Visibooks illustration-based computer textbooks

THE VISIBOOKS GUIDE TO PERL Basics

See. Do. Learn.

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Learning the Basics

In this section, you'll learn how to:

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- **Create a simple script**
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- **Set script permissions**
- **Run a script from a Web page**
- **Insert comments**
- **Format text output with HTML tags**

Install an FTP program

1. Open your Web browser and go to:

www.ipswitch.com

2. Download and install WS_FTP Home.

WS_FTP

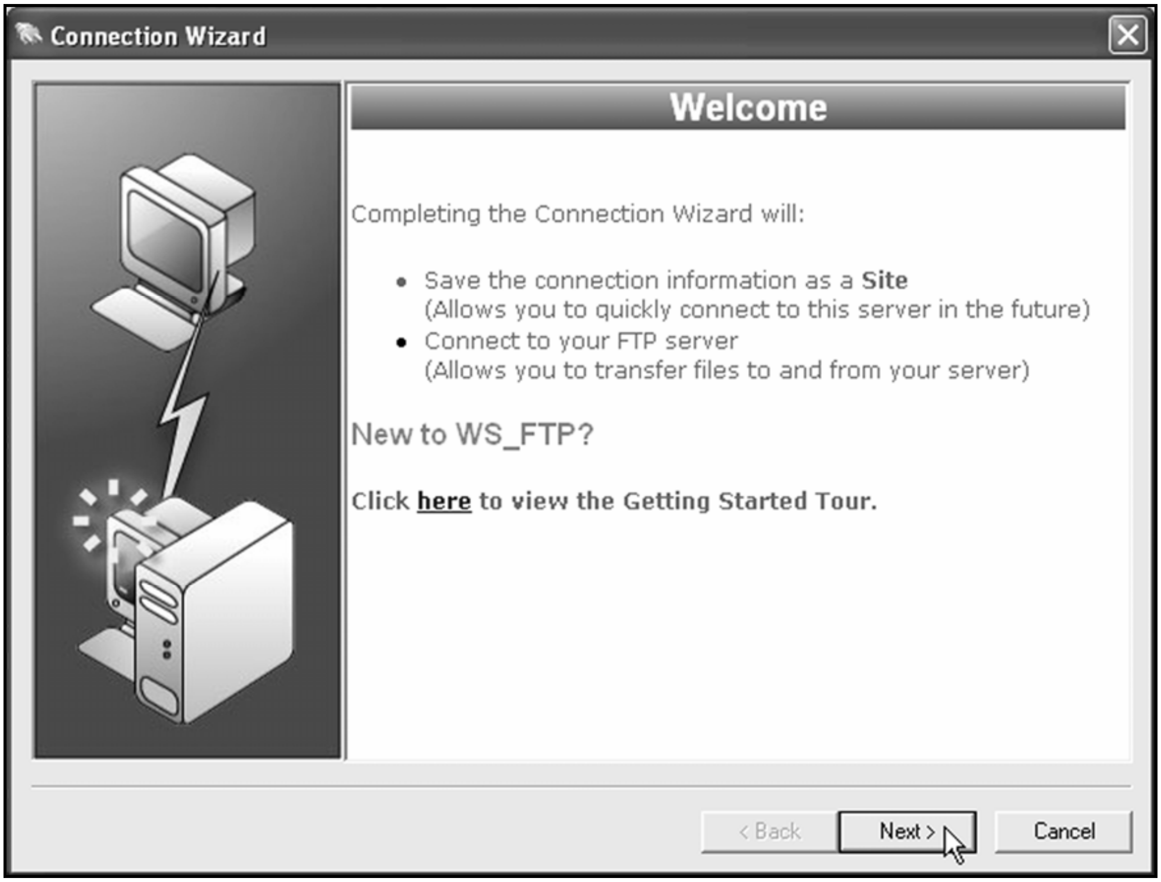
FTP stands for File Transfer Protocol, a way to transfer files between computers over the Internet. If you have trouble configuring FrontPage to upload pages to a Web server, use an FTP program.

Using an FTP program is the most straightforward way to upload a Web site to a Web server. WS_FTP is the most popular FTP program used to upload and download Web pages.

The Home version is free to use for 30 days, and can be downloaded at www.ipswitch.com.

3. Open WS_FTP Home.

The Connection Wizard should open.



Connection Wizard

Welcome

Completing the Connection Wizard will:

- Save the connection information as a **Site**
  (Allows you to quickly connect to this server in the future)
- Connect to your FTP server
  (Allows you to transfer files to and from your server)

New to WS_FTP?

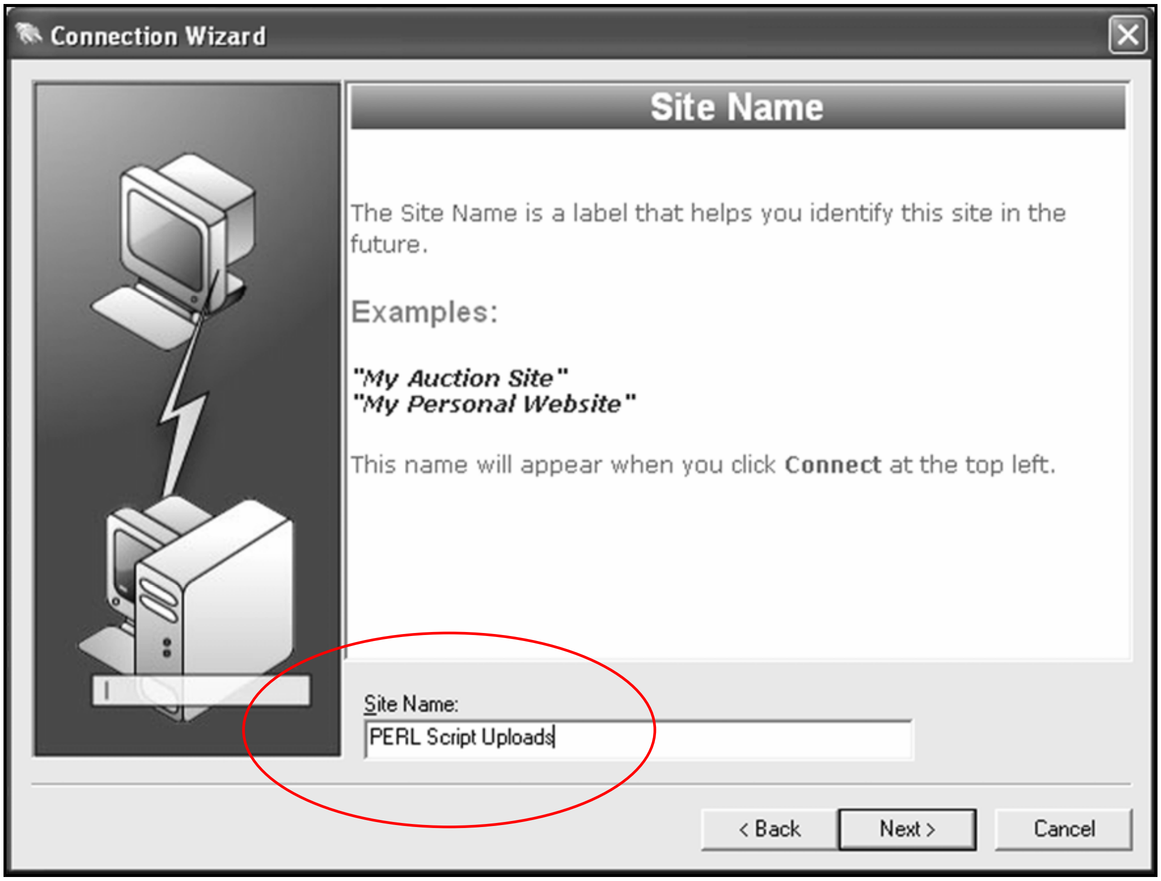
Click <u>here</u> to view the Getting Started Tour.

Click the Next > button.

4. When the **Site Name** screen appears, type:

Perl Script Uploads

in the **Site Name** box.



The Site Name is a label that helps you identify this site in the future.

Examples:

"My Auction Site"
"My Personal Website"

This name will appear when you click **Connect** at the top left.

Site Name: PERL Script Uploads

Then click the Next > button.

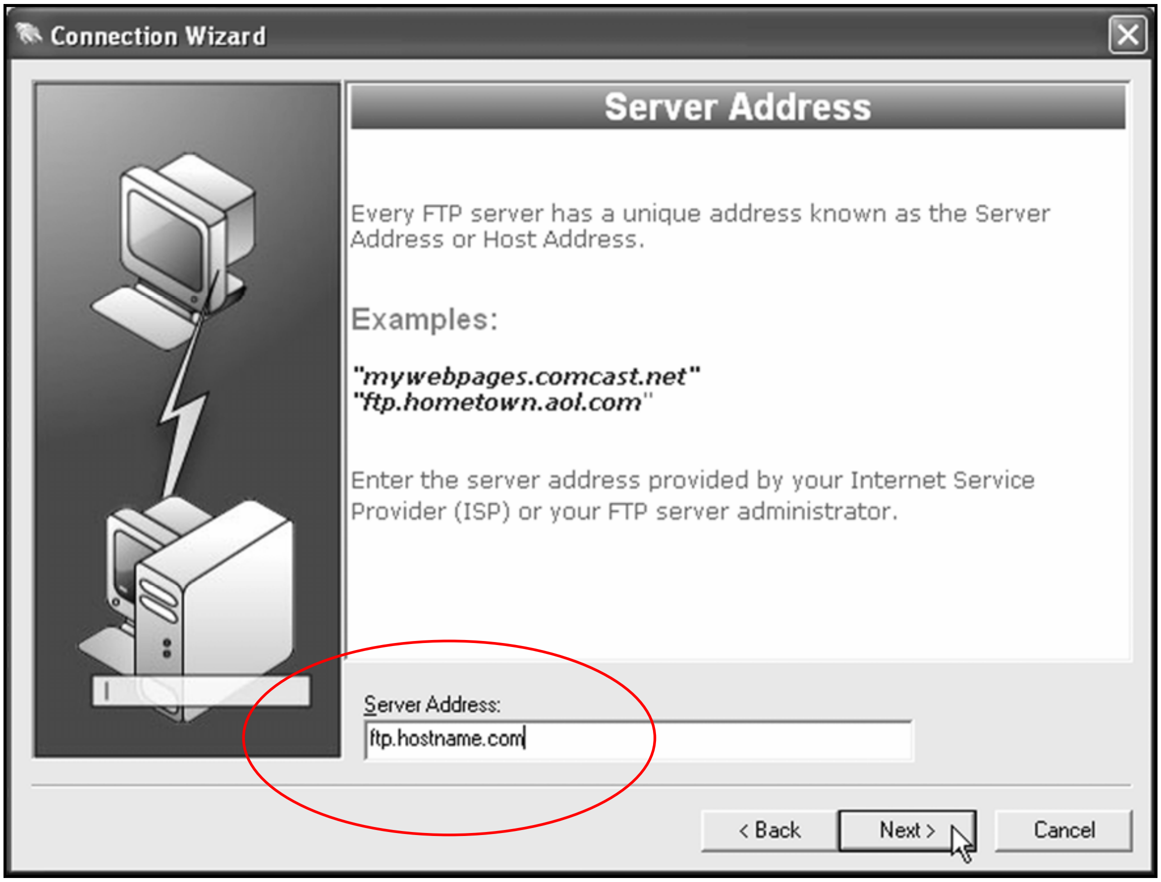
5. When the **Server Address** screen appears, type the host address of your server in the **Server Address** box.

It can be something like:

www.visibooks.com

washington.patriot.net

207.176.7.217



Server Address

Every FTP server has a unique address known as the Server Address or Host Address.

Examples:

"mywebpages.comcast.net"
"ftp.hometown.aol.com"

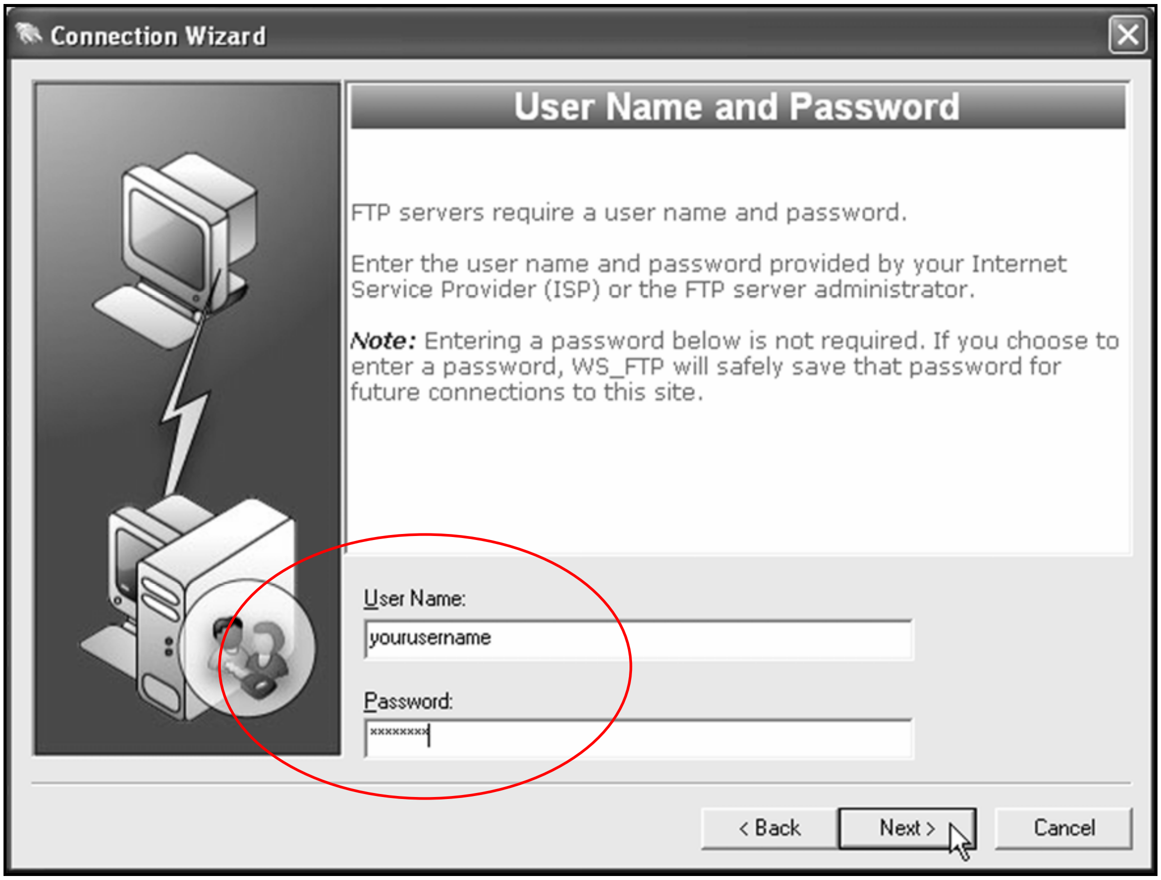
Enter the server address provided by your Internet Service Provider (ISP) or your FTP server administrator.

Server Address: ftp.hostname.com

Then click the Next > button.

Tip: *You can get the Server Address of your Web site, as well as your username and password, from your Web server administrator.*

6. When the **User Name and Password** screen appears, type in your username and password.



User Name and Password

FTP servers require a user name and password.

Enter the user name and password provided by your Internet Service Provider (ISP) or the FTP server administrator.

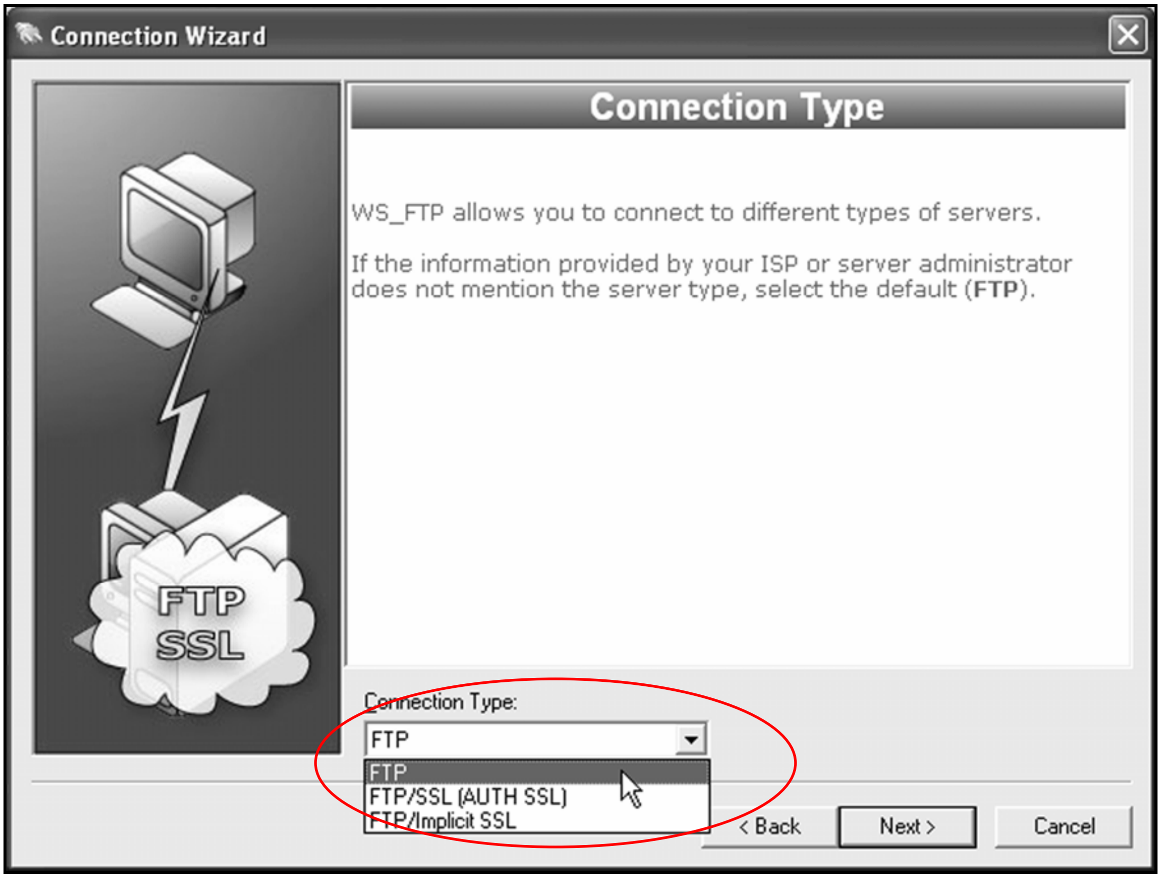
Note: Entering a password below is not required. If you choose to enter a password, WS_FTP will safely save that password for future connections to this site.

User Name: yourusername

Password: ********

Then click the Next > button.

7. When the **Connection Type** screen appears, leave the connection type set at **FTP**.



Connection Wizard

Connection Type

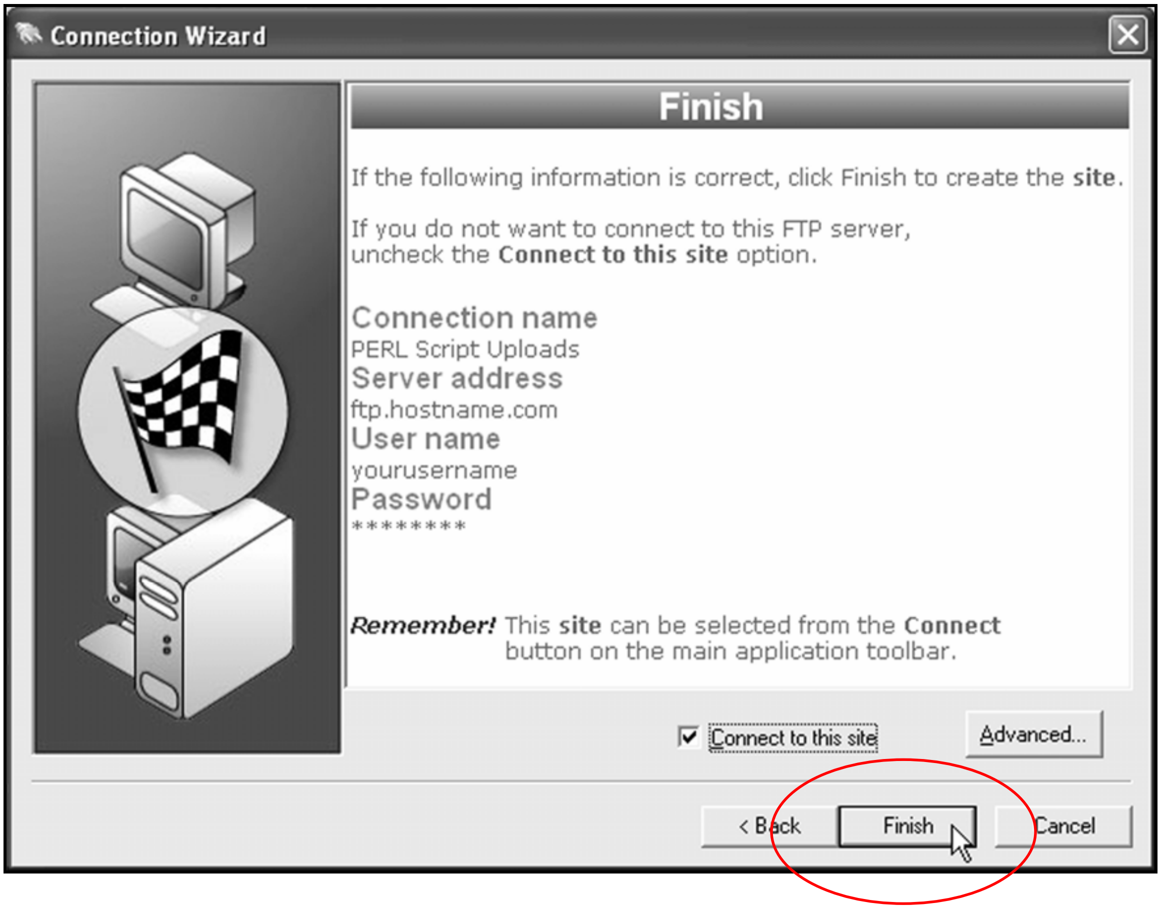
WS_FTP allows you to connect to different types of servers.

If the information provided by your ISP or server administrator does not mention the server type, select the default (**FTP**).

Connection Type: FTP

Then click the Next > button.

8. When the **Finish** screen appears, click the Finish button.



Finish

If the following information is correct, click Finish to create the **site**.

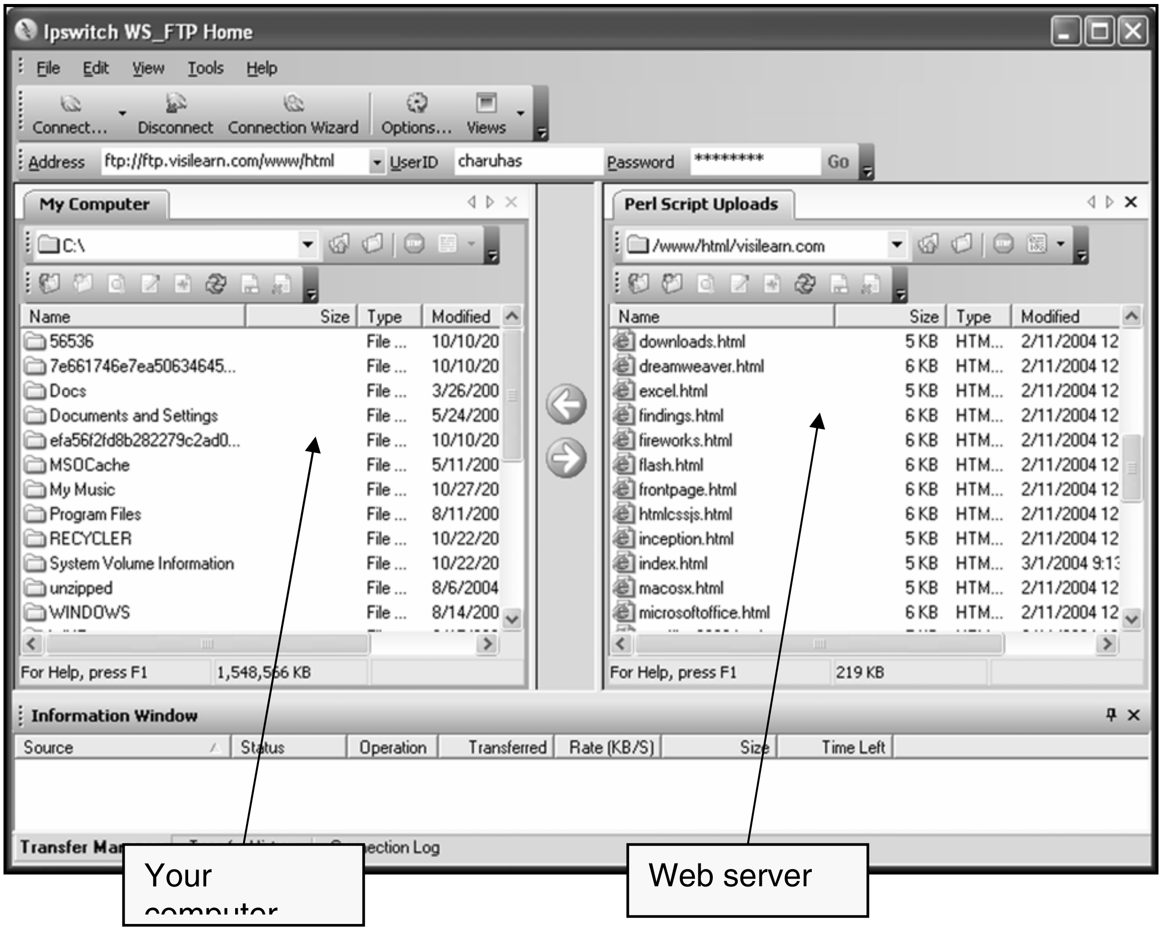
If you do not want to connect to this FTP server, uncheck the **Connect to this site** option.

Connection name
PERL Script Uploads
Server address
ftp.hostname.com
User name
yourusername
Password
****

Remember! This **site** can be selected from the **Connect** button on the main application toolbar.

☑ Connect to this site

WS_FTP should connect to your Web server:



Address ftp://ftp.visilearn.com/www/html UserID charuhas Password ********

C:\

Name	Size	Type	Modified
56536		File ...	10/10/20
7e661746e7ea50634645...		File ...	10/10/20
Docs		File ...	3/26/200
Documents and Settings		File ...	5/24/200
efa56f2fd8b282279c2ad0...		File ...	10/10/20
MSOCache		File ...	5/11/200
My Music		File ...	10/27/20
Program Files		File ...	8/11/200
RECYCLER		File ...	10/22/20
System Volume Information		File ...	10/22/20
unzipped		File ...	8/6/2004
WINDOWS		File ...	8/14/200

For Help, press F1 1,548,566 KB

/www/html/visilearn.com

Name	Size	Type	Modified
downloads.html	5 KB	HTM...	2/11/2004 12
dreamweaver.html	6 KB	HTM...	2/11/2004 12
excel.html	5 KB	HTM...	2/11/2004 12
findings.html	6 KB	HTM...	2/11/2004 12
fireworks.html	6 KB	HTM...	2/11/2004 12
flash.html	6 KB	HTM...	2/11/2004 12
frontpage.html	6 KB	HTM...	2/11/2004 12
htmlcssjs.html	6 KB	HTM...	2/11/2004 12
inception.html	5 KB	HTM...	2/11/2004 12
index.html	5 KB	HTM...	3/1/2004 9:1
macosx.html	5 KB	HTM...	2/11/2004 12
microsoftoffice.html	6 KB	HTM...	2/11/2004 12

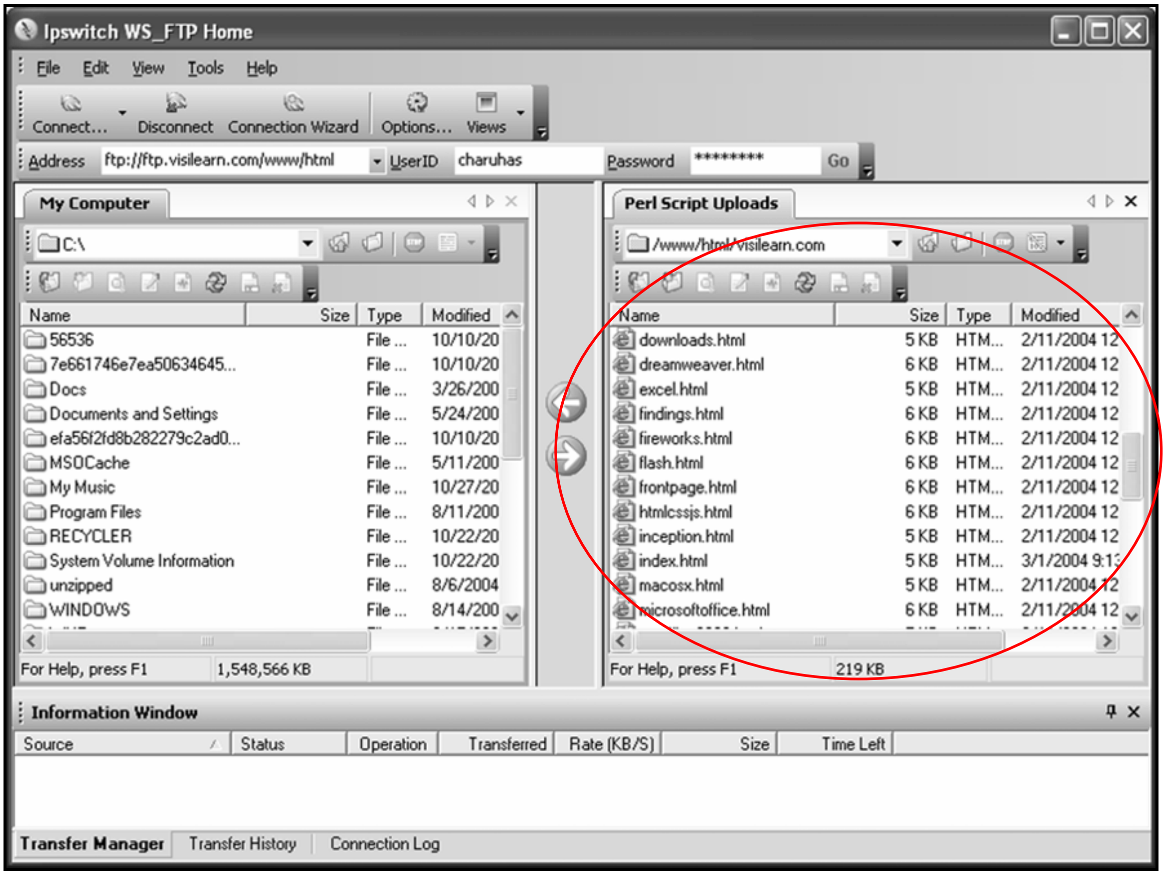
For Help, press F1 219 KB

Your computer

Web server

9. In the right-hand **Perl Script Uploads** pane, double-click on the **public_html** folder, **html** folder, or the folder that contains your Web pages on the server.

You should now see the contents of your Web site on the server:



Ipswitch WS_FTP Home
File Edit View Tools Help
Connect... Disconnect Connection Wizard Options... Views
Go
Information Window
Transfer Manager Transfer History Connection Log

Address ftp://ftp.visilearn.com/www/html

UserID charuhas

Password ********

My Computer

C:\

Name	Size	Type	Modified
56536		File ...	10/10/20
7e661746e7ea50634645...		File ...	10/10/20
Docs		File ...	3/26/200
Documents and Settings		File ...	5/24/200
efa56f2fd8b282279c2ad0...		File ...	10/10/20
MSOCache		File ...	5/11/200
My Music		File ...	10/27/20
Program Files		File ...	8/11/200
RECYCLER		File ...	10/22/20
System Volume Information		File ...	10/22/20
unzipped		File ...	8/6/2004
WINDOWS		File ...	8/14/200

For Help, press F1 1,548,566 KB

Perl Script Uploads

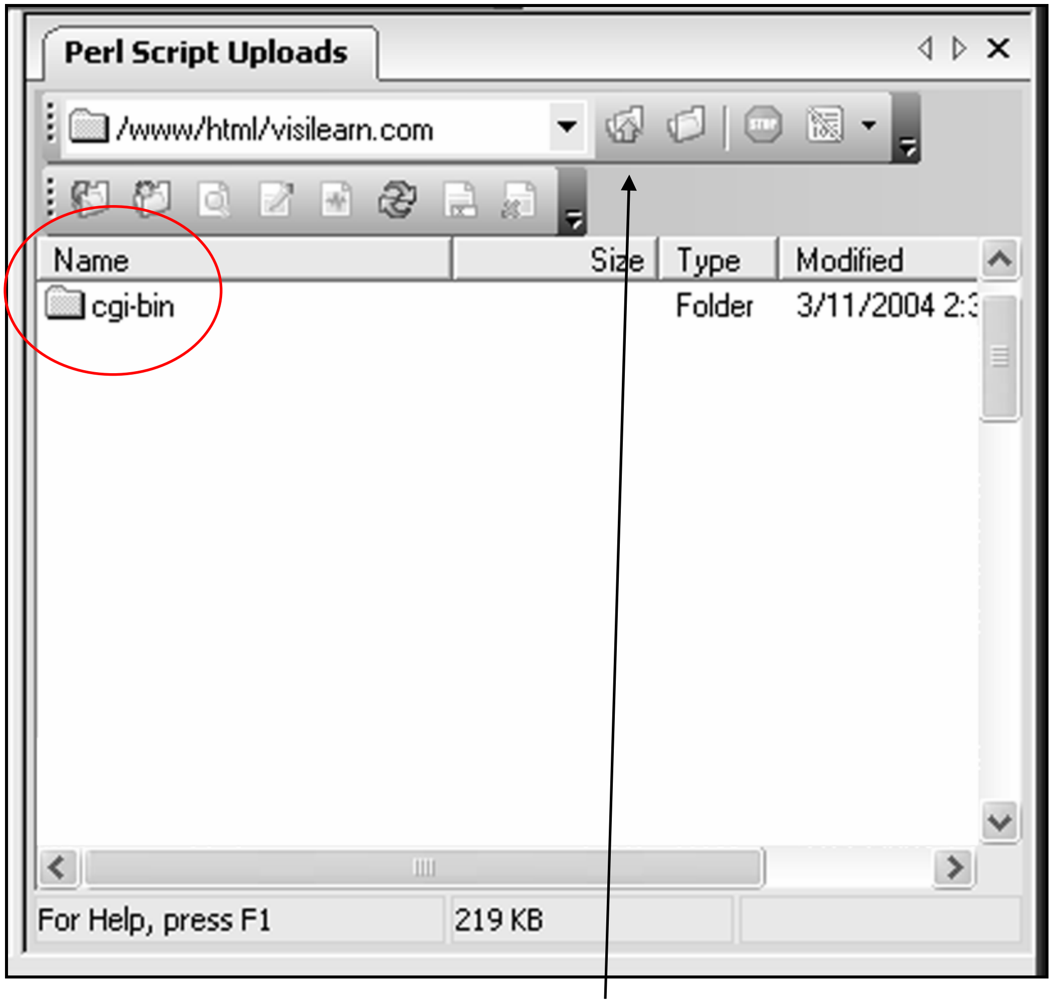
/www/html/visilearn.com

Name	Size	Type	Modified
downloads.html	5 KB	HTM...	2/11/2004 12
dreamweaver.html	6 KB	HTM...	2/11/2004 12
excel.html	5 KB	HTM...	2/11/2004 12
findings.html	6 KB	HTM...	2/11/2004 12
fireworks.html	6 KB	HTM...	2/11/2004 12
flash.html	6 KB	HTM...	2/11/2004 12
frontpage.html	6 KB	HTM...	2/11/2004 12
htmlcssjs.html	6 KB	HTM...	2/11/2004 12
inception.html	5 KB	HTM...	2/11/2004 12
index.html	5 KB	HTM...	3/1/2004 9:13
macosx.html	5 KB	HTM...	2/11/2004 12
microsoftoffice.html	6 KB	HTM...	2/11/2004 12

For Help, press F1 219 KB

Source	Status	Operation	Transferred	Rate (KB/S)	Size	Time Left

10. In the right-hand **Perl Script Uploads** pane, navigate to the **cgi-bin** directory of your Web site.

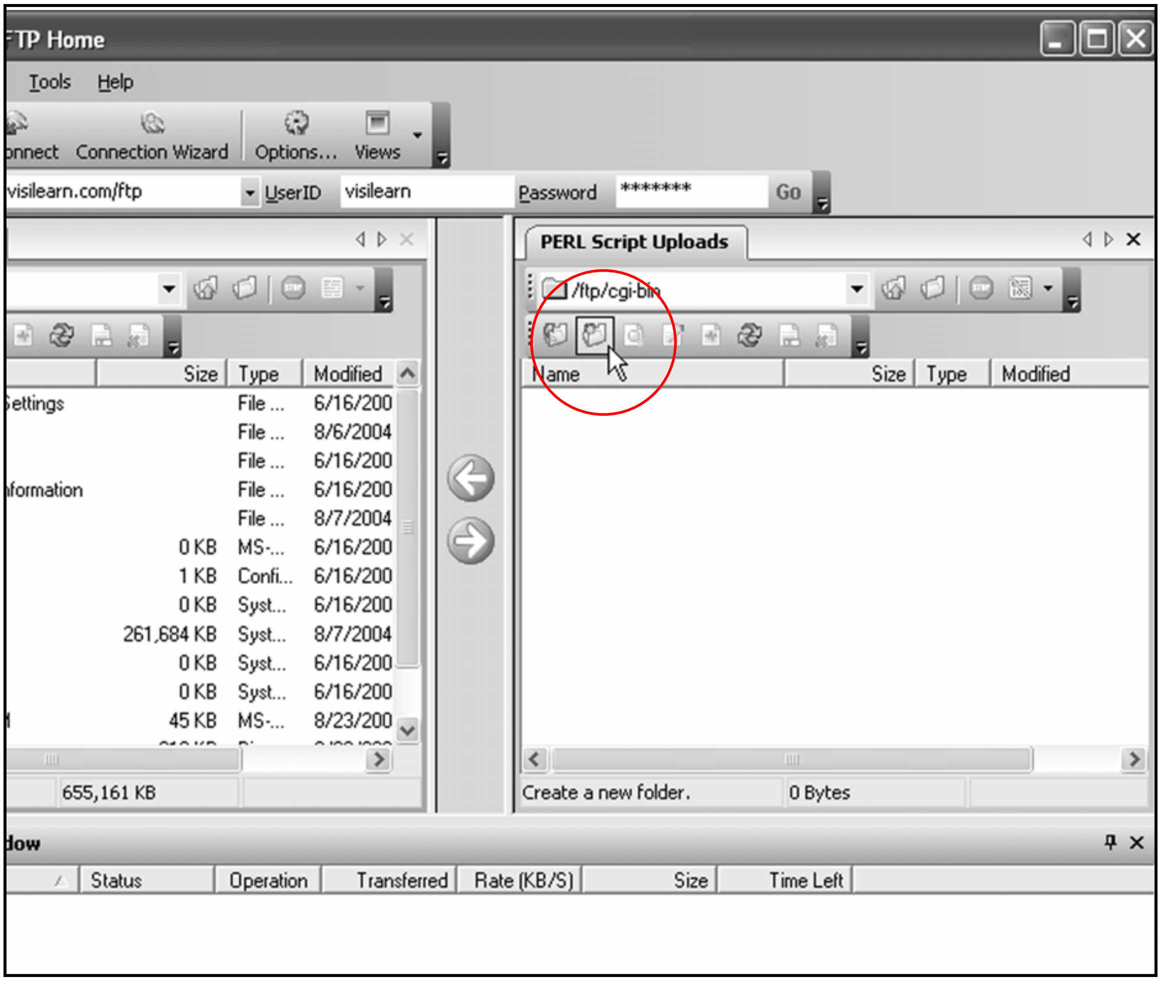


Tip: *You may have to click the icon to move up in the site hierarchy.*

11. Double-click the **cgi-bin** directory to open it.

Tip: *Many Internet Service Providers require you to place all PERL scripts into a separate* **cgi-bin** *directory. This is a good security practice because it hides your scripts from the rest of the world.*

12. Click the 📁 icon.



visilearn.com/ftp UserID visilearn Password *******

/ftp/cgi-bin

	Size	Type	Modified
ettings		File ...	6/16/200
		File ...	8/6/2004
		File ...	6/16/200
formation		File ...	6/16/200
		File ...	8/7/2004
	0 KB	MS-...	6/16/200
	1 KB	Confi...	6/16/200
	0 KB	Syst...	6/16/200
	261,684 KB	Syst...	8/7/2004
	0 KB	Syst...	6/16/200
	0 KB	Syst...	6/16/200
	45 KB	MS-...	8/23/200

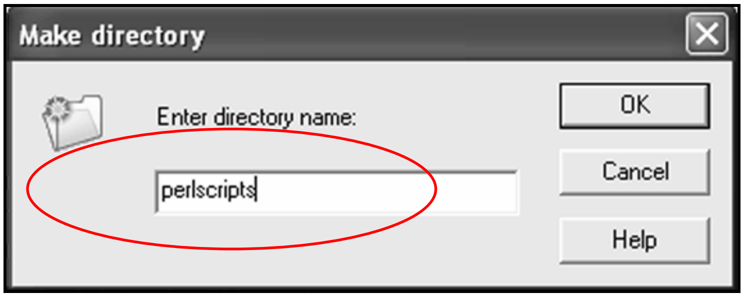
655,161 KB

Create a new folder. 0 Bytes

13. When the **Make directory** window appears, type:

perlscripts

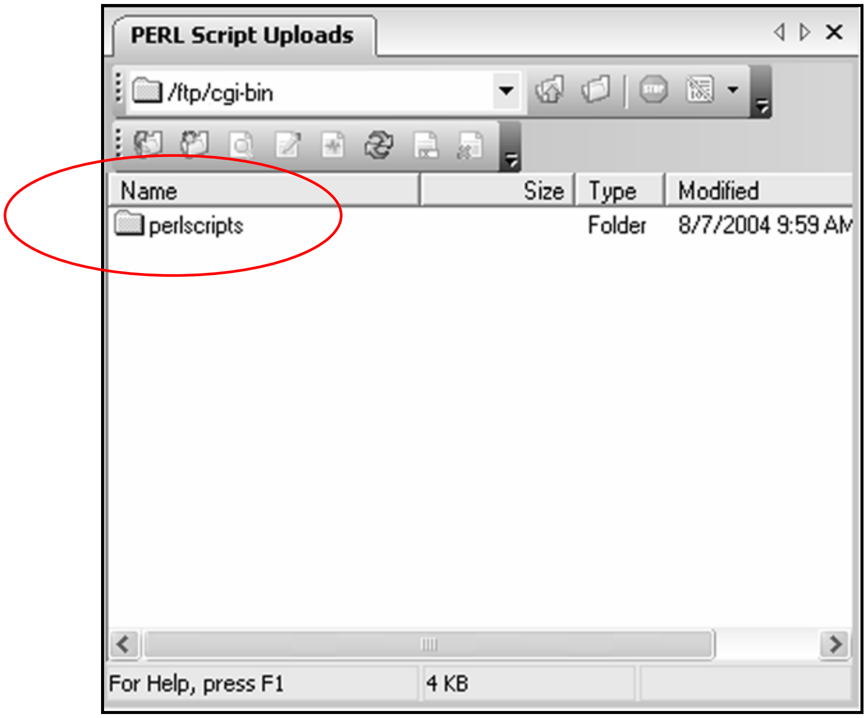
in the textbox.



Enter directory name: perlscripts

14. Click the OK button.

You should now see a directory called **perlscripts** in the right pane:



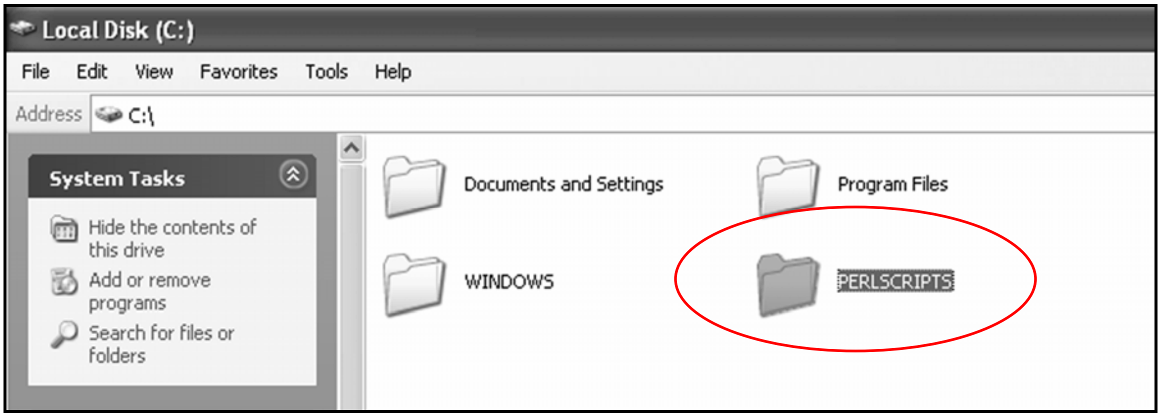
Name	Size	Type	Modified
perlscripts		Folder	8/7/2004 9:59 AM

For Help, press F1 | 4 KB

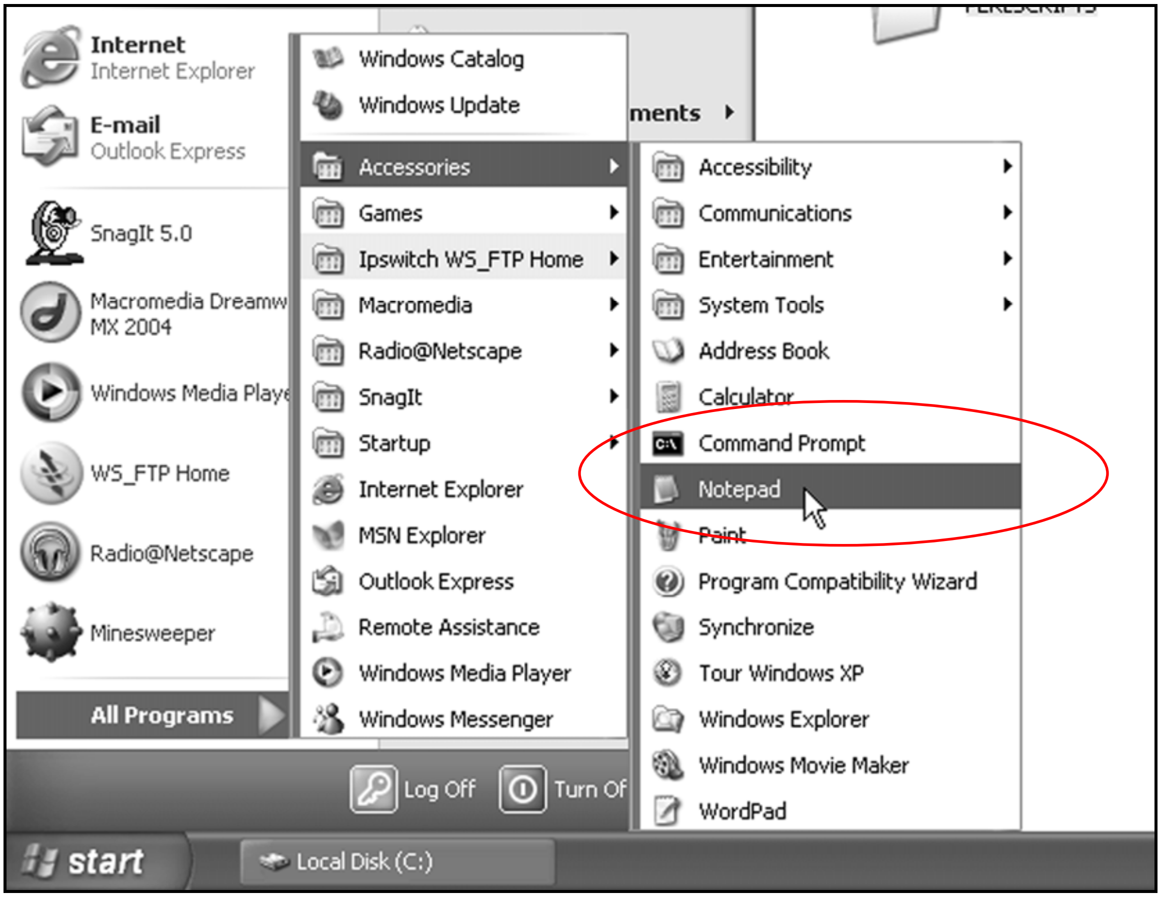
15. Close WS_FTP.

Create a simple script

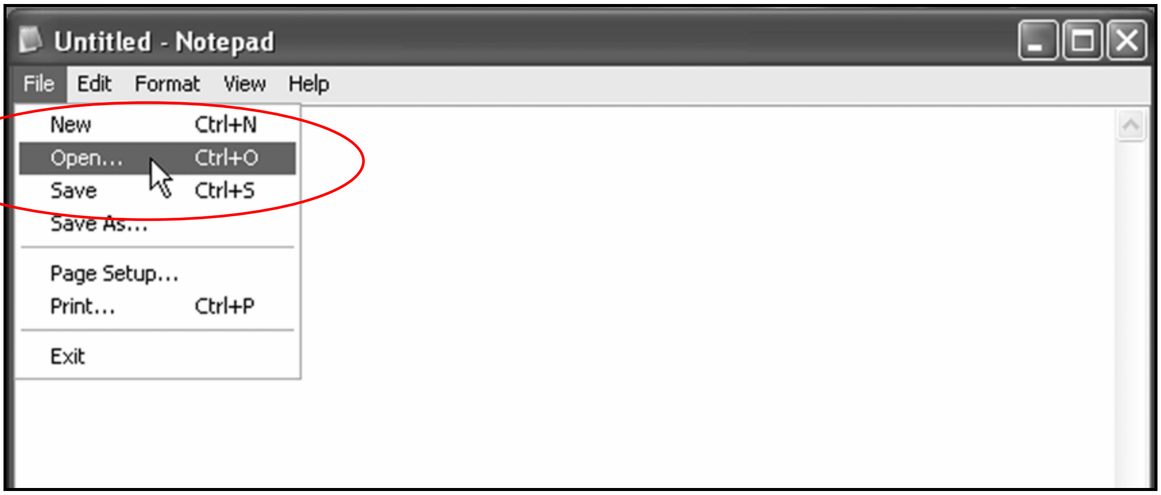
1. Create a folder called **PERLSCRIPTS** on your hard drive.



2. Open the Notepad program on your computer.

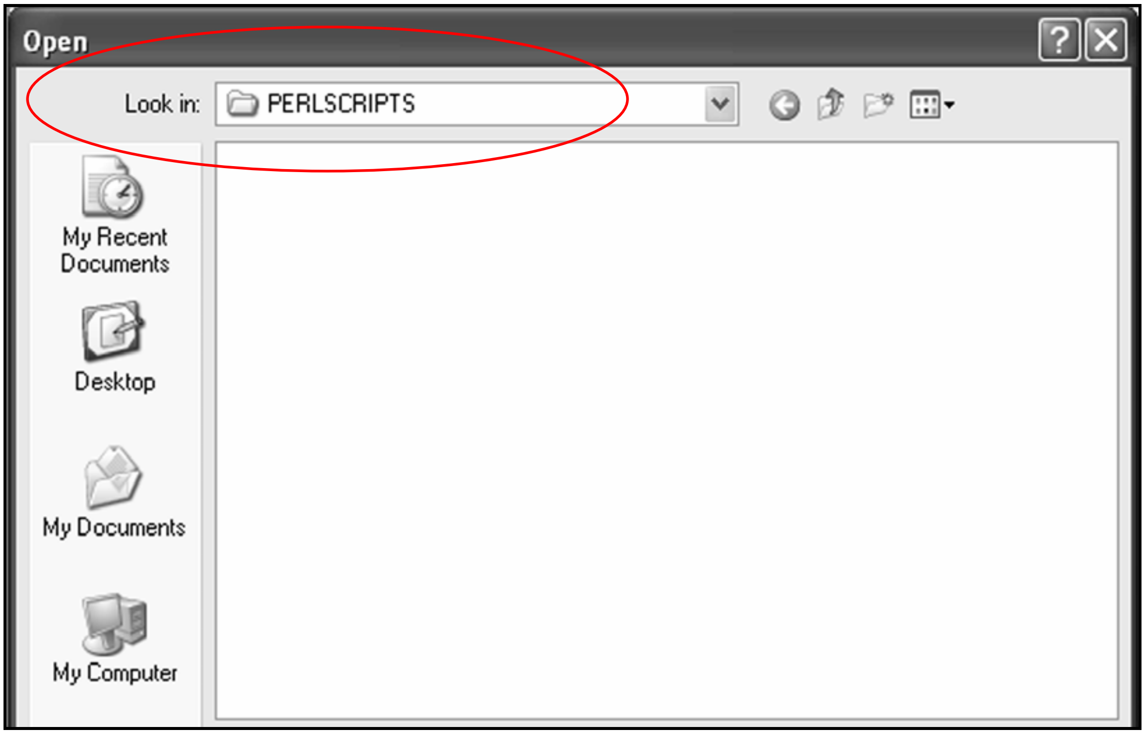


3. Click **File**, then **Open**.

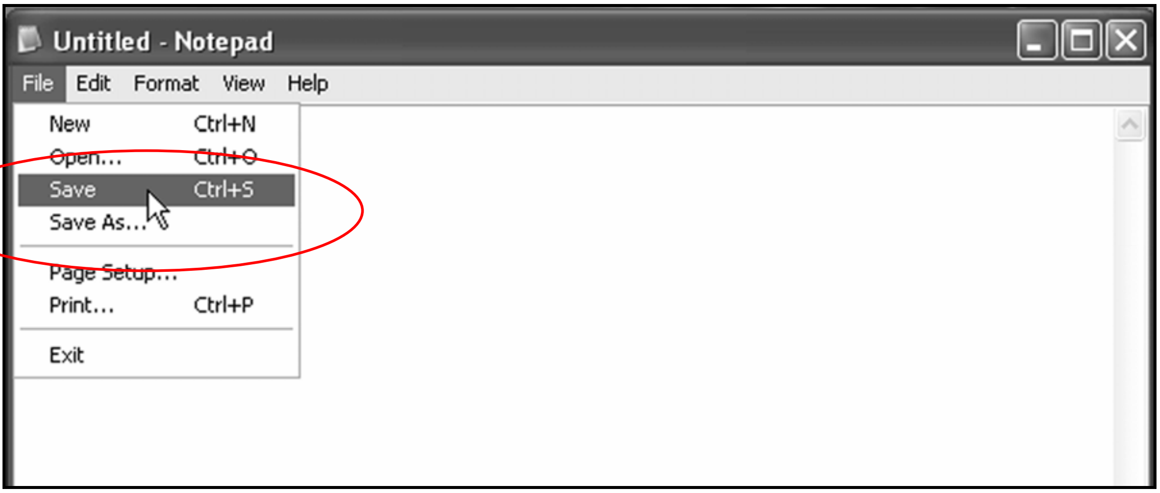


4. When the **Open** window appears, navigate to the **PERLSCRIPTS** folder on your hard drive, then double-click it.

It should appear in the **Look in** box.



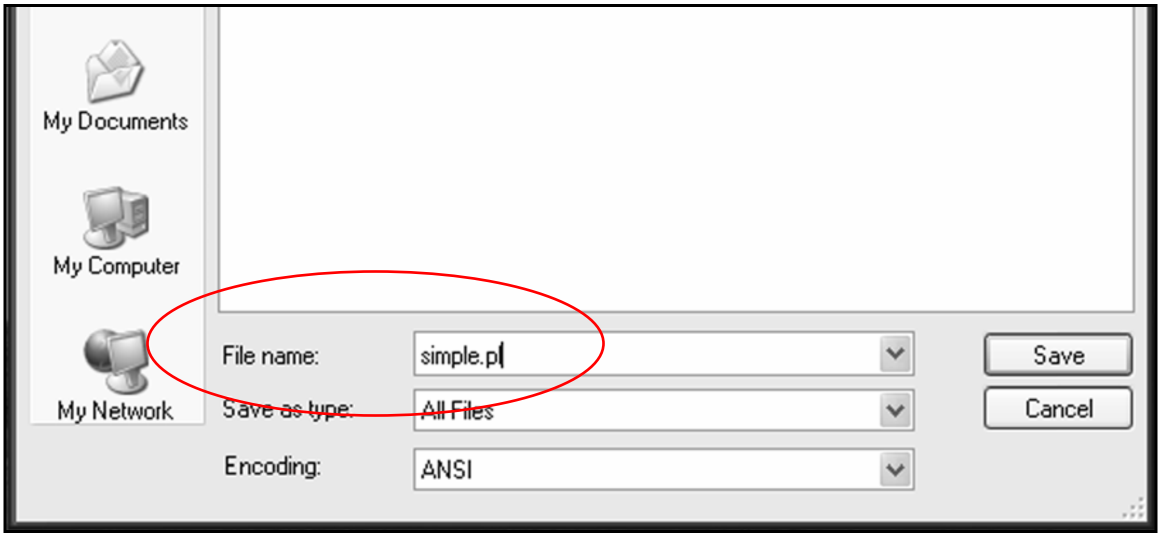
5. Click **File**, then **Save**.



6. When the **Save As** window appears, type:

simple.pl

in the **File Name** textbox.



File name: simple.pl

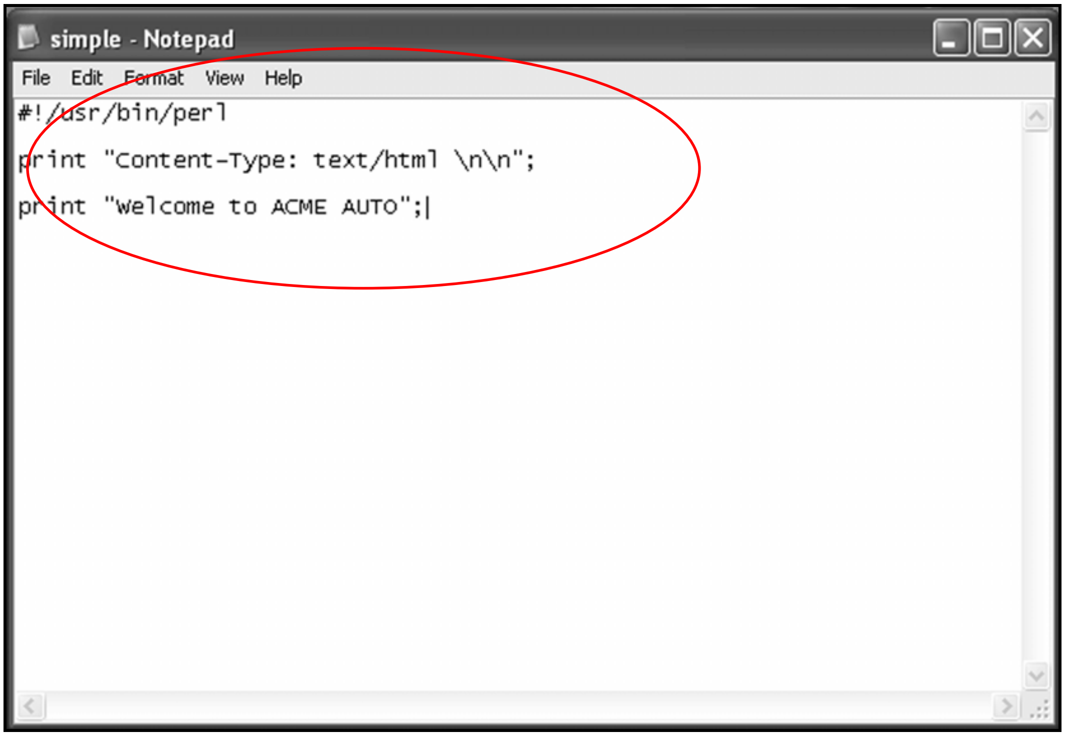
Save as type: All Files

Encoding: ANSI

7. Click the Save button.

8. In the blank document window, type:

```
#!/usr/bin/perl

print "Content-Type: text/html \n\n";

print "Welcome to ACME AUTO";
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";
print "Welcome to ACME AUTO";
```

Tip: *You're now typing commands to the Web server in the PERL language. Sometimes these commands are case-sensitive. Use lower-case for PERL commands—that is, everything not enclosed in quotation marks, like*

"Content-Type: text/html \n\n."

Also, don't forget to type a semicolon (;) at the end of each line. For your commands to work, or "execute," they need a semicolon (;) at the end.

9. Save the script.

Here's what each line of this PERL script does:

- **`#!/usr/bin/perl`**

  ```
  #!/usr/bin/perl
  ```

  This first line states the location of the PERL module in your Web site. This module lets your Web server understand PERL commands.

  Contact the company/person who runs your Web server to be sure you have the correct path to the PERL module.

  In this case, the PERL module is in a directory on the Web server called **`perl`**, which is in the `bin` directory, which is contained within the **`usr`** directory.

  This path MUST be the first line of all your PERL scripts.

- **`(blank line)`**

  Before the next line of code is a blank line. You can use blank lines throughout your PERL scripts.

  Blank lines allow you to group sections of code together, which makes scripts easier to read.

- **`print "Content-Type: text/html \n\n";`**

  `print` `"Content-Type: text/html \n\n";`

  This `print` command tells the Web server to “print” a line of text to a Web browser.

  `print` **`"Content-Type: text/html`** `\n\n";`

  This line tells the web browser that what comes next is HTML, or text that can be read by a Web browser.

  `print "Content-Type: text/html` **`\n\n";`**

  The **`\n`** character tells the Web browser to print the HTML code that follows on a new line.

  Since there are two new lines specified, a blank line is printed between this line of code and the next.

- **`print "Welcome to ACME AUTO";`**

  `print` `"Welcome to ACME AUTO";`

  This **`print`** command prints the words between the quotes to the browser window.

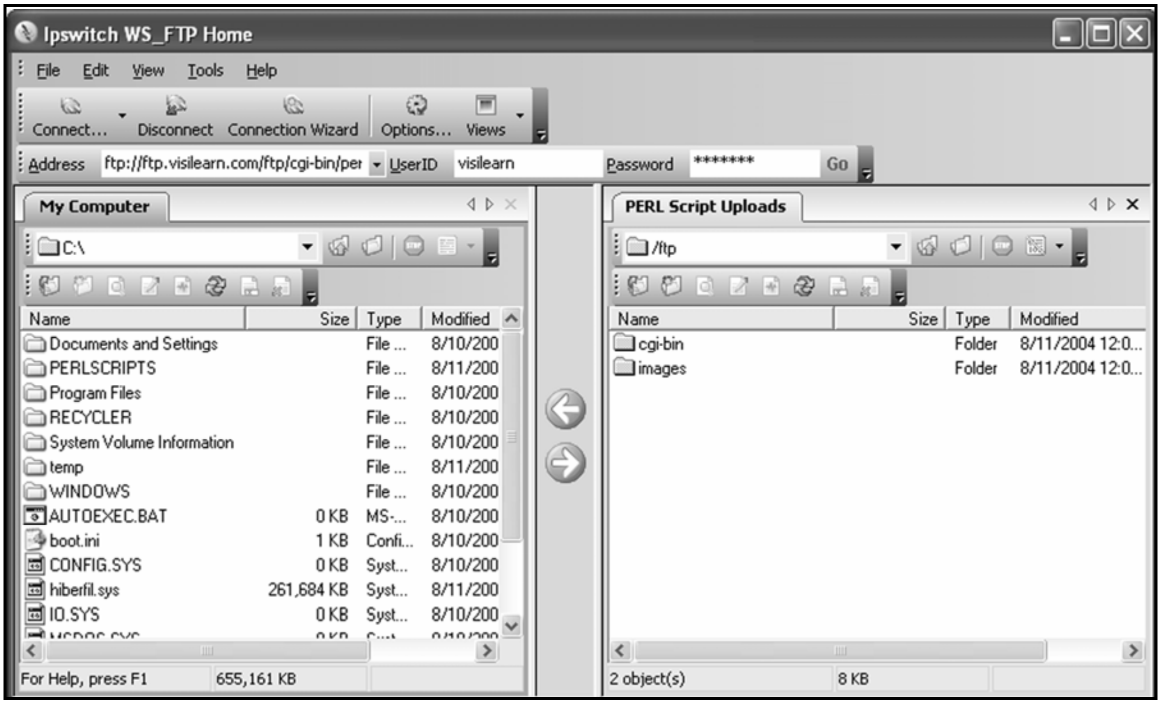
  `print "Welcome to ACME AUTO"``;`

  Remember: for a command string to execute, there must be a semicolon (`;`) at the end.

Upload a script

1. Open WS_FTP and navigate to the home directory on your Web server.

It should look something like this:



Address ftp://ftp.visilearn.com/ftp/cgi-bin/per UserID visilearn Password *******

C:\

Name	Size	Type	Modified
Documents and Settings		File ...	8/10/200
PERLSCRIPTS		File ...	8/11/200
Program Files		File ...	8/10/200
RECYCLER		File ...	8/10/200
System Volume Information		File ...	8/10/200
temp		File ...	8/11/200
WINDOWS		File ...	8/10/200
AUTOEXEC.BAT	0 KB	MS-...	8/10/200
boot.ini	1 KB	Confi...	8/10/200
CONFIG.SYS	0 KB	Syst...	8/10/200
hiberfil.sys	261,684 KB	Syst...	8/11/200
IO.SYS	0 KB	Syst...	8/10/200

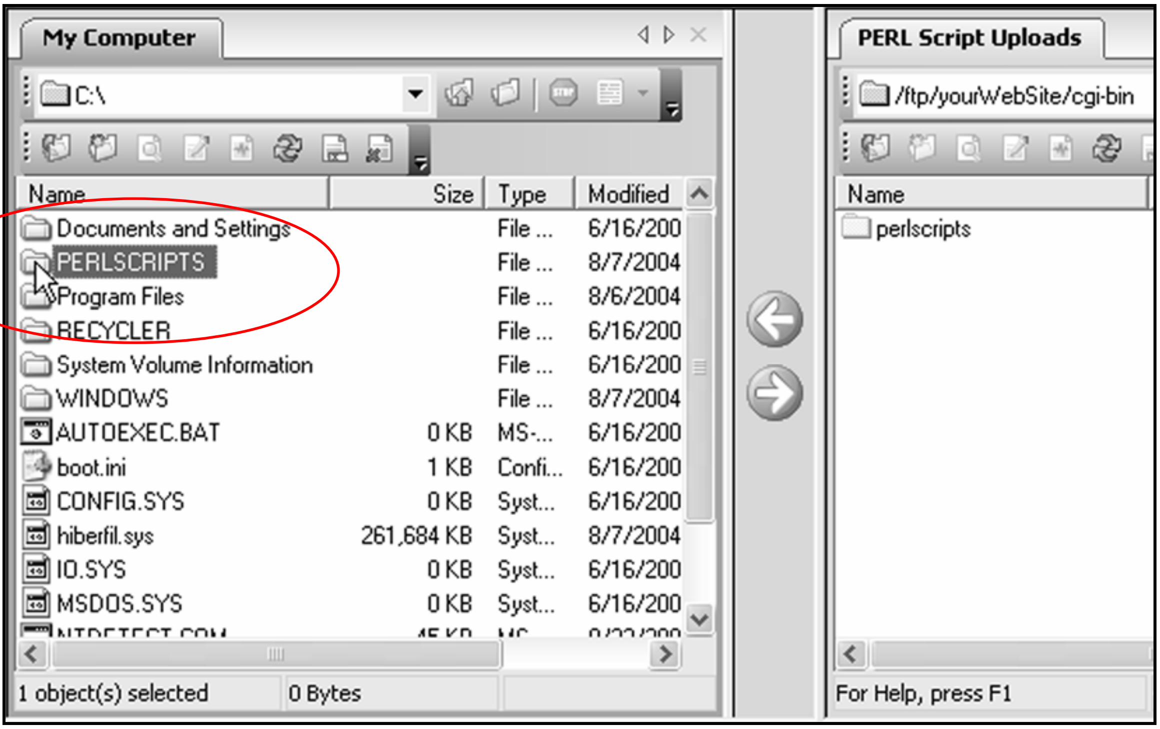
For Help, press F1 655,161 KB

/ftp

Name	Size	Type	Modified
cgi-bin		Folder	8/11/2004 12:0...
images		Folder	8/11/2004 12:0...

2 object(s) 8 KB

2. In the left-hand **My Computer** pane, navigate to the **PERLSCRIPTS** folder on your computer.



Name	Size	Type	Modified
Documents and Settings		File ...	6/16/200
PERLSCRIPTS		File ...	8/7/2004
Program Files		File ...	8/6/2004
RECYCLER		File ...	6/16/200
System Volume Information		File ...	6/16/200
WINDOWS		File ...	8/7/2004
AUTOEXEC.BAT	0 KB	MS-...	6/16/200
boot.ini	1 KB	Confi...	6/16/200
CONFIG.SYS	0 KB	Syst...	6/16/200
hiberfil.sys	261,684 KB	Syst...	8/7/2004
IO.SYS	0 KB	Syst...	6/16/200
MSDOS.SYS	0 KB	Syst...	6/16/200
NTDETECT.COM	45 KB	MS...	8/23/200

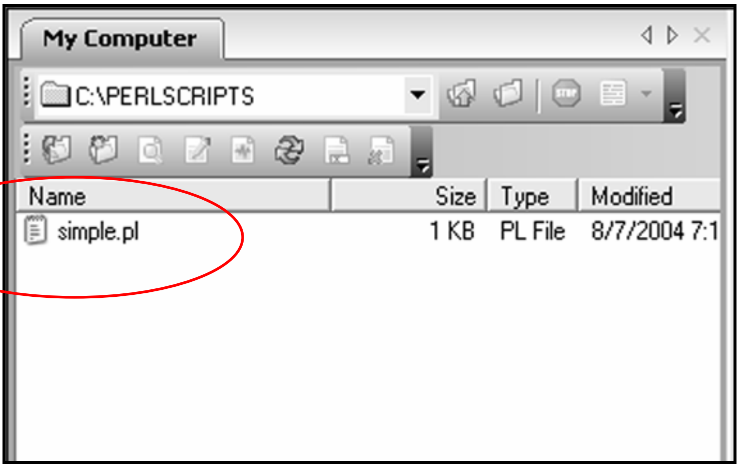
1 object(s) selected 0 Bytes

Name
perlscripts

For Help, press F1

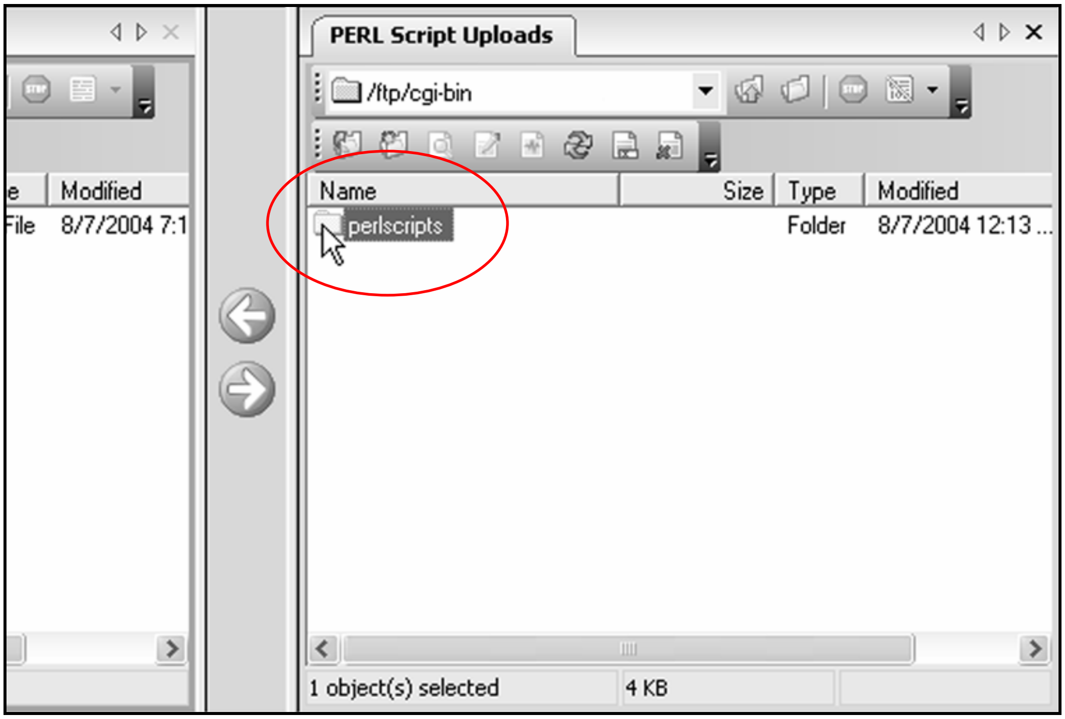
3. Double-click the **PERLSCRIPTS** folder.

simple.pl should appear.



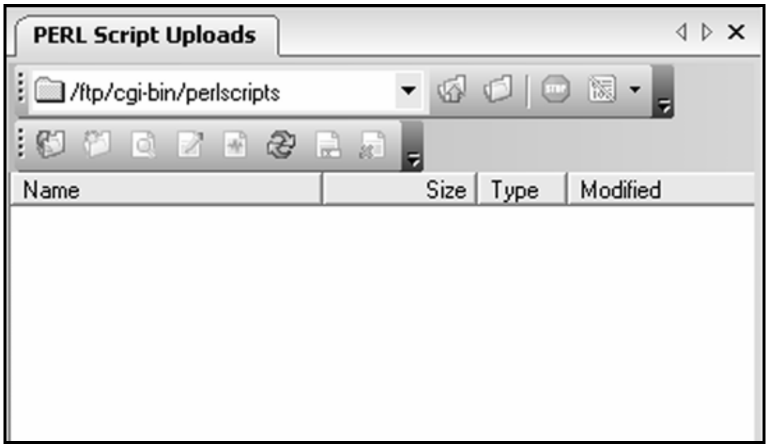
Name	Size	Type	Modified
simple.pl	1 KB	PL File	8/7/2004 7:1

4. In the right-hand **Perl Script Uploads** pane, navigate to the **cgi-bin** directory, then to the **perlscripts** directory in your Web site.

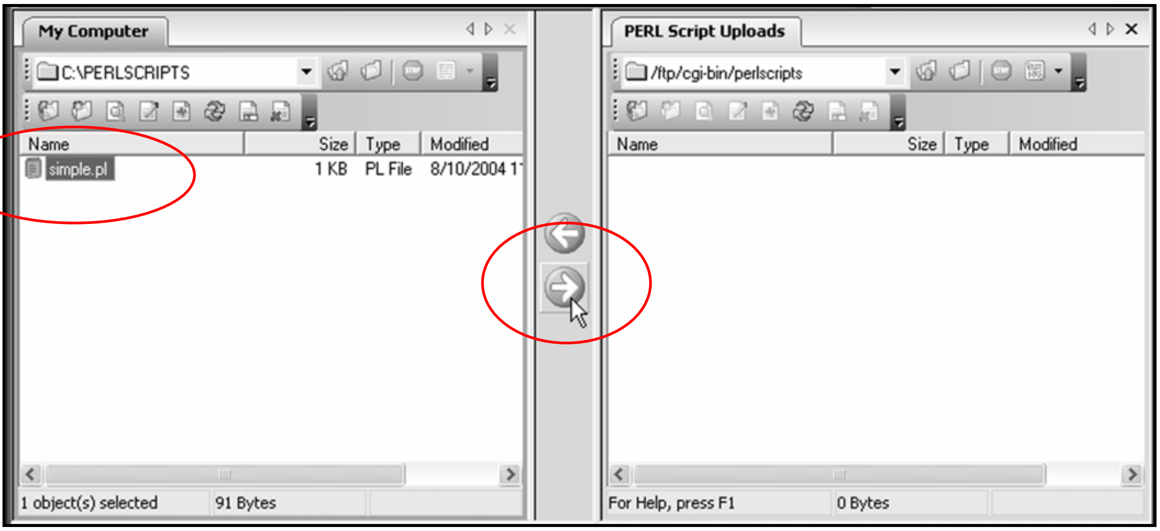


5. Double-click the **perlscripts** directory.

The pane should be blank:



6. Click **simple.pl** in the **My Computer** pane, then click the ➔ button.



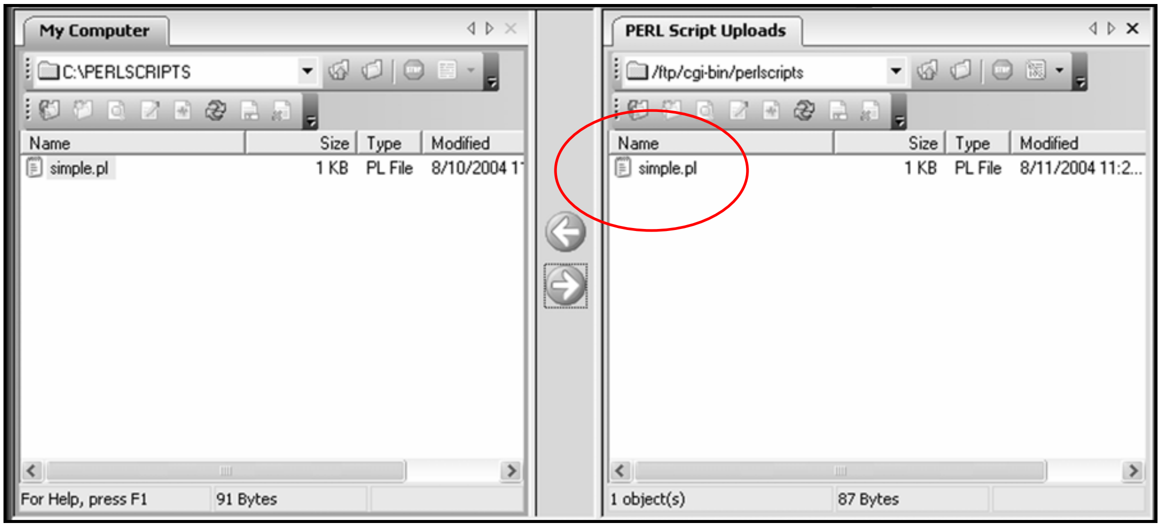
Name	Size	Type	Modified
simple.pl	1 KB	PL File	8/10/2004 1

1 object(s) selected 91 Bytes

Name	Size	Type	Modified

For Help, press F1 0 Bytes

simple.pl should now appear in the **Perl Script Uploads** pane:



Name	Size	Type	Modified
simple.pl	1 KB	PL File	8/10/2004 1

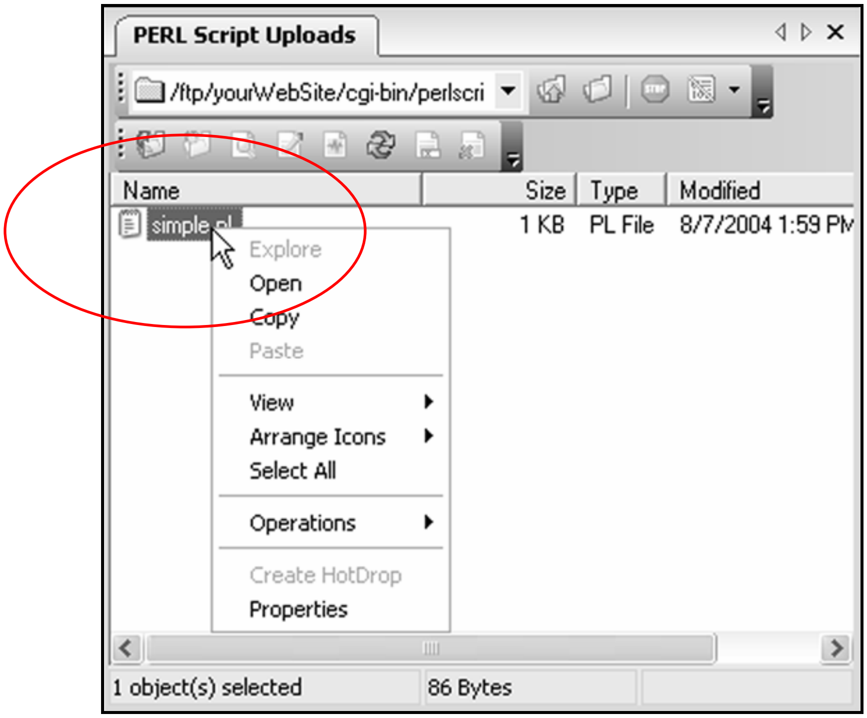
For Help, press F1 91 Bytes

Name	Size	Type	Modified
simple.pl	1 KB	PL File	8/11/2004 11:2...

1 object(s) 87 Bytes

Set script permissions

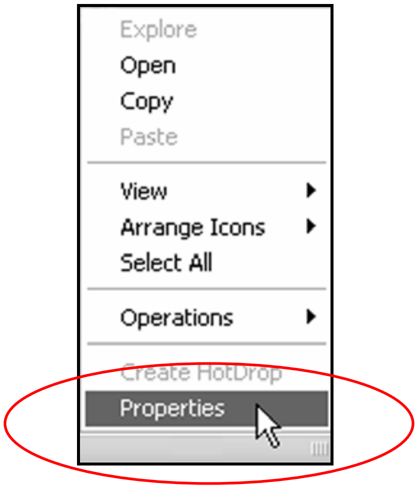
1. In the **Perl Script Uploads** pane, right-click **simple.pl**.



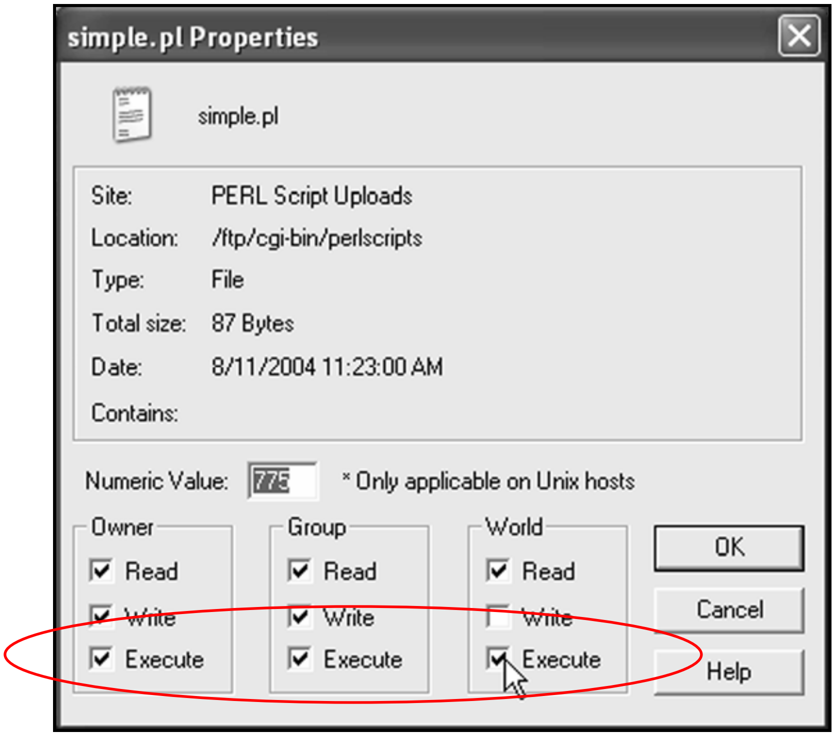
Name	Size	Type	Modified
simple.pl	1 KB	PL File	8/7/2004 1:59 PM

1 object(s) selected 86 Bytes

2. When the menu appears, click **Properties**.



3. When the **simple.pl Properties** window appears, click all the **Execute** checkboxes.



simple.pl Properties

simple.pl

Site: PERL Script Uploads
Location: /ftp/cgi-bin/perlscripts
Type: File
Total size: 87 Bytes
Date: 8/11/2004 11:23:00 AM
Contains:

Numeric Value: 775 * Only applicable on Unix hosts

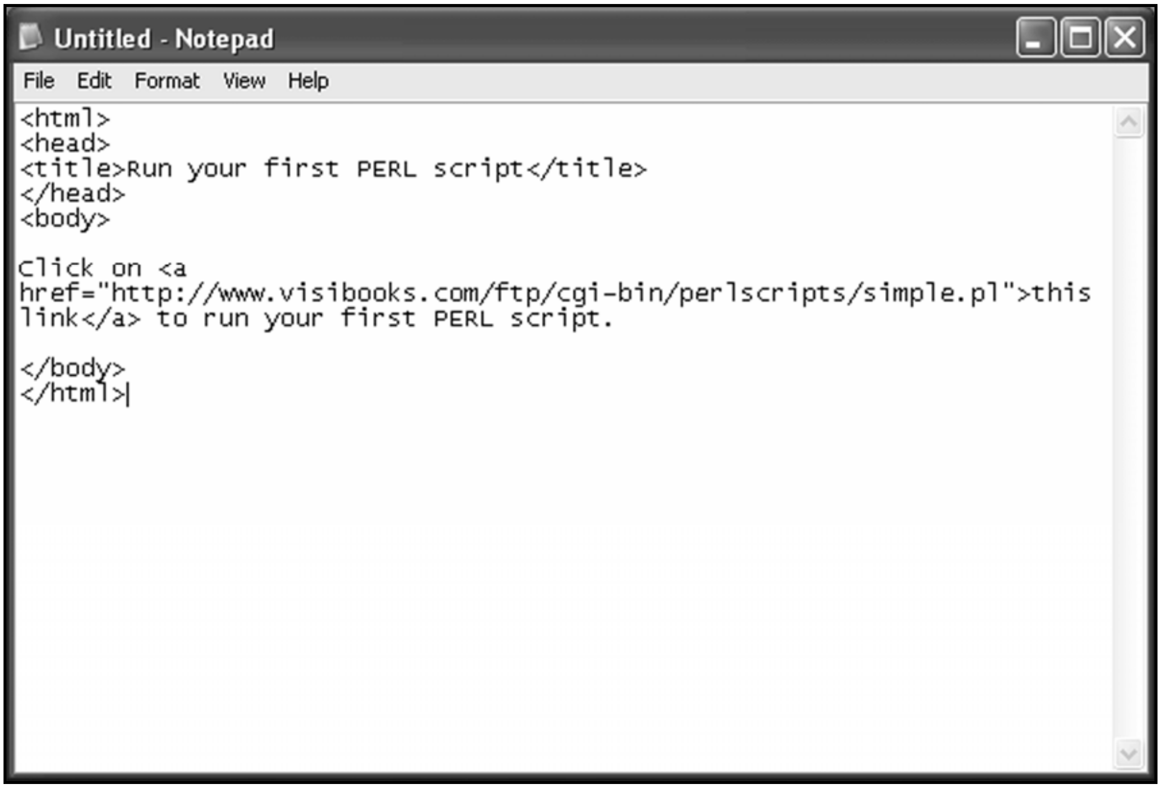
Owner	Group	World
☑ Read	☑ Read	☑ Read
☑ Write	☑ Write	□ Write
☑ Execute	☑ Execute	☑ Execute

4. Click the OK button.

Run a script from a Web page

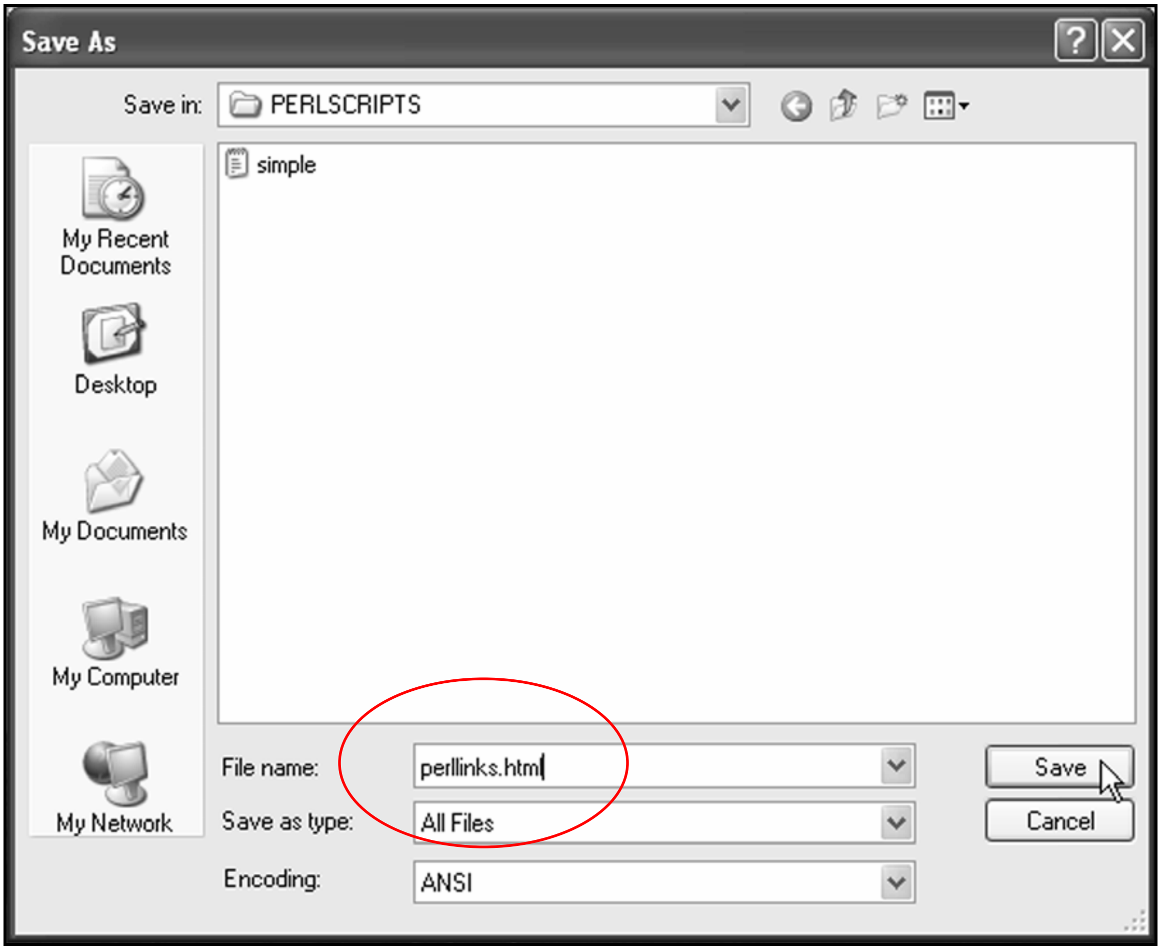
1. Using Notepad, create a new Web page with this code:

```
<html>
<head>
<title>Run your first PERL script</title>
</head>
<body>

Click on <a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/simple.pl">this link</a> to run
your first PERL script.

</body>
</html>
```



```
<html>
<head>
<title>Run your first PERL script</title>
</head>
<body>

Click on <a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/simple.pl">this
link</a> to run your first PERL script.

</body>
</html>
```

2. Save the Web page as **perllinks.html** in the **PERLSCRIPTS** folder on your computer.



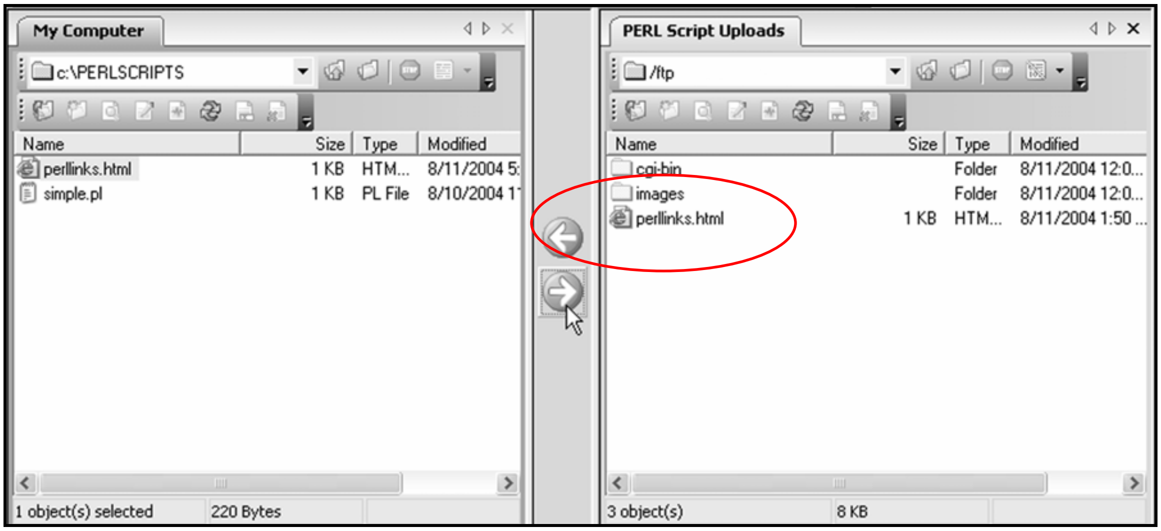
Save in: PERLSCRIPTS

File name: perllinks.html

Save as type: All Files

Encoding: ANSI

3. In WS_FTP, upload **perllinks.html** into the home directory of your Web site.



Name	Size	Type	Modified
perllinks.html	1 KB	HTM...	8/11/2004 5:
simple.pl	1 KB	PL File	8/10/2004 1

1 object(s) selected 220 Bytes

Name	Size	Type	Modified
cgi-bin		Folder	8/11/2004 12:0...
images		Folder	8/11/2004 12:0...
perllinks.html	1 KB	HTM...	8/11/2004 1:50 ...

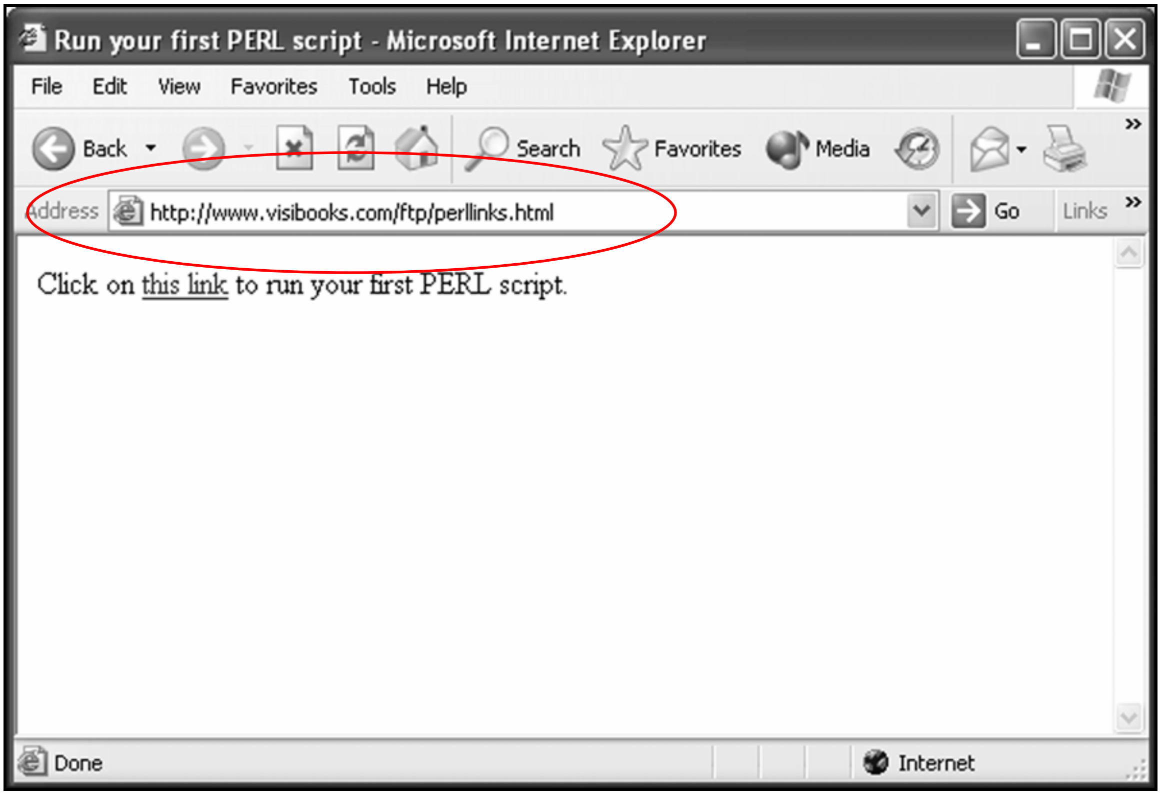
3 object(s) 8 KB

Tip: *Don't upload* **perllinks.html** *into the* **/cgi-bin/perlscripts** *directory.*

*Put it in the home directory of your Web site, where the home page—***index.html***—resides.*

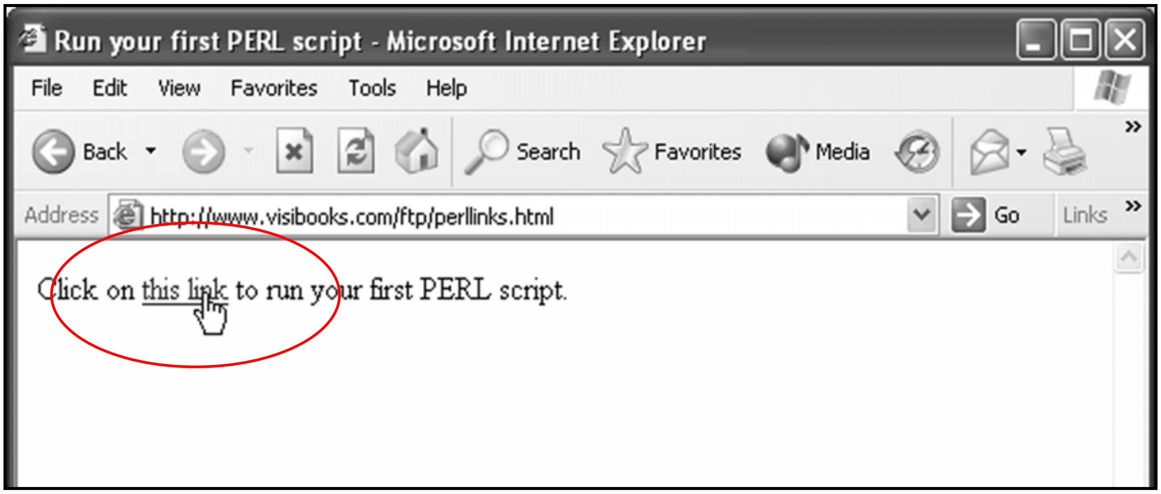
4. Open the Web browser and go to:

www.yourwebsite.com/perllinks.html


Run your first PERL script - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/perllinks.html
Go
Links
Done
Internet

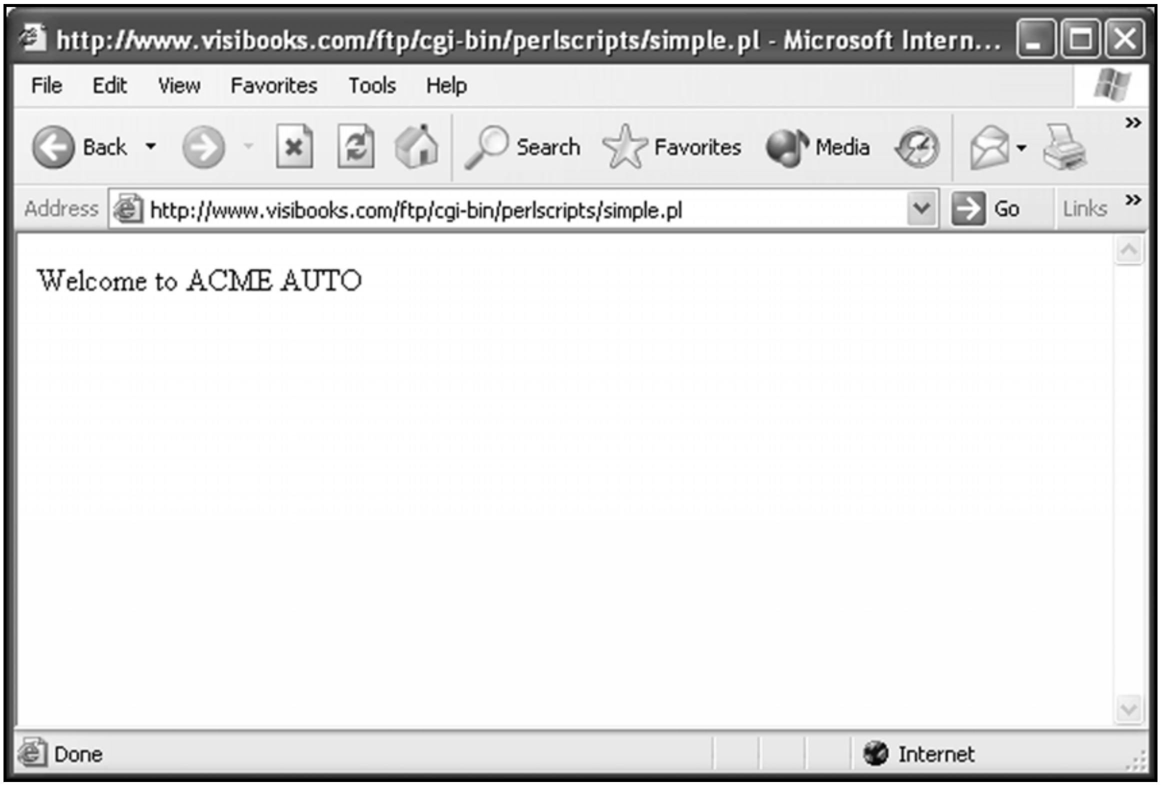
Click on this link to run your first PERL script.

5. Click the link.


Run your first PERL script - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/perllinks.html
Go
Links

Click on this link to run your first PERL script.

The output should look like this:

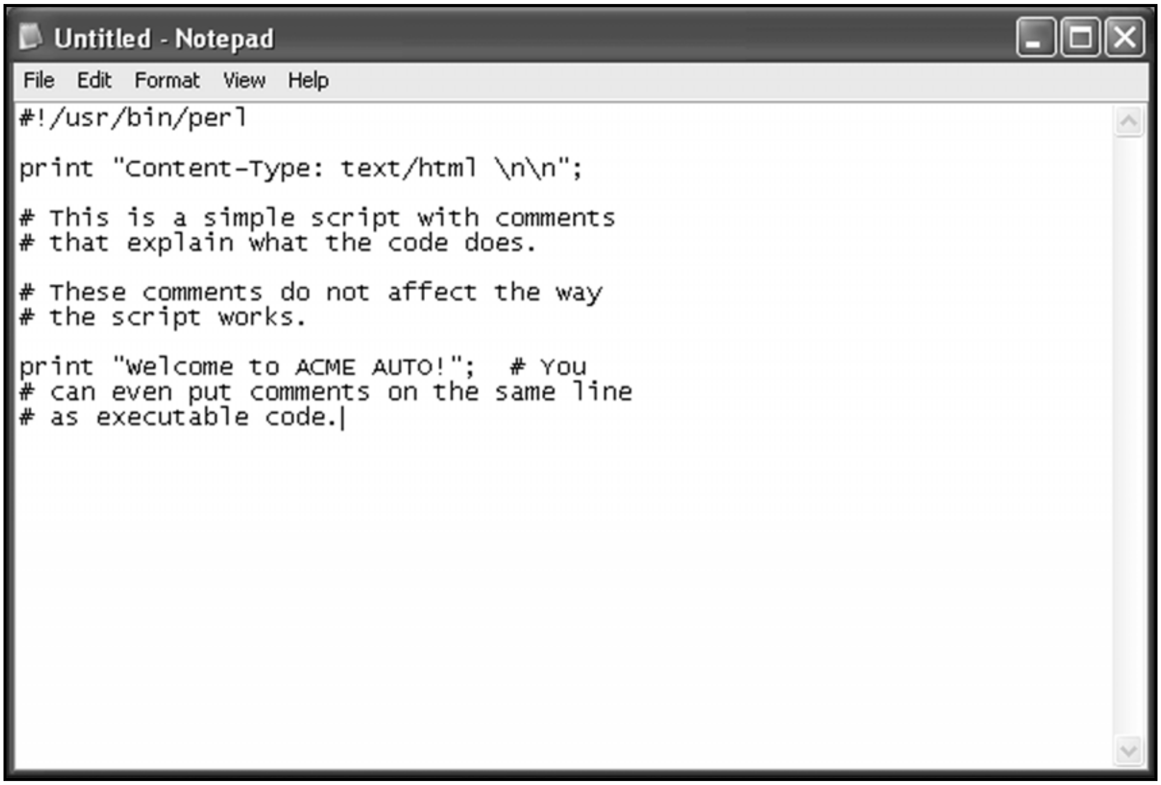

http://www.visibooks.com/ftp/cgi-bin/perlscripts/simple.pl - Microsoft Intern...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/simple.pl
Go
Links
Done
Internet

Welcome to ACME AUTO

Insert comments

1. Using Notepad, create a new script with this code:

```
#!/usr/bin/perl

print "Content-Type: text/html \n\n";

# This is a simple script with comments
# that explain what the code does.

# These comments do not affect the way
# the script works.

print "Welcome to ACME AUTO!";  # You
# can even put comments on the same line
# as executable code.
```



```
#!/usr/bin/perl

print "Content-Type: text/html \n\n";

# This is a simple script with comments
# that explain what the code does.

# These comments do not affect the way
# the script works.

print "Welcome to ACME AUTO!";  # You
# can even put comments on the same line
# as executable code.
```

Tip: *If you're writing a comment in a script and it wraps to the next line, it needs a new* **#** *character in front.*

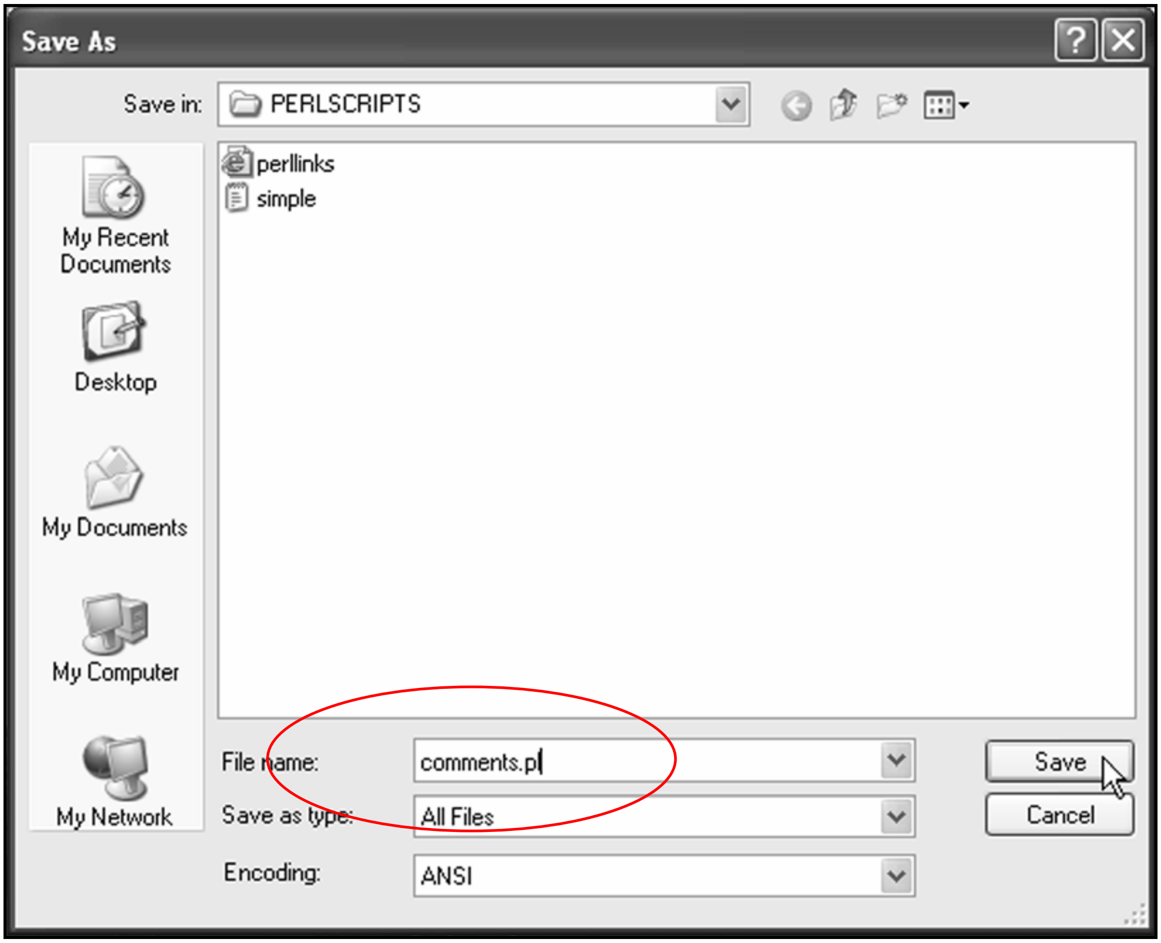
Incorrect:

```
# The second line lets a browser
display the script output.
```

Correct:

```
# The second line lets a browser
# display the script output.
```

2. Save this script as **comments.pl** in the **PERLSCRIPTS** folder on your computer.



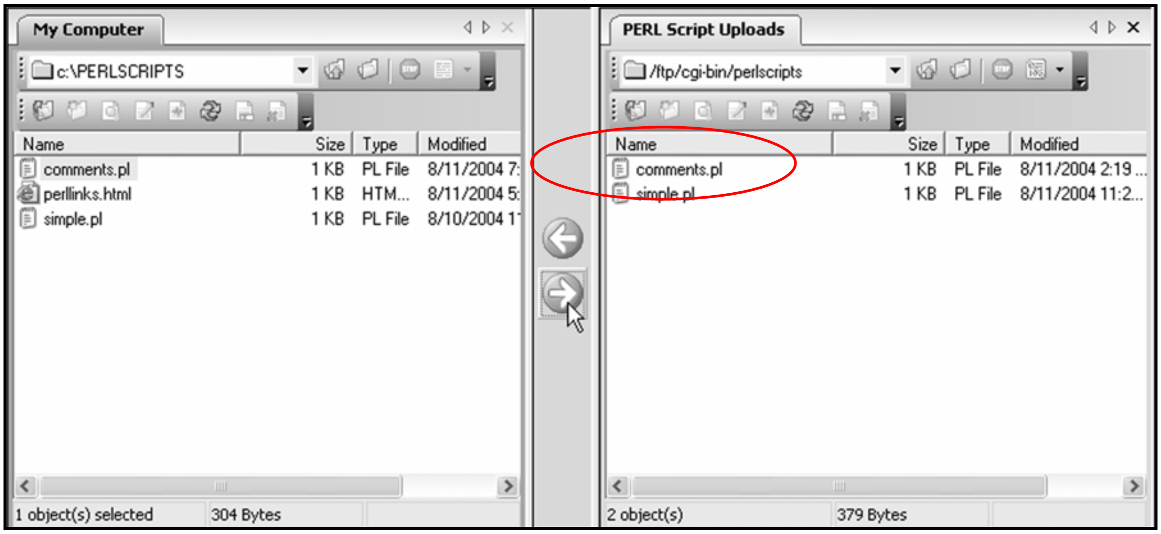
Save in: PERLSCRIPTS

File name: comments.pl

Save as type: All Files

Encoding: ANSI

3. Open WS_FTP and upload the **comments.pl** script to the **perlscripts** directory in your Web site.



My Computer

c:\PERLSCRIPTS

Name	Size	Type	Modified
comments.pl	1 KB	PL File	8/11/2004 7:
perllinks.html	1 KB	HTM...	8/11/2004 5:
simple.pl	1 KB	PL File	8/10/2004 1

1 object(s) selected 304 Bytes

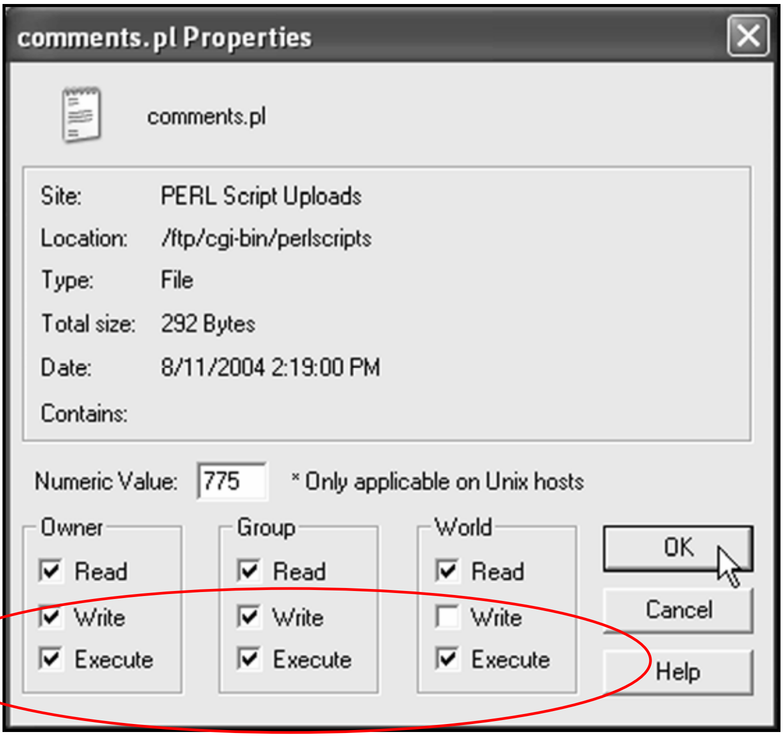
PERL Script Uploads

/ftp/cgi-bin/perlscripts

Name	Size	Type	Modified
comments.pl	1 KB	PL File	8/11/2004 2:19 ...
simple.pl	1 KB	PL File	8/11/2004 11:2...

2 object(s) 379 Bytes

4. Set the script's permissions so that Owner, Group, and World can execute it.



comments.pl Properties

comments.pl

Site: PERL Script Uploads

Location: /ftp/cgi-bin/perlscripts

Type: File

Total size: 292 Bytes

Date: 8/11/2004 2:19:00 PM

Contains:

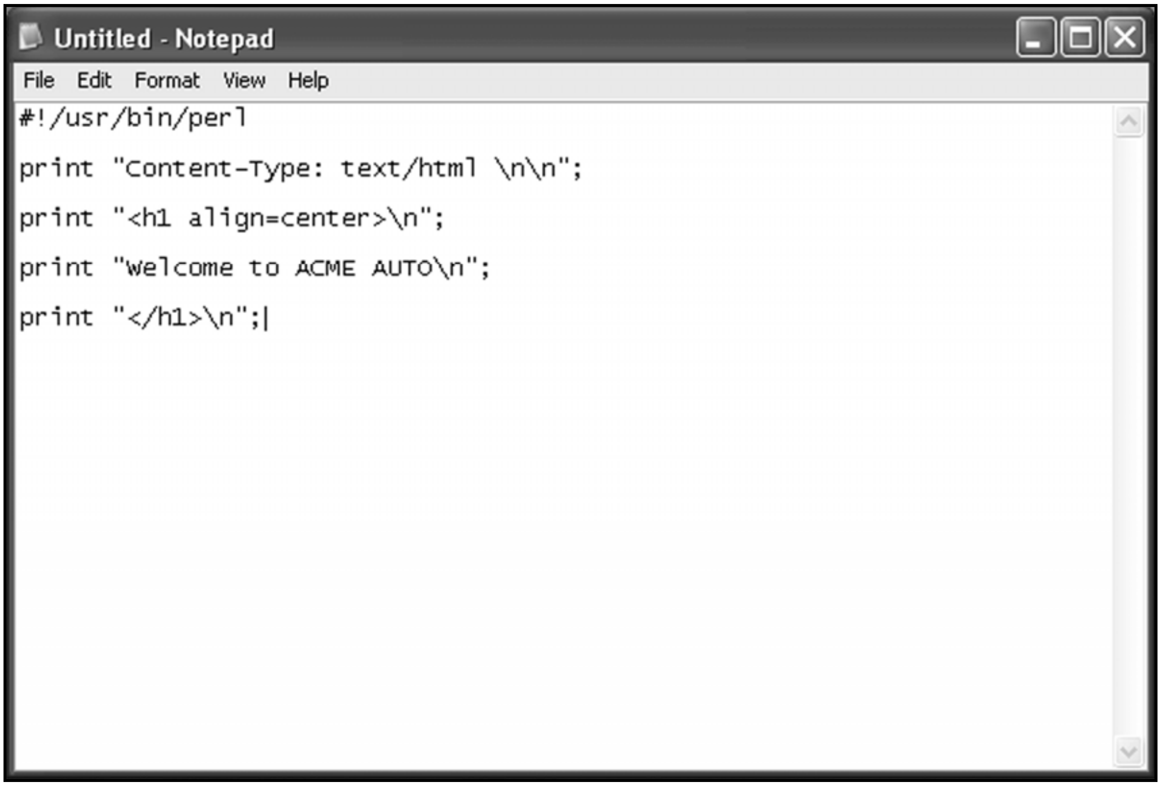
Numeric Value: 775 * Only applicable on Unix hosts

Owner	Group	World
☑ Read	☑ Read	☑ Read
☑ Write	☑ Write	□ Write
☑ Execute	☑ Execute	☑ Execute

Format text output with HTML tags

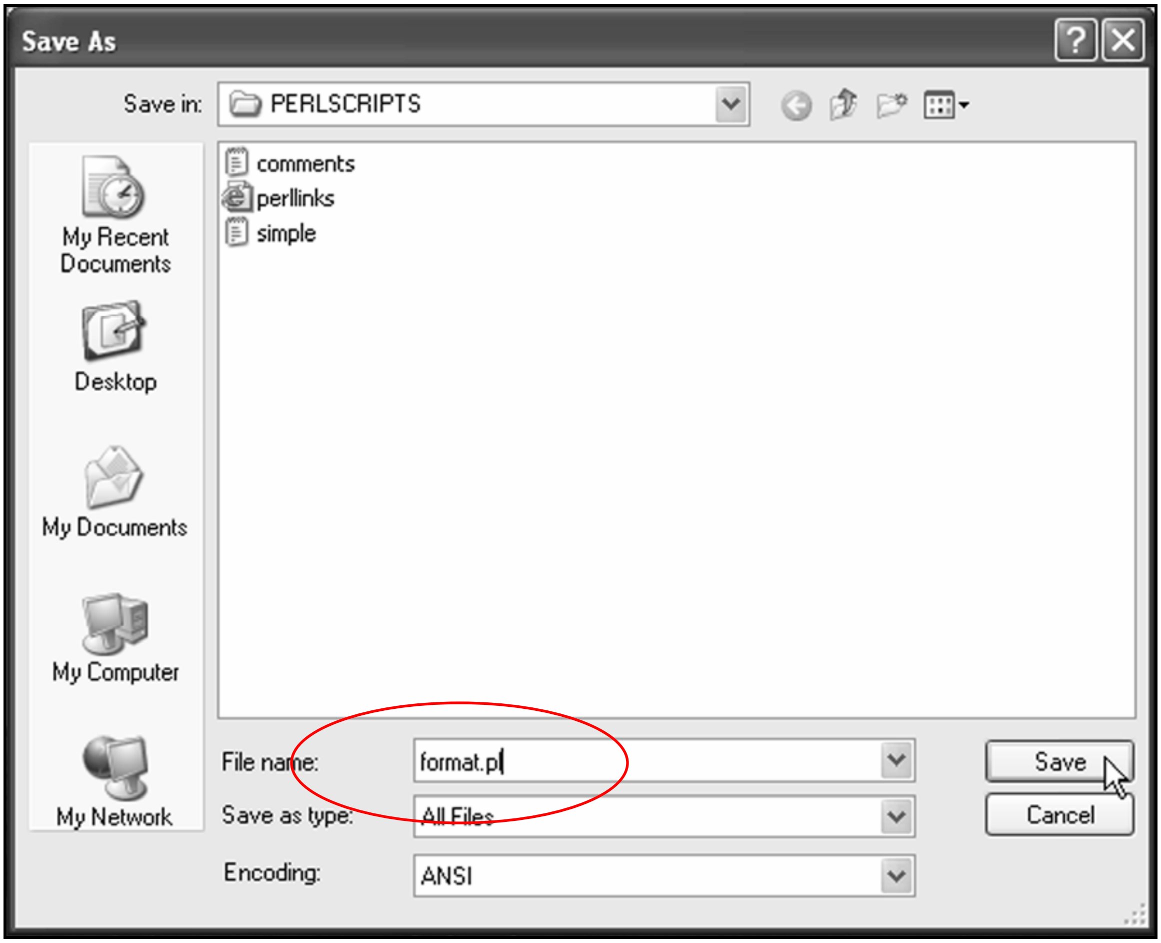
1. In Notepad, create a new script with this code:

```
#!/usr/bin/perl

print "Content-Type: text/html \n\n";

print "<h1 align=center>\n";

print "Welcome to ACME AUTO\n";

print "</h1>\n";
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";
print "<h1 align=center>\n";
print "Welcome to ACME AUTO\n";
print "</h1>\n";
```

2. Save the script as **format.pl** in the **PERLSCRIPTS** folder.



Save in: PERLSCRIPTS

comments
perllinks
simple

File name: format.pl

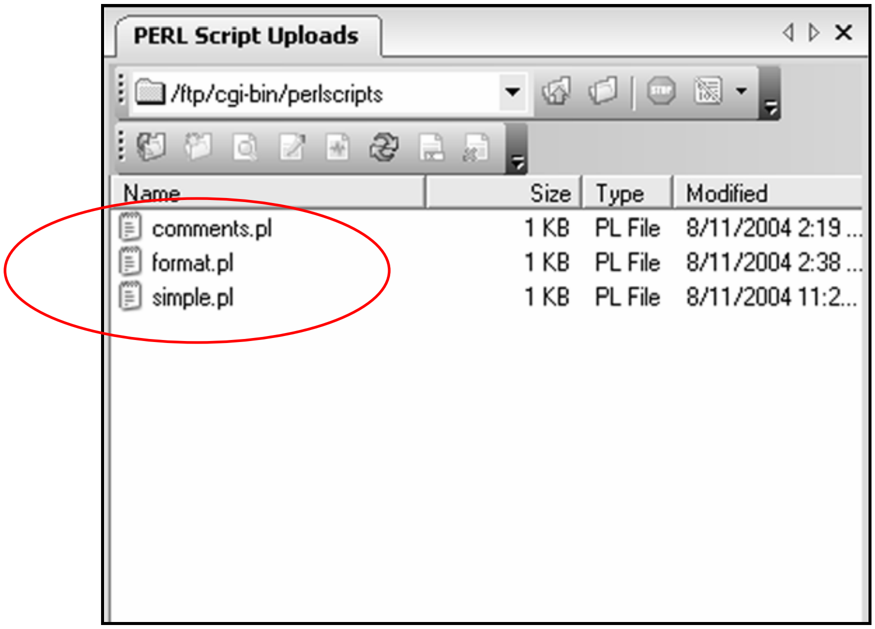
Save as type: All Files

Encoding: ANSI

This PERL script also includes HTML tags that format the text it outputs to the browser window:

```
print "<h1 align=center>\n";

print "Welcome to ACME AUTO\n";

print "</h1>\n";
```

3. Upload **format.pl** to the **perlscripts** directory in your Web site.

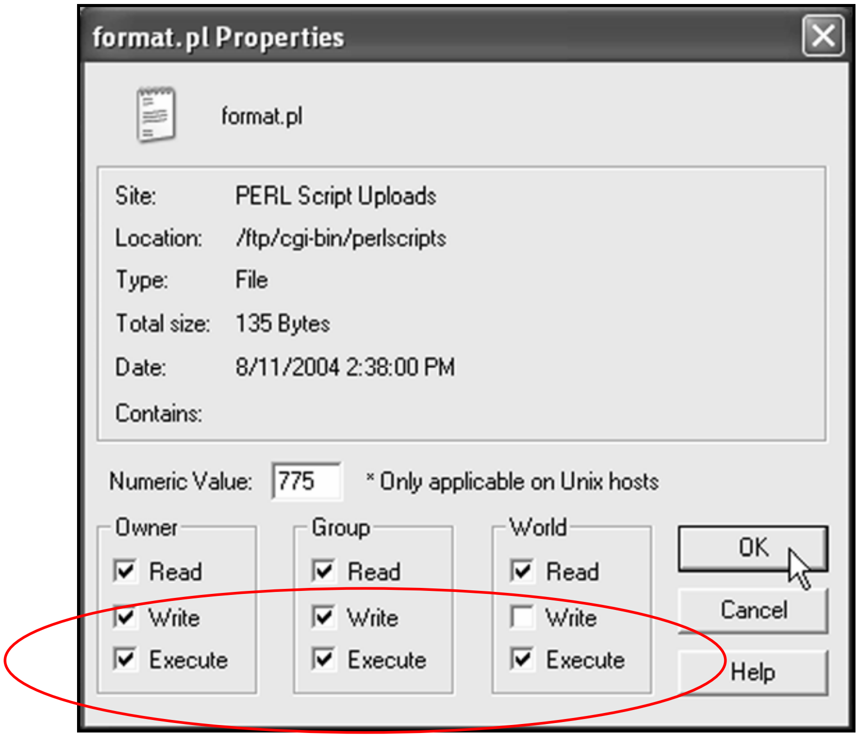


PERL Script Uploads

/ftp/cgi-bin/perlscripts

Name	Size	Type	Modified
comments.pl	1 KB	PL File	8/11/2004 2:19 ...
format.pl	1 KB	PL File	8/11/2004 2:38 ...
simple.pl	1 KB	PL File	8/11/2004 11:2...

4. Set its permissions so that anyone can execute it.



format.pl Properties

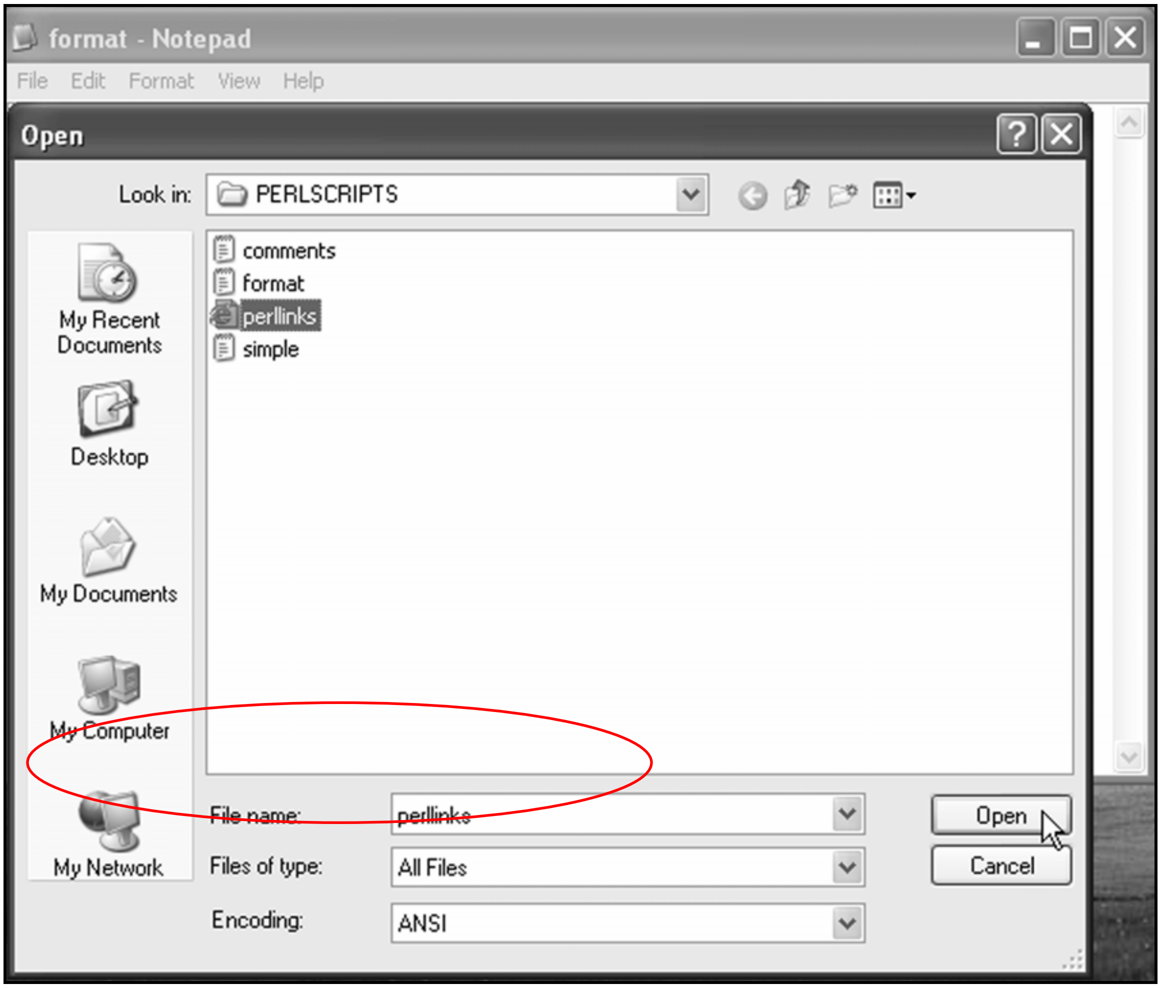
format.pl

Site:	PERL Script Uploads
Location:	/ftp/cgi-bin/perlscripts
Type:	File
Total size:	135 Bytes
Date:	8/11/2004 2:38:00 PM
Contains:	

Numeric Value: 775 * Only applicable on Unix hosts

Owner	Group	World
☑ Read	☑ Read	☑ Read
☑ Write	☑ Write	☐ Write
☑ Execute	☑ Execute	☑ Execute

5. Open **perllinks.html** in Notepad.



File name: perllinks

Files of type: All Files

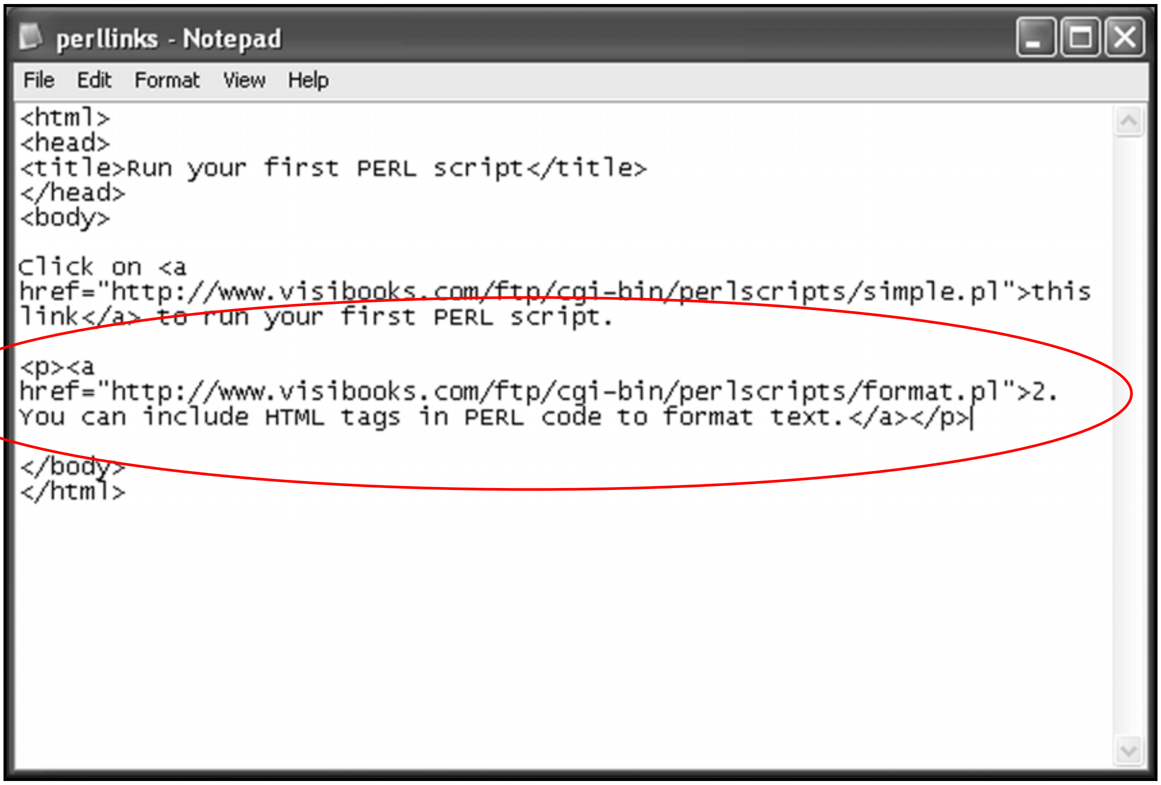
Encoding: ANSI

Tip: *It's in the* **PERLSCRIPTS** *folder.*

You may need to select **All Files** *in the* **Files of type** *list.*

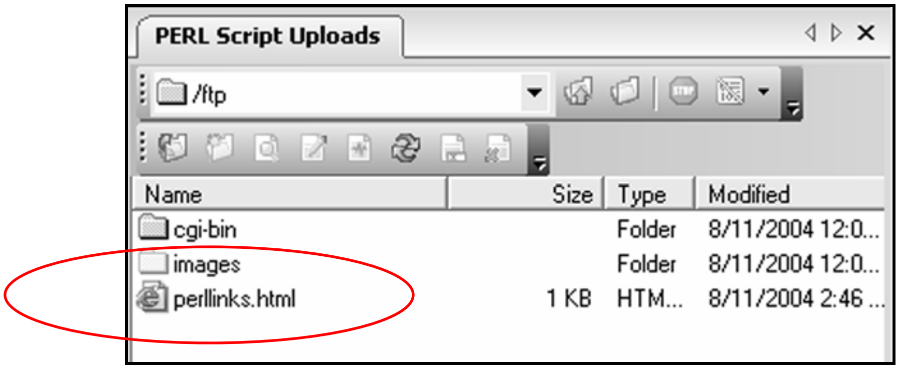
6. Add a link to see the output of **format.pl**:

```
<html>
<head>
<title>Run your first PERL script</title>
</head>
<body>

Click on <a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/simple.pl">this link</a> to run
your first PERL script.

<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/format.pl">2. You can include
HTML tags in PERL code to format text.</a></p>

</body>
</html>
```



```
<html>
<head>
<title>Run your first PERL script</title>
</head>
<body>

Click on <a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/simple.pl">this
link</a> to run your first PERL script.

<p><a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/format.pl">2.
You can include HTML tags in PERL code to format text.</a></p>

</body>
</html>
```

7. Save **perllinks.html**, then use WS_FTP to upload it to the home directory in your Web site.

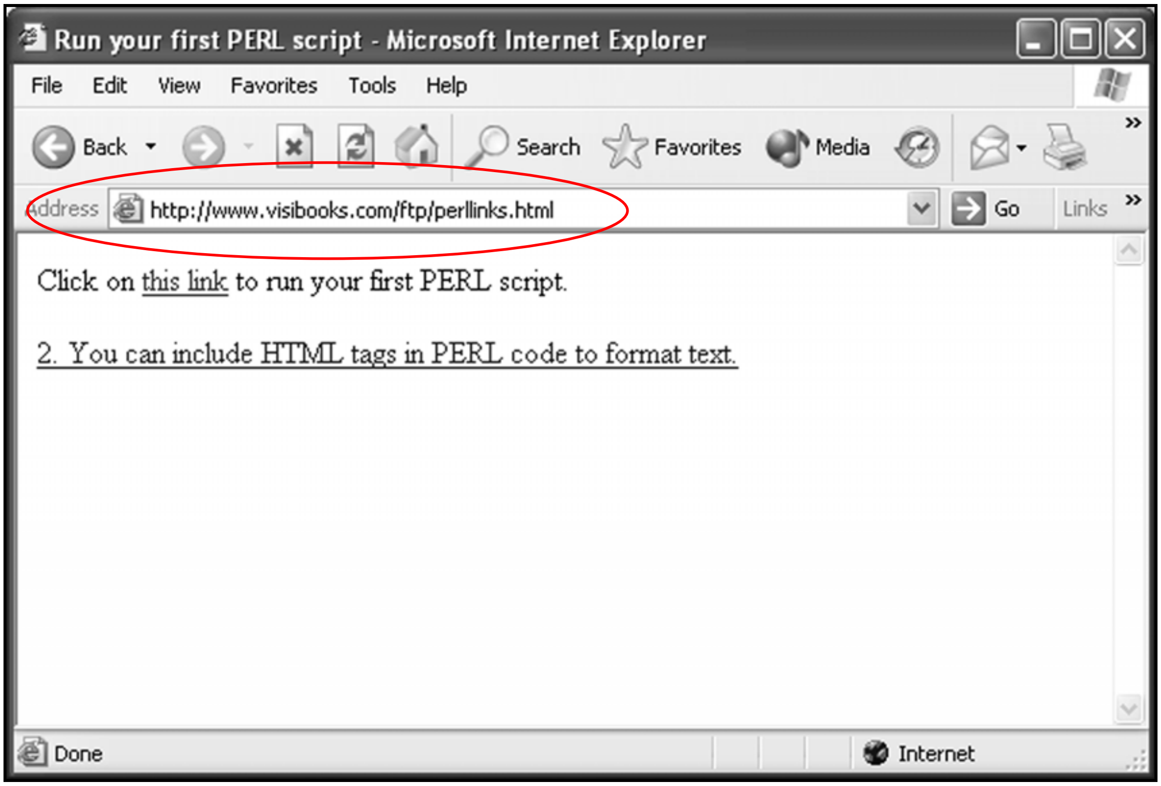


Name	Size	Type	Modified
cgi-bin		Folder	8/11/2004 12:0...
images		Folder	8/11/2004 12:0...
perllinks.html	1 KB	HTM...	8/11/2004 2:46 ...

Tip: *This is the same place* **perllinks.html** *was before. When WS_FTP prompts you to replace the existing file, click the* Overwrite *button.*

8. Open the browser and go to:

www.yourwebsite.com/perllinks.html

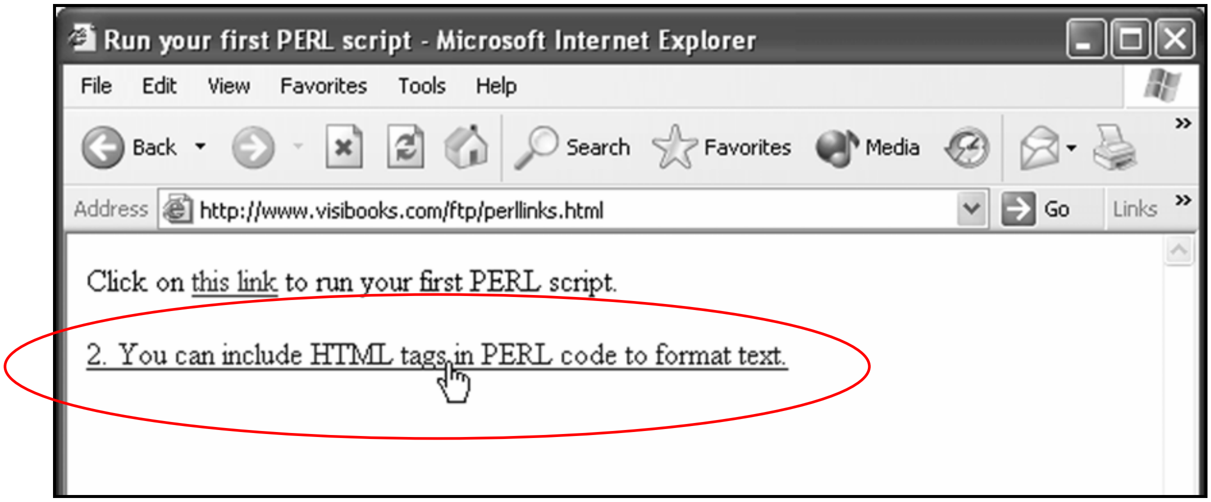


http://www.visibooks.com/ftp/perllinks.html

Click on this link to run your first PERL script.

2. You can include HTML tags in PERL code to format text.

9. Click the second link.

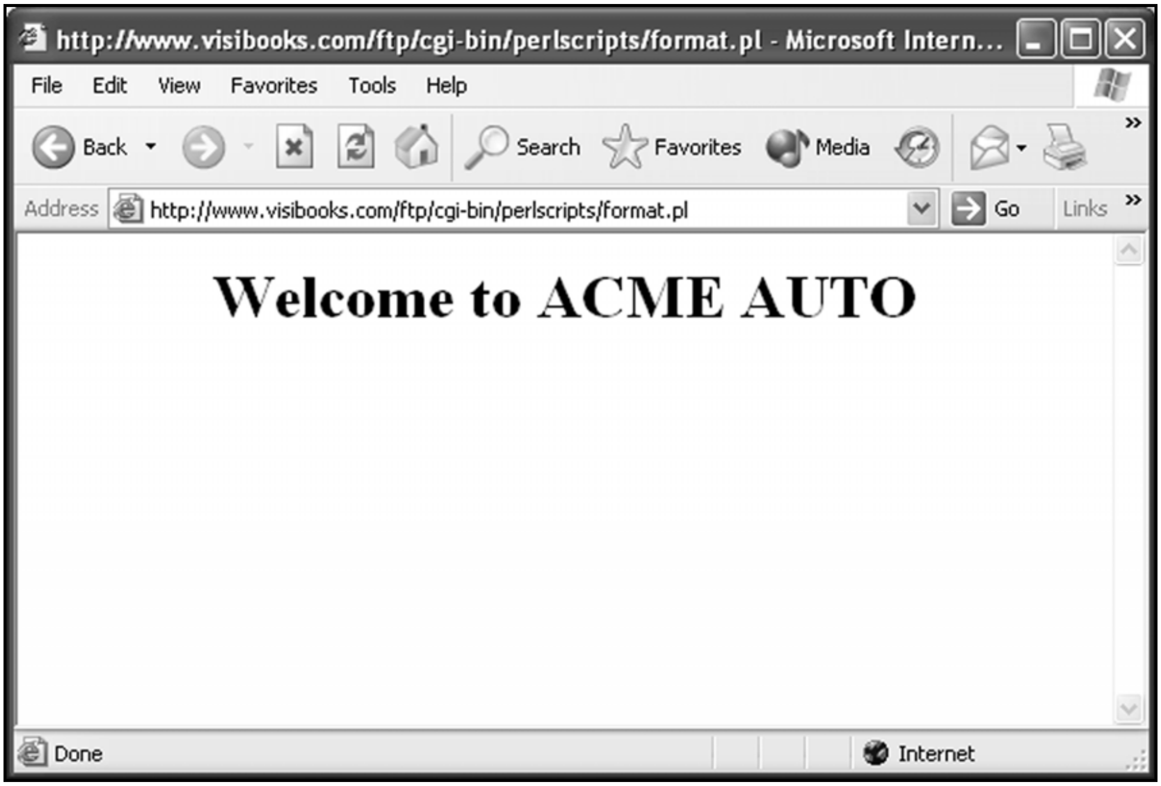


http://www.visibooks.com/ftp/perllinks.html

Click on this link to run your first PERL script.

2. You can include HTML tags in PERL code to format text.

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/format.pl - Microsoft Intern...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
Go
Links
Done
Internet

http://www.visibooks.com/ftp/cgi-bin/perlscripts/format.pl

Welcome to ACME AUTO

10. Close Notepad and WS_FTP.

Practice: Learning the Basics

1. Create a new folder called **PERL PRACTICE** on your computer's hard drive.

2. Open the Notepad program and create a new PERL script called **cars.pl**.

   Write the script so it prints:

   Fast cars, vintage cars, and classic cars, we all have our favorite car.

   in a Web browser window.

3. Save **cars.pl** in the **PERL PRACTICE** folder on your computer.

4. Open WS_FTP and create a new directory called **practice** within the **cgi-bin** directory in your Web site.

5. Upload **cars.pl** to the **practice** directory in your Web site.

6. Change the permissions of **cars.pl** so Owner, Group, and World can execute it.

7. Using Notepad, create a new Web page called **practice.html** that contains a link to the PERL script **cars.pl**:

```
<p><a href="http://www.yourwebsite.com/cgi-
bin/practice/cars.pl">Read about cars</a></p>
```

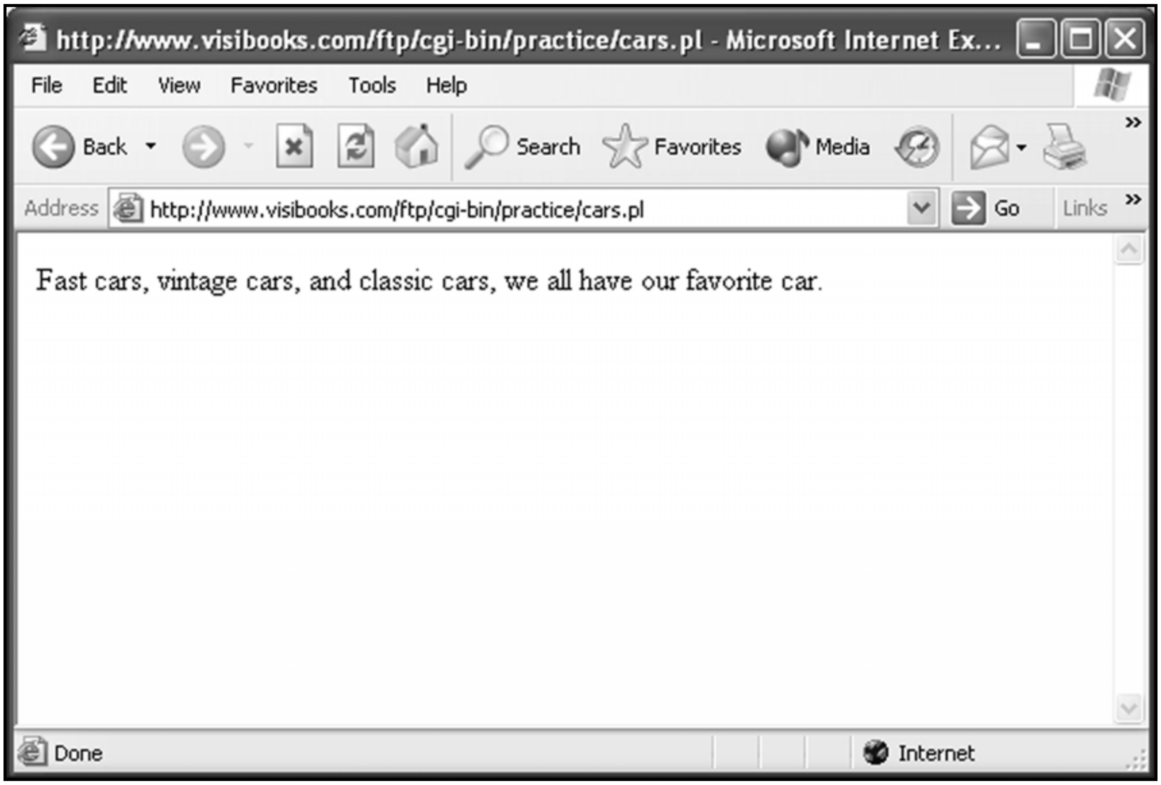
8. Save **practice.html**, then upload it to the home directory in your Web site.

9. In the browser, go to:

www.yourwebsite.com/practice.html

and click the **Read about cars** link.

The browser window should look like this:



http://www.visibooks.com/ftp/cgi-bin/practice/cars.pl - Microsoft Internet Ex...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/cars.pl
Go
Links
Done
Internet

Fast cars, vintage cars, and classic cars, we all have our favorite car.

10. In **practice.html**, insert a new link to **comments.pl**:

```
<p><a href=”http://www.yourwebsite.com/cgi-
bin/perlscripts/comments.pl”>Scripts still work
with comments in their code.</a></p>
```

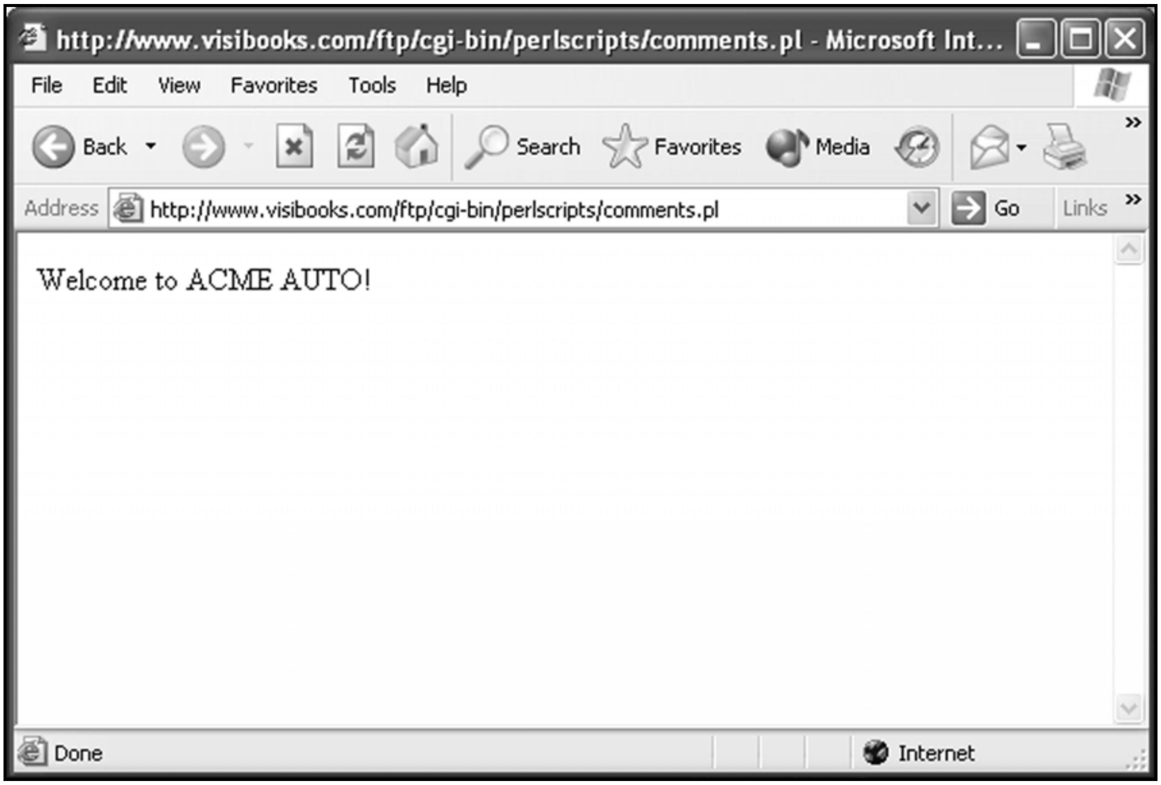
11. Save **practice.html**, then upload it to the home directory in your Web site.

12. In the browser, go to:

www.yourwebsite.com/practice.html

and click the **Scripts still work with comments in their code.** link.

The browser window should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/comments.pl - Microsoft Int...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/comments.pl
Go
Links
Done
Internet

Welcome to ACME AUTO!

13. Close Notepad and WS_FTP.

Working with Variables

In this section, you'll learn how to:

- **Employ single variables**
- **Print quotation marks**
- **Employ lists of variables**

What’s a variable?

A variable is a placeholder for information within a PERL script.

In PERL, a **Scalar variable** is a single piece of information. It always starts with a dollar sign.

E*xample:* `$myname`

An **Array variable** is a list of information. It always starts with the “at” sign (@).

E*xample:* `@months`

Variables are essential to all programming, and very useful. For example, you can use a Scalar variable to easily change “brown eyes” to “blue eyes” in a PERL script:

```
$eyecolor=“brown”
```

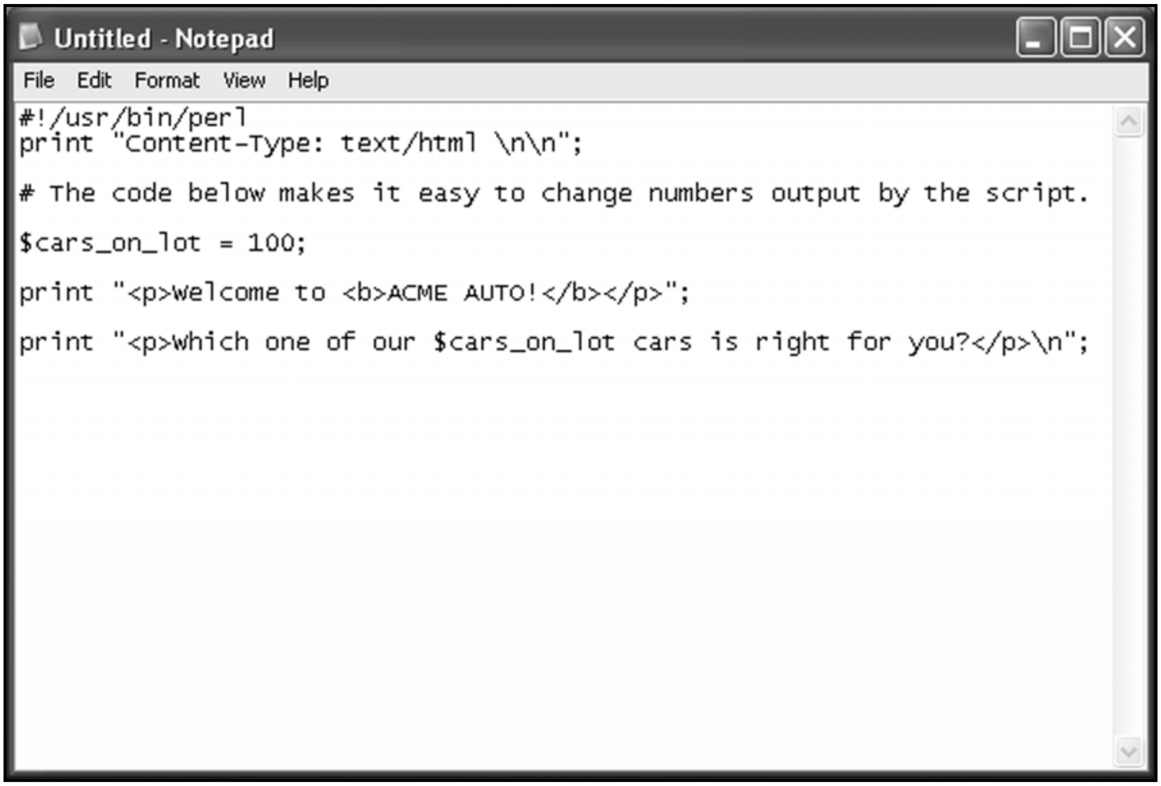
As the old song says, “Don’t it make my $eyecolor eyes blue…”

Employ single variables

Assign a number to a single variable

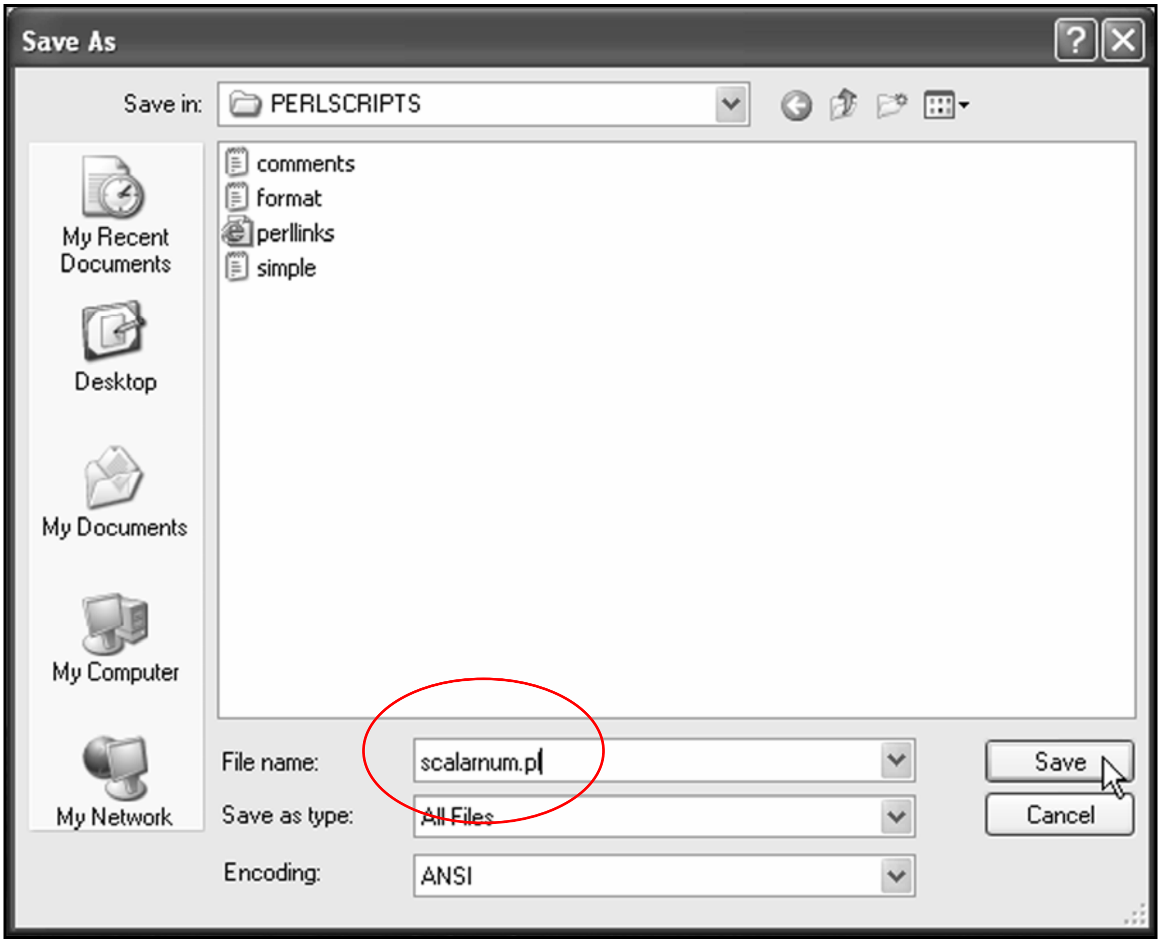
1. Open Notepad, then create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# The code below makes it easy to change
# numbers output by the script.

$cars_on_lot = 100;

print "<p>Welcome to <b>ACME AUTO!</b></p>";

print "<p>Which one of our $cars_on_lot cars is
right for you?</p>\n";
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# The code below makes it easy to change numbers output by the script.

$cars_on_lot = 100;

print "<p>Welcome to <b>ACME AUTO!</b></p>";

print "<p>Which one of our $cars_on_lot cars is right for you?</p>\n";
```

2. Save the script as **scalarnum.pl** in the **PERLSCRIPTS** folder.



Save in: PERLSCRIPTS

File name: scalarnum.pl

Save as type: All Files

Encoding: ANSI

Here's what each line of the script does:

-
  ```
  #!/usr/bin/perl
  print "Content-Type: text/html \n\n";
  ```

  These lines should look familiar. The first specifies the path to your Web server's PERL module. The second tells the browser that what comes after this line is HTML.

- **`$cars_on_lot = 100;`**

  `$cars_on_lot` is the single (scalar) variable. Scalar variables start with a `$`.

  The number **`100`** is assigned to the variable. The number is easy to change—that's why it's called a variable.

- **`print "<p>Welcome to <b>ACME AUTO!</b></p>";`**

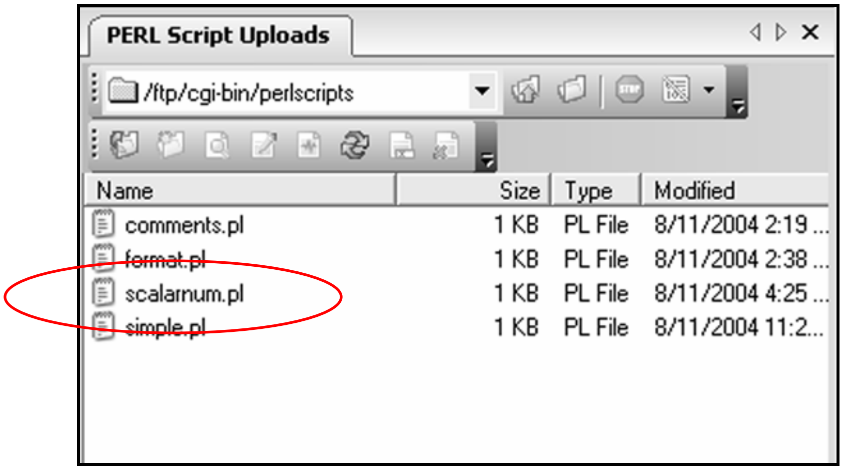
  `print "<p>Which one of our $cars_on_lot cars is right for you?</p>\n";`

  These lines should also look familiar. They're HTML code like we've used before, but with a difference: **`$cars_on_lot`**.

  This variable tells the Web browser to get the number specified (`100`) and insert it here.

  You'll see how it works in the following steps.

3. Open WS_FTP, then upload **scalarnum.pl** to the **perlscripts** directory in your Web site.



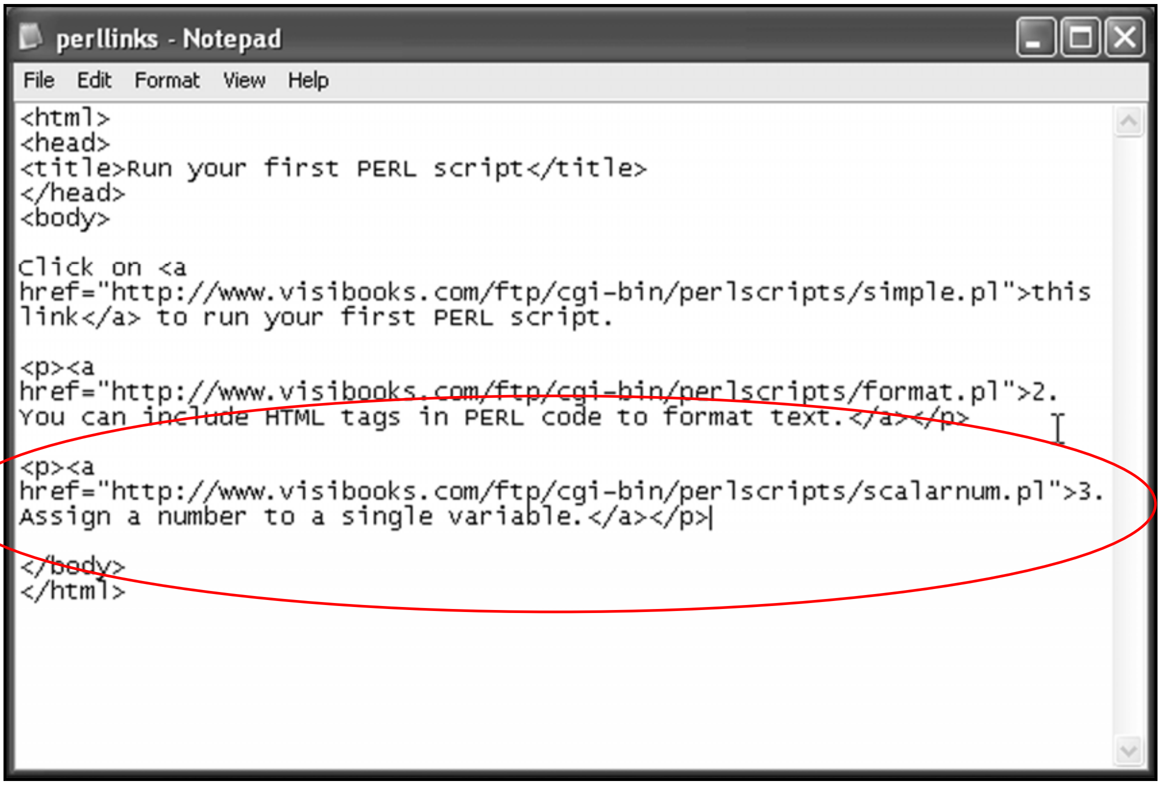
Name	Size	Type	Modified
comments.pl	1 KB	PL File	8/11/2004 2:19 ...
format.pl	1 KB	PL File	8/11/2004 2:38 ...
scalarnum.pl	1 KB	PL File	8/11/2004 4:25 ...
simple.pl	1 KB	PL File	8/11/2004 11:2...

4. Set its permissions so that anyone can execute it.

5. In Notepad, open **perllinks.html**.

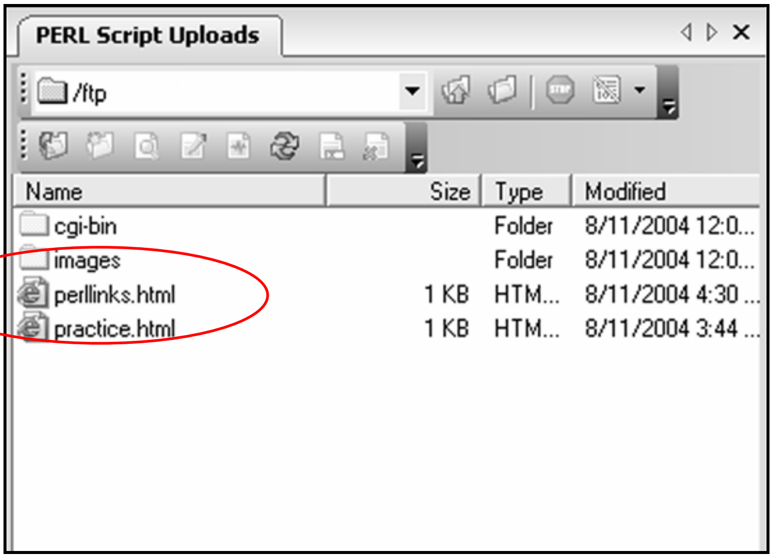
6. Insert a new link to **scalarnum.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/format.pl">2. You can include
HTML tags in PERL code to format text.</a></p>

<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/scalarnum.pl">3. Assign a
number to a single variable.</a></p>
```



```
<html>
<head>
<title>Run your first PERL script</title>
</head>
<body>

Click on <a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/simple.pl">this
link</a> to run your first PERL script.

<p><a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/format.pl">2.
You can include HTML tags in PERL code to format text.</a></p>

<p><a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalarnum.pl">3.
Assign a number to a single variable.</a></p>

</body>
</html>
```

7. Save **perllinks.html**, then upload it to the home directory in your Web site.

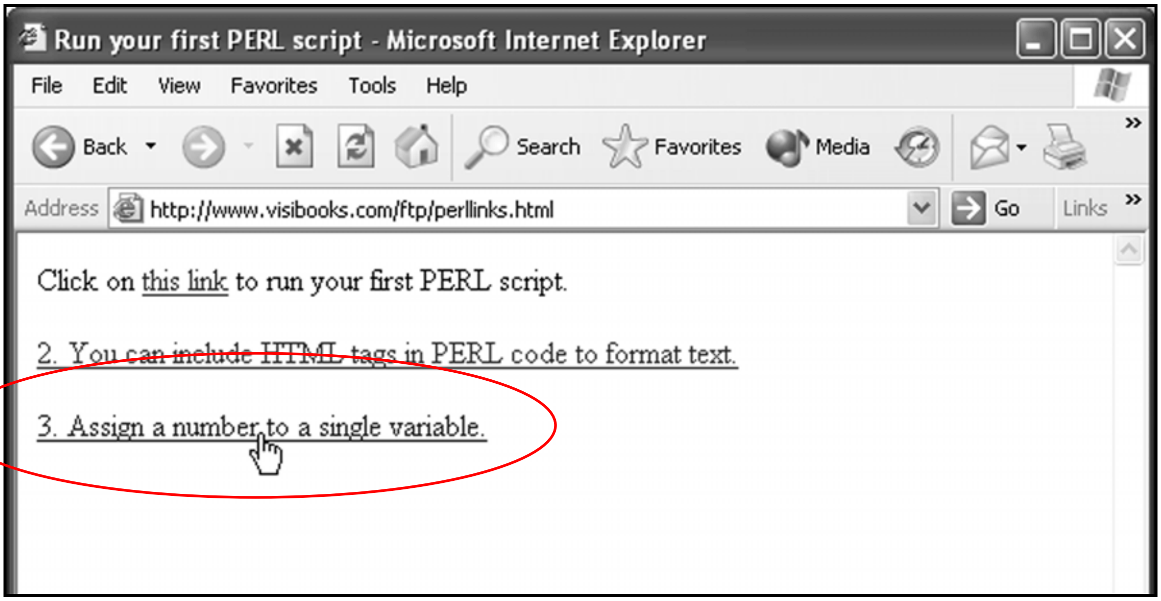


Name	Size	Type	Modified
cgi-bin		Folder	8/11/2004 12:0...
images		Folder	8/11/2004 12:0...
perllinks.html	1 KB	HTM...	8/11/2004 4:30 ...
practice.html	1 KB	HTM...	8/11/2004 3:44 ...

8. Using the browser, go to:

www.yourwebsite.com/perllinks.html

9. Click the **Assign a number to a single variable** link.



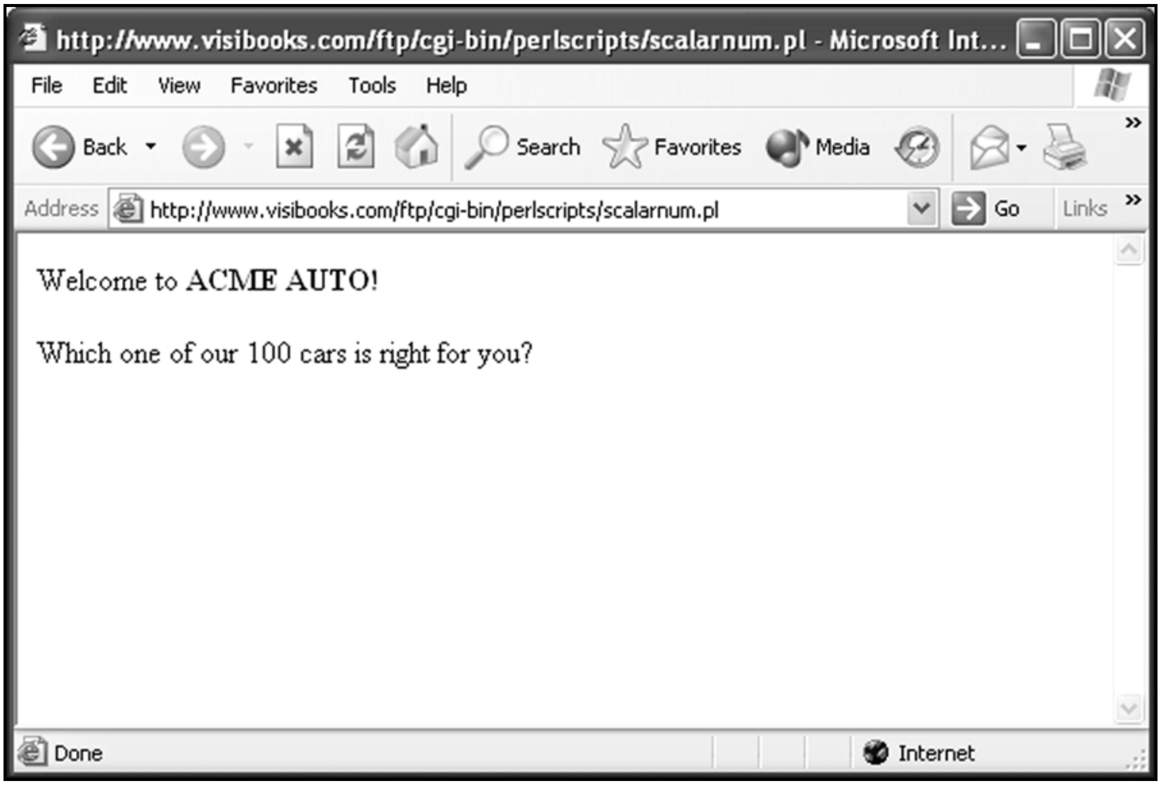
http://www.visibooks.com/ftp/perllinks.html

Click on this link to run your first PERL script.

2. You can include HTML tags in PERL code to format text.

3. Assign a number to a single variable.

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalarnum.pl - Microsoft Int...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalarnum.pl
Go
Links
Done
Internet

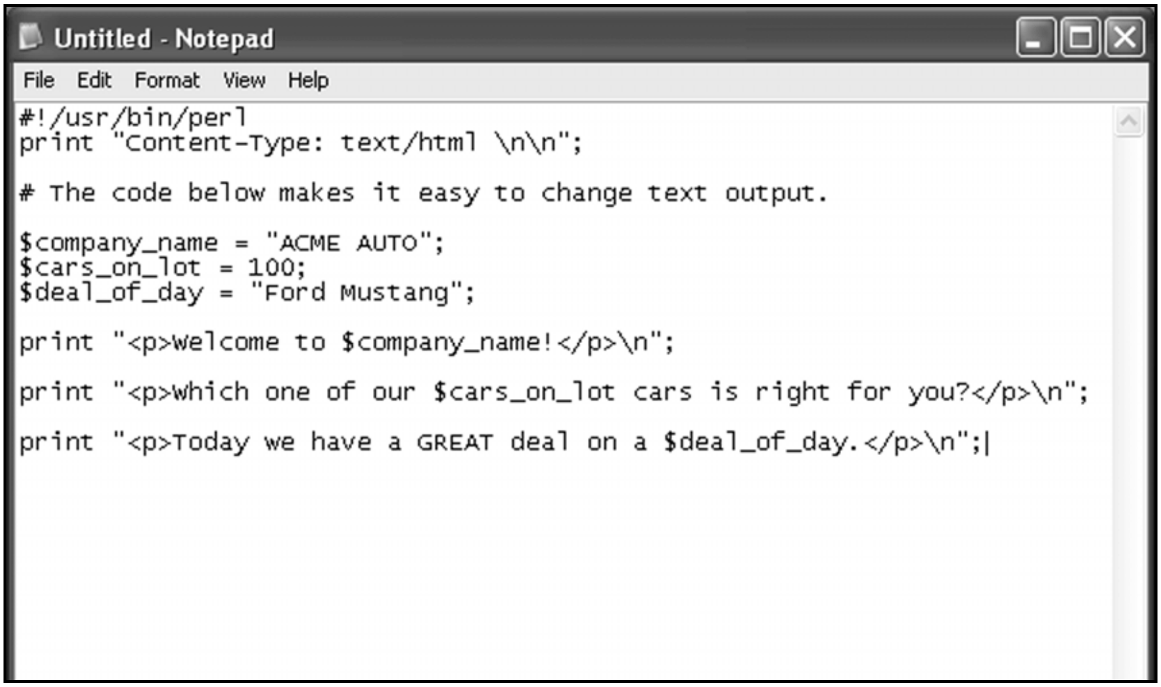
Welcome to ACME AUTO!

Which one of our 100 cars is right for you?

Assign text to a single variable

1. Using Notepad, create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# The code below makes it easy to
# change text output.

$company_name = "ACME AUTO";
$cars_on_lot  = 100;
$deal_of_day  = "Ford Mustang";

print "<p>Welcome to $company_name!</p>\n";

print "<p>Which one of our $cars_on_lot cars is
right for you?</p>\n";

print "<p>Today we have a GREAT deal on a
$deal_of_day.</p>\n";
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# The code below makes it easy to change text output.

$company_name = "ACME AUTO";
$cars_on_lot = 100;
$deal_of_day = "Ford Mustang";

print "<p>Welcome to $company_name!</p>\n";

print "<p>Which one of our $cars_on_lot cars is right for you?</p>\n";

print "<p>Today we have a GREAT deal on a $deal_of_day.</p>\n";
```

2. Save the script as **scalartext.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

- **`$company_name = "ACME AUTO";`**

  Assigns the text **`ACME AUTO`** to the scalar variable **`$company_name`**.

- **`$deal_of_day  = "Ford Mustang";`**

  Assigns the text **`Ford Mustang`** to the scalar variable **`$deal_of_day`**.

- **`$cars_on_lot  = 100;`**

  Assigns the number **`100`** to the scalar variable **`$cars_on_lot`**.

- **`print "<p>Welcome to $company_name!</p>\n";`**

  Prints the words "Welcome to" to the browser window, then inserts the text assigned to the scalar variable **`$company_name`** ("ACME AUTO").

- **`print "<p>Which one of our $cars_on_lot cars is right for you?</p>\n";`**

  Prints words to the browser window, inserting the number assigned to the scalar variable **`$cars_on_lot`** (**`100`**).

- `print "<p>Today we have a GREAT deal on a $deal_of_day.</p>\n";`

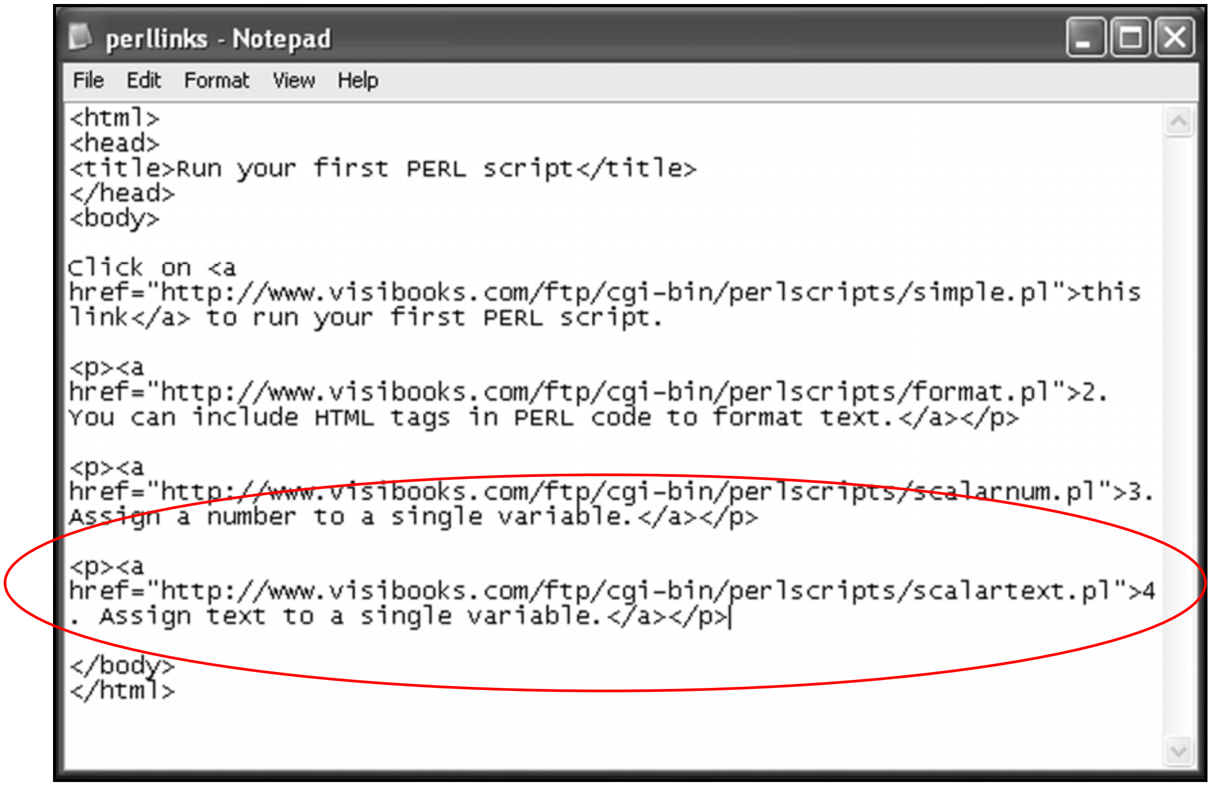
  Prints words to the browser window, then inserts the text assigned to the scalar variable **`$deal_of_day`** ("Ford Mustang").

3. Upload **scalartext.pl** to the **perlscripts** directory in your Web site and set its permissions so that anyone can execute it.

4. In Notepad, open **perllinks.html**.

5. Insert a new link to **scalartext.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-bin/perlscripts/scalartext.pl">4. Assign text
to a single variable.</a></p>
```



```
<html>
<head>
<title>Run your first PERL script</title>
</head>
<body>

Click on <a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/simple.pl">this
link</a> to run your first PERL script.

<p><a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/format.pl">2.
You can include HTML tags in PERL code to format text.</a></p>

<p><a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalarnum.pl">3.
Assign a number to a single variable.</a></p>

<p><a
href="http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalartext.pl">4
. Assign text to a single variable.</a></p>

</body>
</html>
```

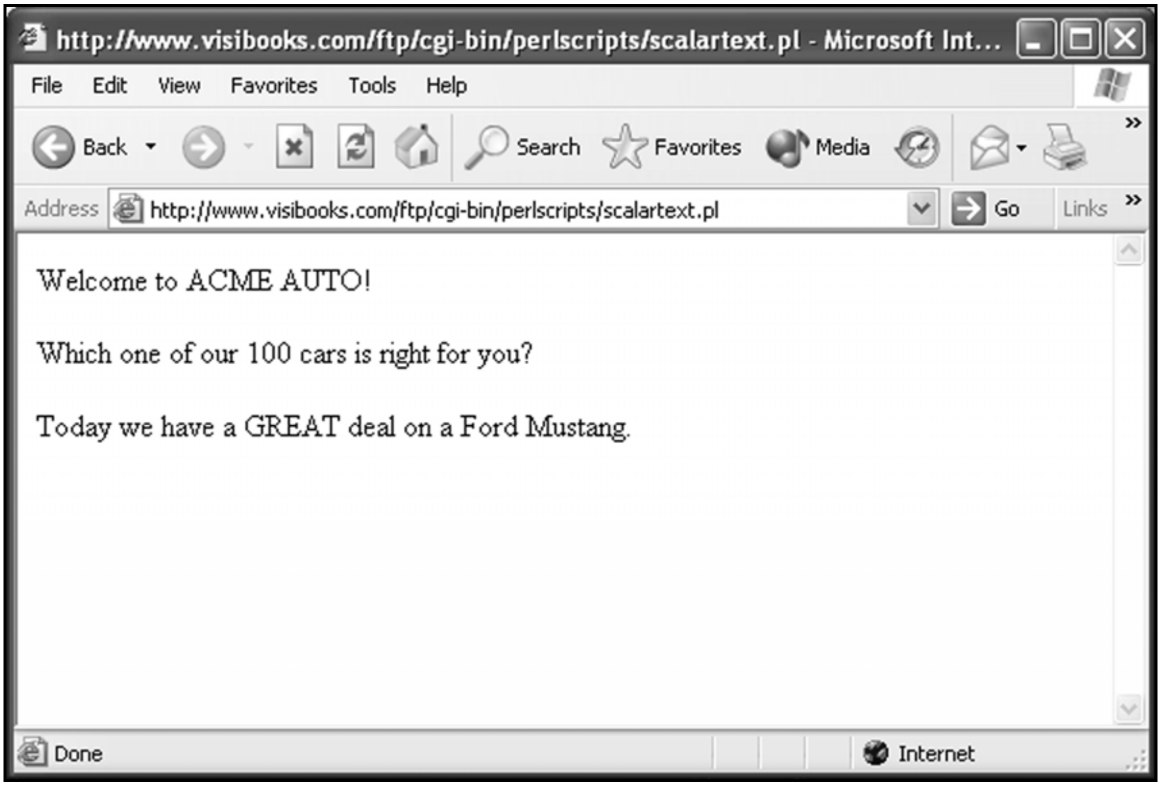
6. Save **perllinks.html**, then upload it to the home directory in your Web site.

7. Using the browser, go to:

   www.yourwebsite.com/perllinks.html

8. Click the **Assign text to a single variable** link.

   The output should look like this:



http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalartext.pl - Microsoft Int...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/scalartext.pl
Go
Links
Done
Internet

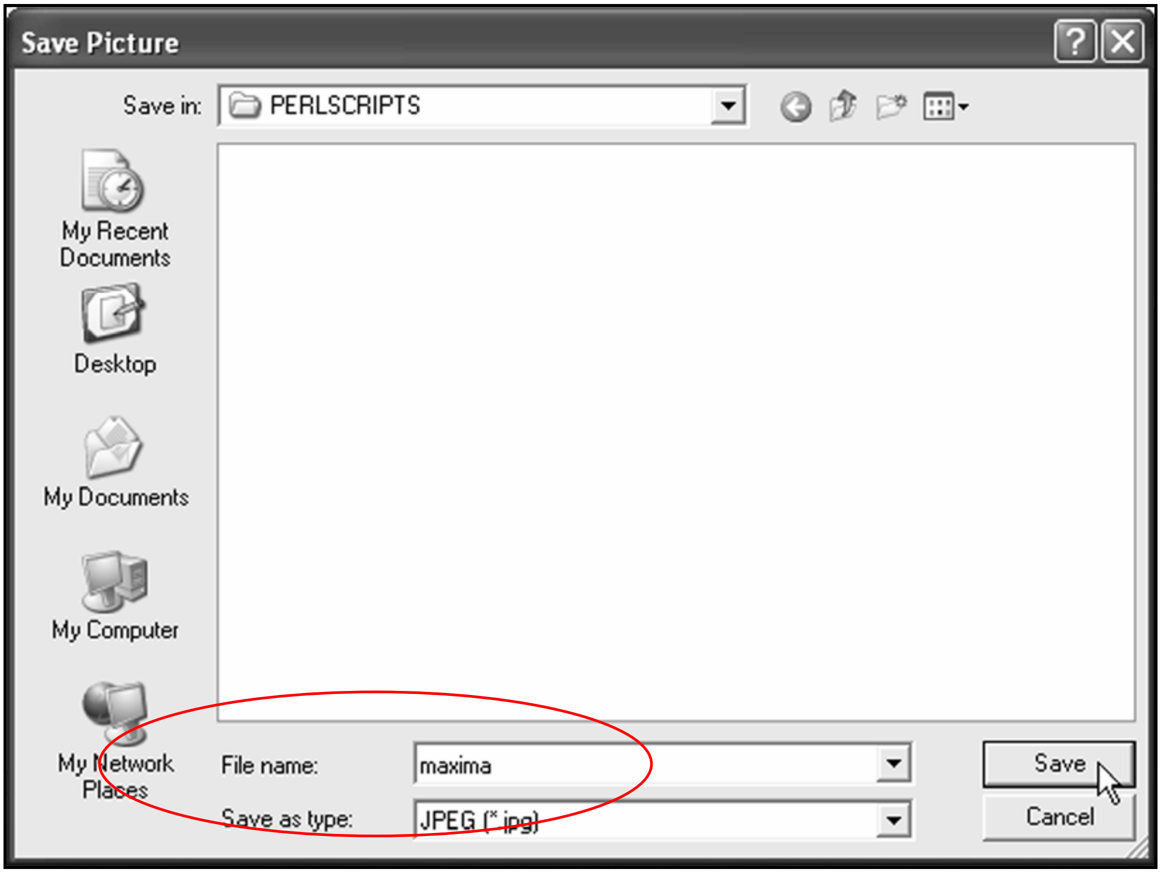
```
Welcome to ACME AUTO!

Which one of our 100 cars is right for you?

Today we have a GREAT deal on a Ford Mustang.
```

Print quotation marks

1. In the browser, go to:

www.visibooks.com/books/perl

2. Right-click **maxima.jpg**, then save it in the **PERLSCRIPTS** folder on your computer.

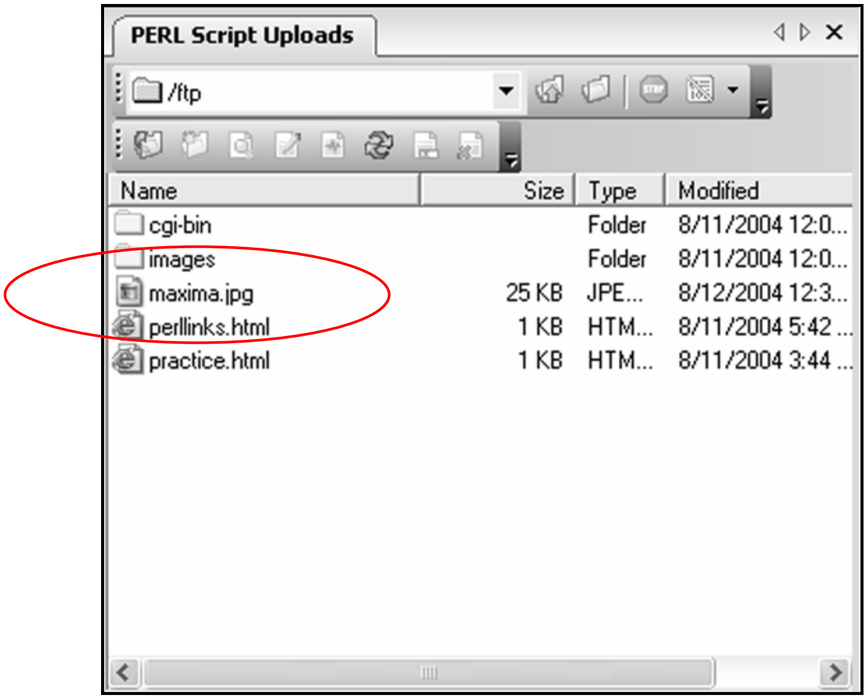


Save in: PERLSCRIPTS

File name: maxima

Save as type: JPEG (*.jpg)

3. Upload **maxima.jpg** to the home directory in your Web site.



Name	Size	Type	Modified
cgi-bin		Folder	8/11/2004 12:0...
images		Folder	8/11/2004 12:0...
maxima.jpg	25 KB	JPE...	8/12/2004 12:3...
perllinks.html	1 KB	HTM...	8/11/2004 5:42 ...
practice.html	1 KB	HTM...	8/11/2004 3:44 ...

4. In Notepad, create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# The code below uses a variable to
# display a photo.

$cars_on_lot = 100;

$deal_of_day = "Nissan Maxima";

$pic_of_day =
"http://www.yourwebsite.com/maxima.jpg";

print "<p>Welcome to <b>ACME AUTO!</b></p>\n";

print "<p>Which one of our $cars_on_lot cars is
right for you?</p>\n";
```

```
print "<p>Today we have a <b>GREAT</b> deal on
a $deal_of_day car:</p>\n";

print "<img src="$pic_of_day">\n";
```

Tip: *Remember to change the* `www.yourwebsite.com` *address in* `$pic_of_day = "http://www.yourwebsite.com/maxima.jpg"` *to your actual Web site address.*

5. Save the script as **qmarks.pl** in the **PERLSCRIPTS** folder.

6. Upload **qmarks.pl** to the **perlscripts** directory in your Web site and set its permissions so that anyone can execute it.

7. In Notepad, open **perllinks.html**.

8. Insert a new link to **qmarks.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/qmarks.pl">5. Print quotation
marks.</a></p>
```

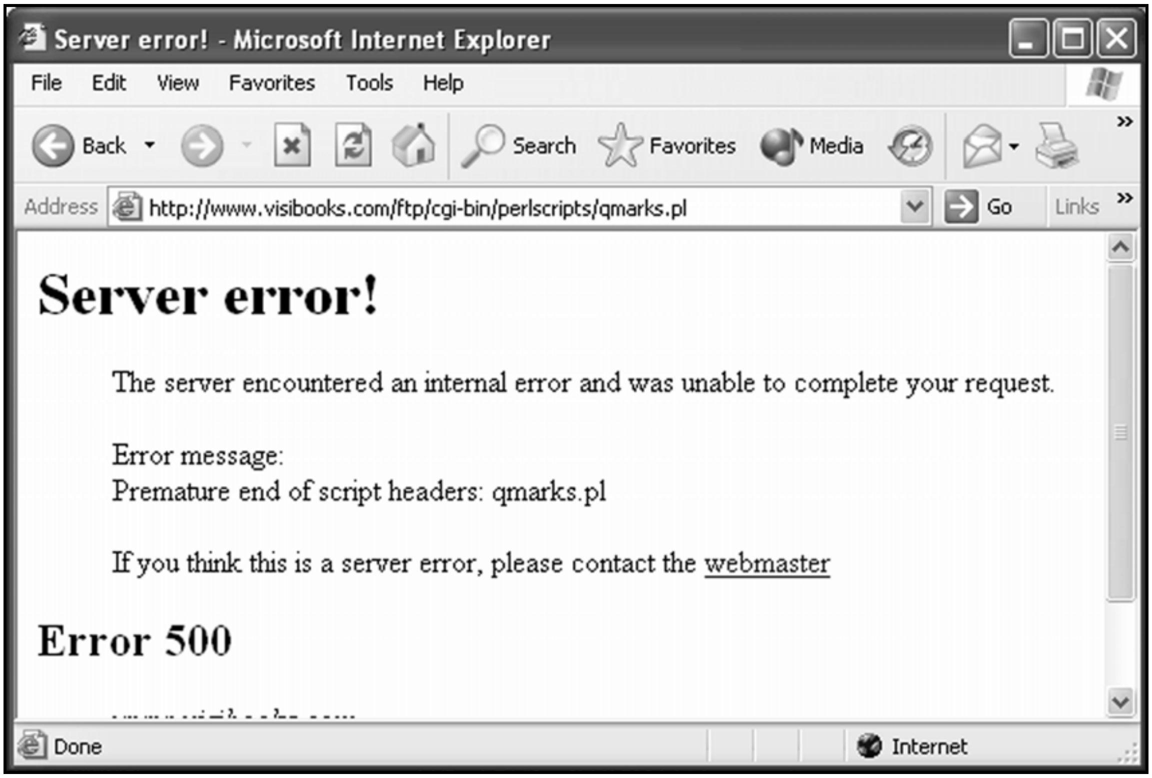
9. Save **perllinks.html**, then upload it to the home directory in your Web site.

10. Using the browser, go to:

www.yourwebsite.com/perllinks.html

11. Click the **Print quotation marks** link.

The output should look something like this:



Server error! - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/qmarks.pl
Go
Links
Done
Internet

Server error!

The server encountered an internal error and was unable to complete your request.

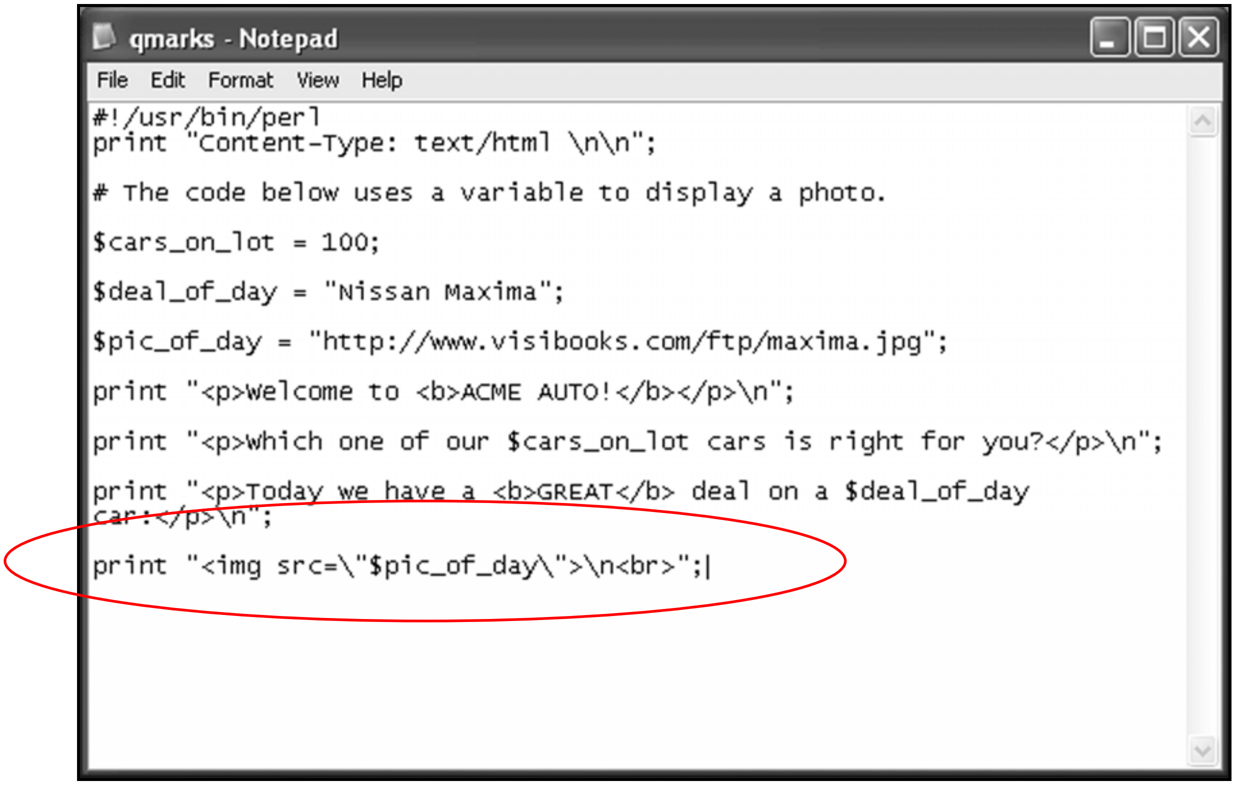
Error message:
Premature end of script headers: qmarks.pl

If you think this is a server error, please contact the webmaster

Error 500

12. In Notepad, edit **qmarks.pl** to enclose the `$pic_of_day` variable in \ characters:

```
print "<img src=\"$pic_of_day\">\n<br>";
```



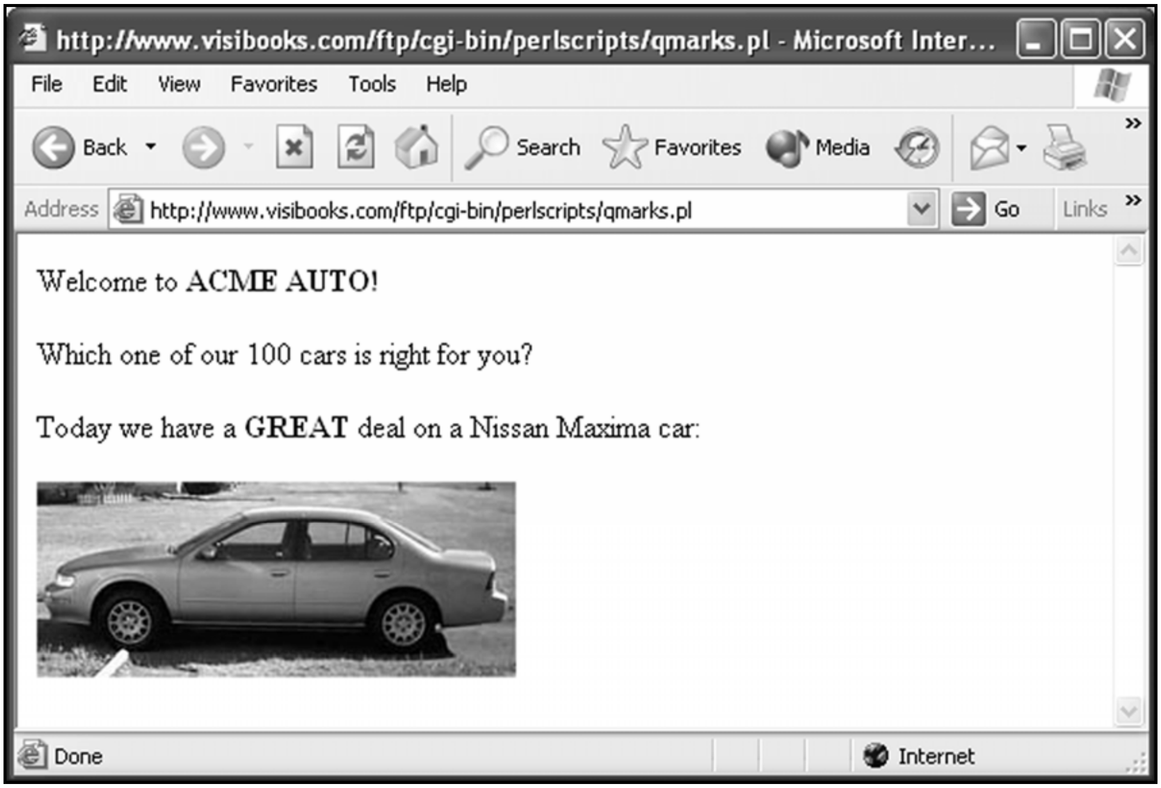
```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# The code below uses a variable to display a photo.

$cars_on_lot = 100;

$deal_of_day = "Nissan Maxima";

$pic_of_day = "http://www.visibooks.com/ftp/maxima.jpg";

print "<p>Welcome to <b>ACME AUTO!</b></p>\n";

print "<p>Which one of our $cars_on_lot cars is right for you?</p>\n";

print "<p>Today we have a <b>GREAT</b> deal on a $deal_of_day
car:</p>\n";

print "<img src=\"$pic_of_day\">\n<br>";
```

13. Save **qmarks.pl** and upload it to the **perlscripts** directory again.

14. Reload **perllinks.html** in your Web browser.

15. Click the **Print quotation marks** link again.

Its output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/qmarks.pl - Microsoft Inter...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/qmarks.pl
Go
Links
Done
Internet

Welcome to **ACME AUTO!**

Which one of our 100 cars is right for you?

Today we have a **GREAT** deal on a Nissan Maxima car:

Tip: *Since the HTML* **`<img>`** *tag requires the use of two double-quotation marks*

`<img src=”maxima.jpg”>`

enclose them in \ *characters to let the Web server know that you want to print a double-quote to the screen. Otherwise, the Web server will think you want the double-quotes to start and end a text string in a PERL command.*

\ *is called an “escape character.” Escape characters are used to print characters, such as double-quotes, that the Web server might otherwise think were part of a PERL command or text string.*

Print with double vs. single quotes

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# Printing with Double Quotes (")
# vs. Single Quotes (')

$cars_on_lot = 100;

print "<p>Welcome to <b>ACME AUTO!</b></p>\n";

# double quotes

print "<p>Which one of our $cars_on_lot cars is
right for you?</p>\n";

# single quotes

print '<p>Which one of $cars_on_lot is right
for you?</p>\n';
```

2. Save the script as **quotes.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

-
  ```
  print "<p>Which one of our $cars_on_lot
  cars is right for you?</p>\n";
  ```

  By using "double quotes" in the above print statement, the number assigned to the scalar variable `$cars_on_lot` (100) is printed to the browser window.

- **`print '<p>Which one of $cars_on_lot is right for you?</p>\n';`**

  By using 'single quotes' in the above print statement, the text **$cars_on_lot** is printed to the browser window along with the words that surround it.

3. Upload **quotes.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **quotes.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/quotes.pl">6. Double vs. single
quotes.</a></p>
```

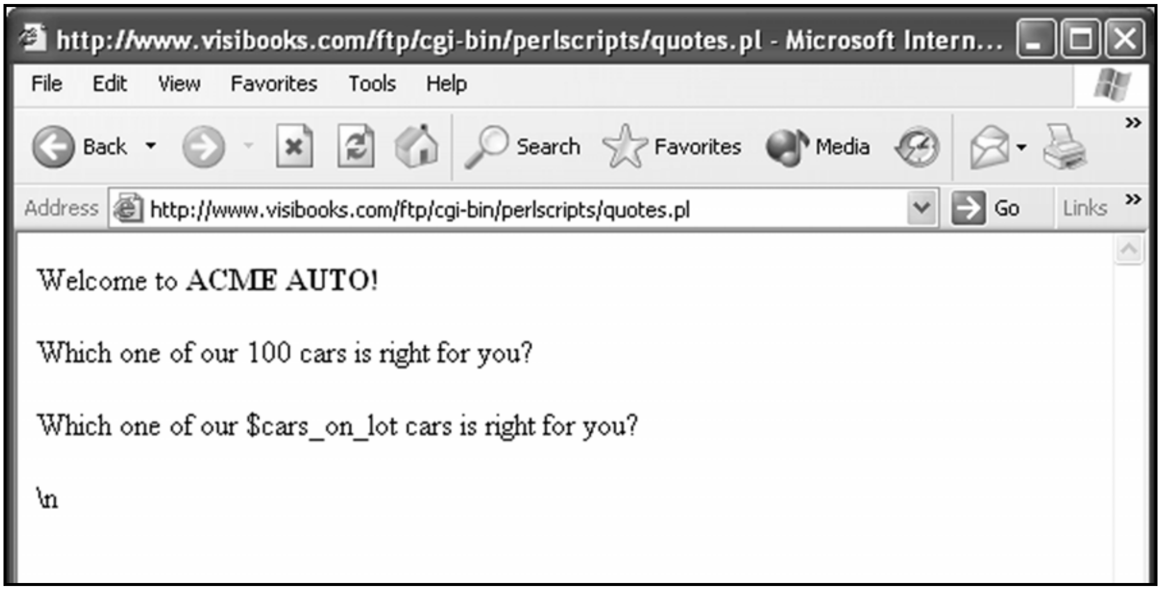
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

   www.yourwebsite.com/perllinks.html

7. Click the **Double vs. single quotes** link.

The output should look like this:

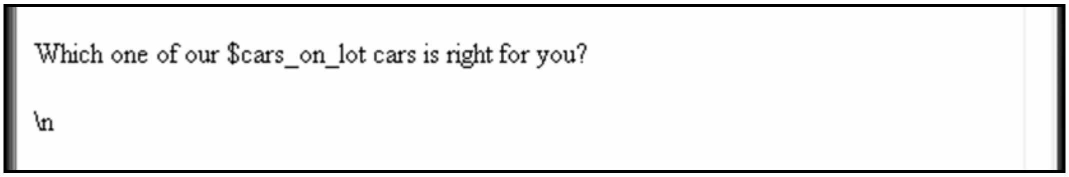

http://www.visibooks.com/ftp/cgi-bin/perlscripts/quotes.pl - Microsoft Intern...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/quotes.pl
Go
Links

```
Welcome to ACME AUTO!

Which one of our 100 cars is right for you?

Which one of our $cars_on_lot cars is right for you?

\n
```

Tip: *Using single quotes* (`‘`) *with the* `print` *function*

```
print ‘<p>Which one of $cars_on_lot is right
for you?</p>\n’;
```

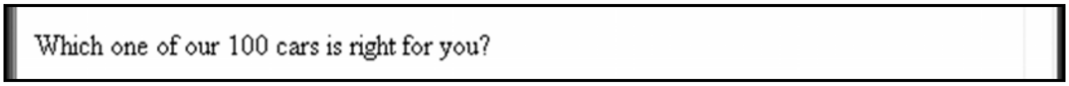
prints literally everything in between the two quotation marks.



```
Which one of our $cars_on_lot cars is right for you?

\n
```

If you want to display the value of a variable, use double quotes (`“`):

```
print “<p>Which one of our $cars_on_lot cars is
right for you?</p>\n”;
```



```
Which one of our 100 cars is right for you?
```

Employ lists of variables

Create lists of number variables

1. Create a new script with this code:

   ```
   #!/usr/bin/perl
   print "Content-Type: text/html \n\n";

   # This script demonstrates how to
   # create a numeric array.

   @AcmeInventory = (178,286,387);

   print @AcmeInventory;

   print "<p>We just created a list of numbers
   using an array variable!";
   ```

2. Save the script as **numberlist.pl** in the **PERLSCRIPTS** folder.

   Here's what the relevant lines in this script do:

   - `@AcmeInventory = (178,286,387);`

     The numbers 178, 286, and 387 are assigned to the array variable `@AcmeInventory`.

   - `print @AcmeInventory;`

     The numbers assigned the array variable `@AcmeInventory` are printed to the browser window: 178, 286, and 387.

3. Upload **numberlist.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **numberlist.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/numberlist.pl">7. Create a list
of numbers.</a></p>
```

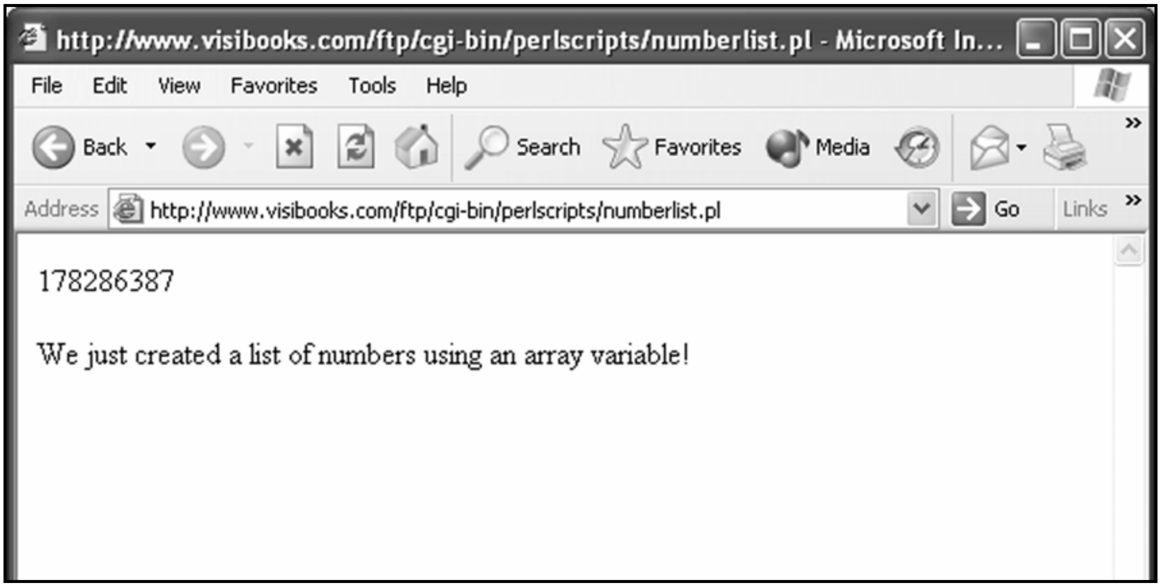
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

www.yourwebsite.com/perllinks.html

7. Click the **Create a list of numbers** link.

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/numberlist.pl - Microsoft In...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/numberlist.pl
Go
Links

```
178286387

We just created a list of numbers using an array variable!
```

Create lists of text variables

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# This script demonstrates how to
# create a text array.

@AcmeCars = ("Ford","Dodge","Chevy");

print "@AcmeCars";

print "<p>We have just created a text
array!</p>”;
```

2. Save the script as **textlist.pl** in the **PERLSCRIPTS** folder.

   Here's what the relevant lines in this script do:

   - `@AcmeCars = ("Ford","Dodge","Chevy");`

     The words "Ford","Dodge", and "Chevy" are assigned to the array variable `@AcmeCars`.

   - `print "@AcmeCars";`

     The words assigned to the array value `@AcmeCars` are printed to the browser window:

     Ford Dodge Chevy

3. Upload **textlist.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **textlist.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/textlist.pl">8. Create a list
of text.</a></p>
```

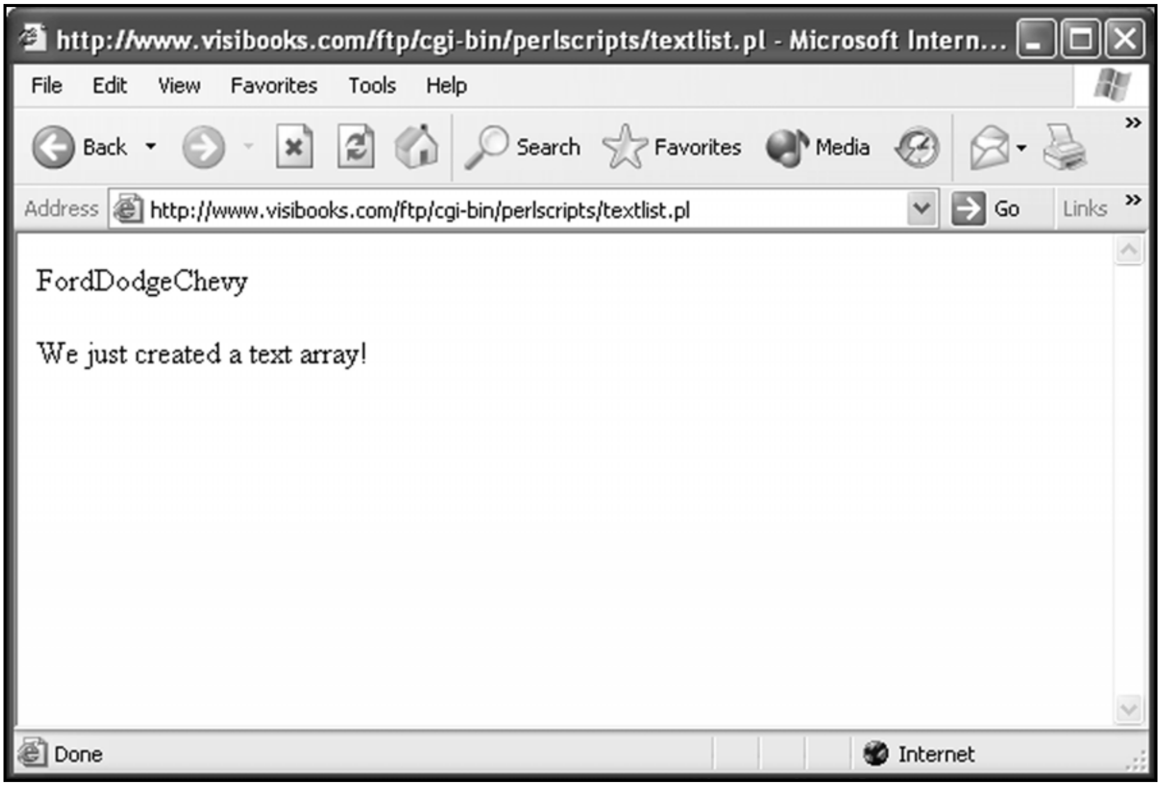
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

   www.yourwebsite.com/perllinks.html

7. Click the **Create a list of text** link.

   The output should look like this:



http://www.visibooks.com/ftp/cgi-bin/perlscripts/textlist.pl - Microsoft Intern...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/textlist.pl
Go
Links
Done
Internet

```
FordDodgeChevy

We just created a text array!
```

Print an element in a list of variables

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# This script demonstrates how to
# print an element in an array

@AcmeCars = ("Ford","Dodge","Chevy");

print "<p>* $AcmeCars[0] * is the first element
in the text array.</p>";

print "<p>* $AcmeCars[2] * is the third element
in the text array.</p>";
```

Tip: *In PERL, numbering of array variables starts at 0 not 1.*

This can be confusing, but it's common to many programming languages.

2. Save the script as **printelement.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in the script do:

- `print "<p>* $AcmeCars[0] * is the first element in the text array.</p>";`

  The word “Ford” is printed to the browser window because it’s the first word in the **`@AcmeCars`** array list—the zero position.

  Notice that **`$`**—signifying a single (scalar) value—is used when printing a single element of an array. Basically, **`$AcmeCars[0]`** means: give me the single (scalar) value, in the zero position in the **`@AcmeCars`** array list.

- `print "<p>* $AcmeCars[2] * is the third element in the text array.</p>";`

  The word “Chevy” is printed because it’s in the number 2 position in the **`@AcmeCars`** array. It’s the third item in the array list—the number two position.

3. Upload **printelement.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **printelement.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/printelement.pl">9. Print
elements in a text array.</a></p>
```

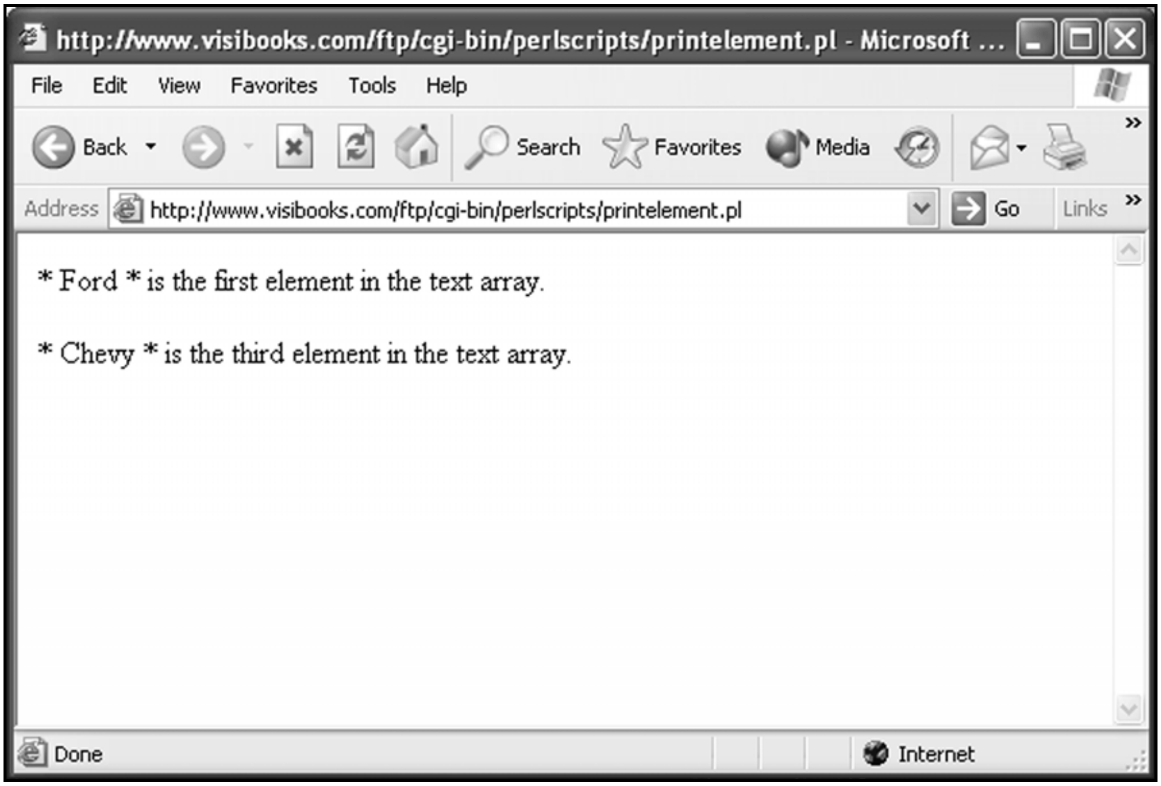
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

www.yourwebsite.com/perllinks.html

7. Click the **Print elements in a text array** link.

The output should look like this:



http://www.visibooks.com/ftp/cgi-bin/perlscripts/printelement.pl - Microsoft ...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/printelement.pl
Go
Links
Done
Internet

```
* Ford * is the first element in the text array.

* Chevy * is the third element in the text array.
```

Practice: Working with Variables

1. Write a script that uses a single (scalar) variable to specify there are 16 monkeys in a barrel of monkeys, then print it to the browser window.

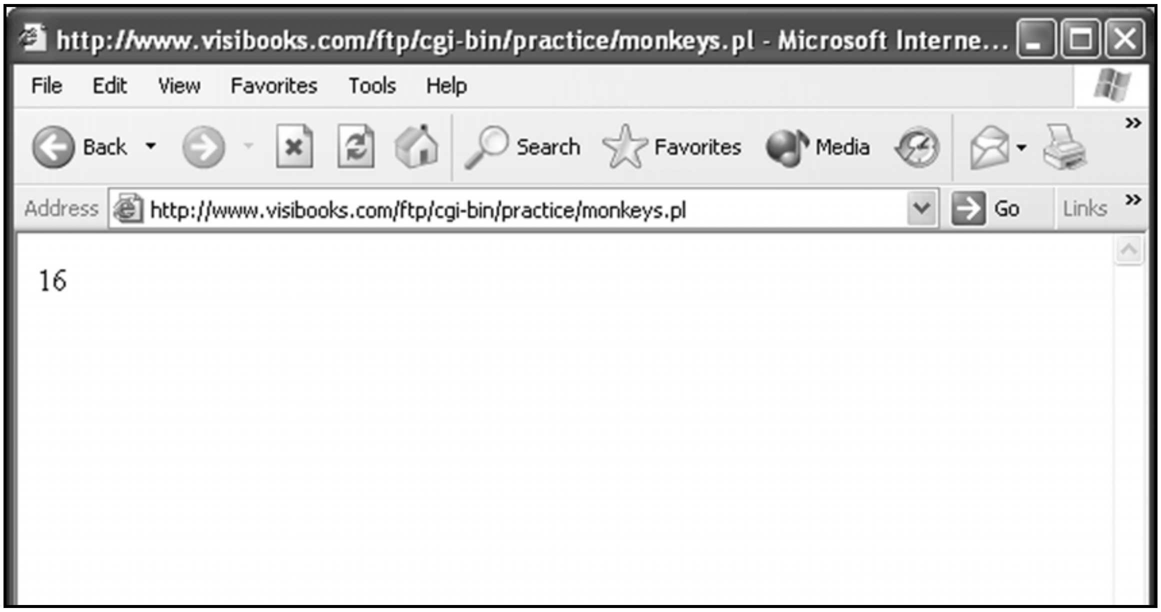
2. Save the script as **monkeys.pl** in the **PERL PRACTICE** folder on your computer.

3. Upload it into the practice directory in your Web site, then change its permissions so that anyone can execute it.

4. Add the paragraph “How many monkeys are in a barrel of monkeys?” to **practice.html**, and link that paragraph to **monkeys.pl**.

5. View **practice.html** in the browser, then click the new link.

Its output should look like this:


http://www.visibooks.com/ftp/cgi-bin/practice/monkeys.pl - Microsoft Interne...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/monkeys.pl
Go
Links

```
16
```

1. Write a script that creates a list (array) of presidents:

   James Buchanan
   George Washington
   Millard Fillmore

   …Prints the text “**This was the Revolution’s indispensable man:**”

   …Then prints the second name in the list.

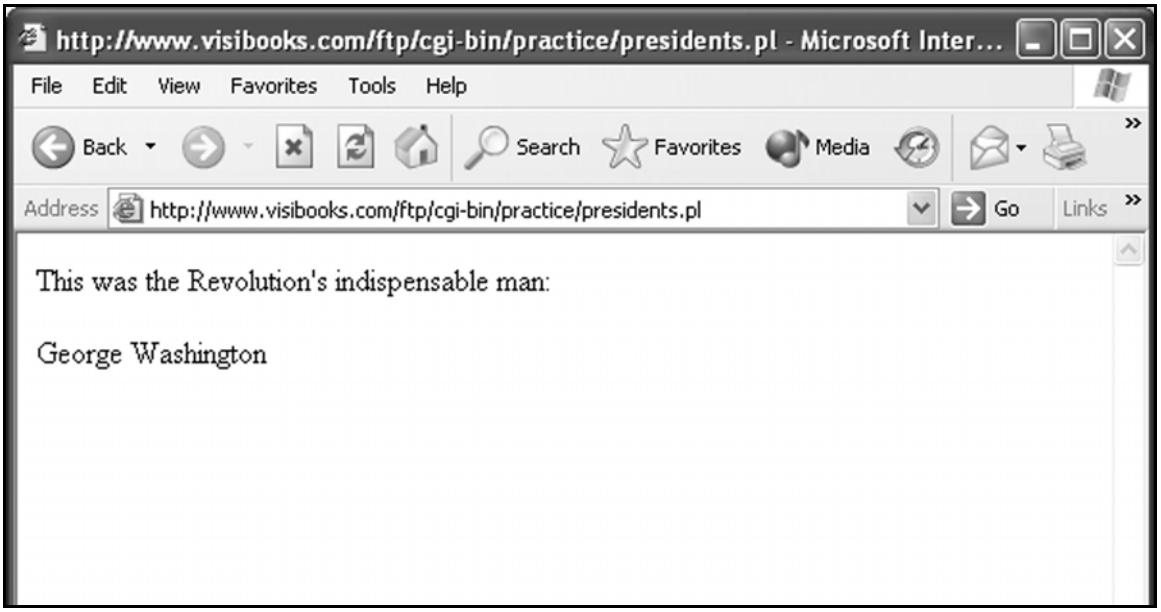
2. Save the script as **presidents.pl** in the **PERL PRACTICE** folder on your computer.

3. Upload it into the **practice** directory in your Web site, then change its permissions so that anyone can execute it.

4. Add the paragraph “**The indispensable man**” to **practice.html**, and link that paragraph to **presidents.pl**.

5. View **practice.html** in the browser, then click the new link.

Its output should look like this:


http://www.visibooks.com/ftp/cgi-bin/practice/presidents.pl - Microsoft Inter...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/presidents.pl
Go
Links

```
This was the Revolution's indispensable man:

George Washington
```

Working with Numbers

In this section, you'll learn how to:

- **Perform calculations**
- **Increment/decrement automatically**
- **Generate random numbers**

Perform calculations

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

$var1 = 5;
$var2 = 2;

$answer = $var1 + $var2 ;

print "$var1 plus $var2 equals $answer.\n";
```

2. Save the script as **add.pl** in the **PERLSCRIPTS** folder.

   Here's what the relevant lines in this script do:

   - `$answer = $var1 + $var2 ;`

     Adds the scalar variables `$var1` and `$var2` together, then assignins the sum to a scalar variable called `$answer`.

     Since `$var1` is 5, and `$var2` is 2, `$answer` has a value of 7.

3. Upload **add.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **add.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/add.pl">10. Add five plus
two.</a></p>
```

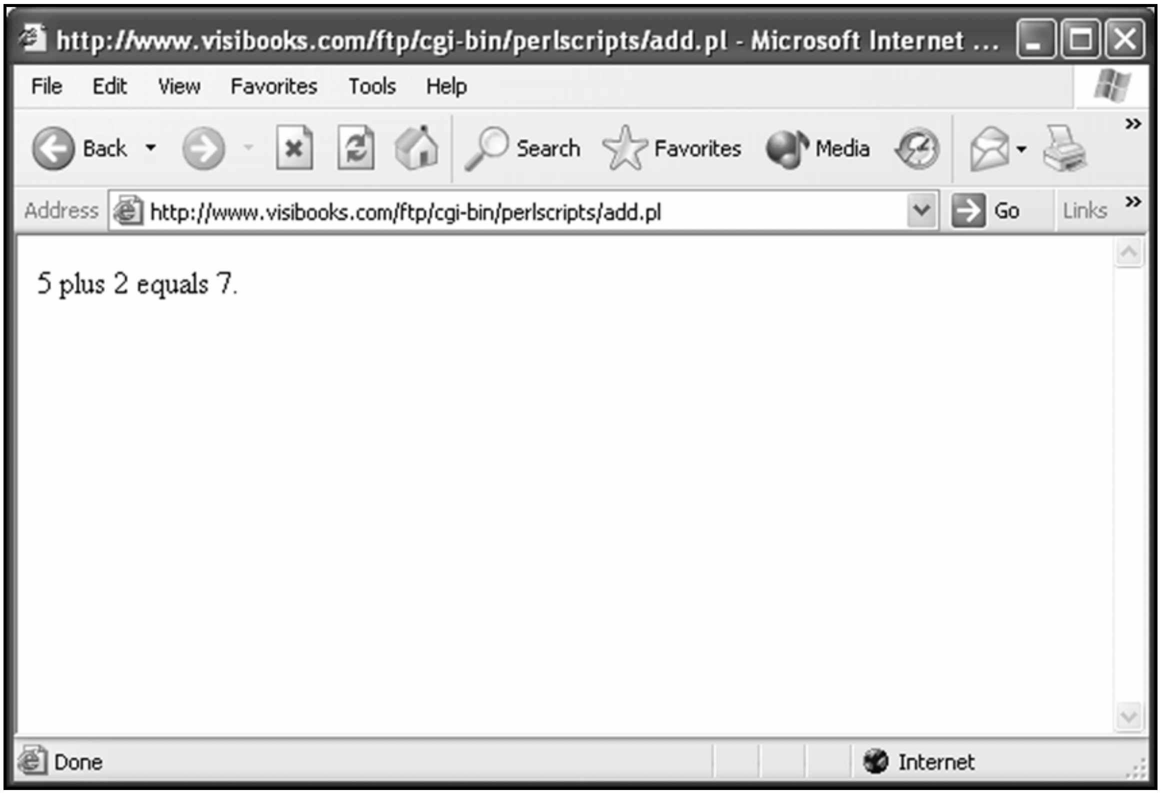
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

   www.yourwebsite.com/perllinks.html

   Click the **Add five plus two** link.

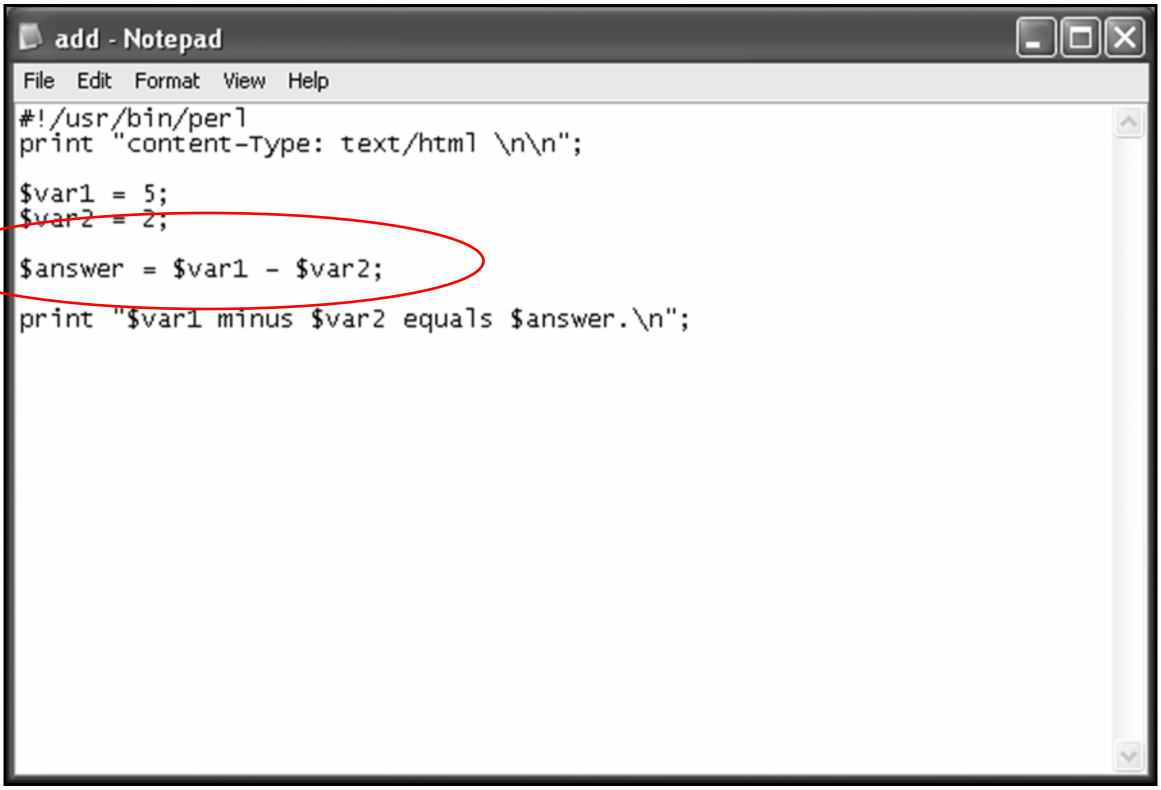
   The output should look like this:



http://www.visibooks.com/ftp/cgi-bin/perlscripts/add.pl - Microsoft Internet ...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/add.pl
Go
Links
Done
Internet

```
5 plus 2 equals 7.
```

Tip: *To subtract, just change the* **+** *sign in the script above to a* **–** *sign.*



```
#!/usr/bin/perl
print "content-Type: text/html \n\n";

$var1 = 5;
$var2 = 2;

$answer = $var1 - $var2;

print "$var1 minus $var2 equals $answer.\n";
```

To multiply, just change it to a ***** *sign.*

To divide, change it to **/**.

Increment/decrement automatically

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

$cars_on_lot = 10;

print "We have $cars_on_lot cars.\n<br>";

print "We got another new car.\n<br>";

$cars_on_lot++;

print "Now we have $cars_on_lot cars!\n<p>";

print '<b>$cars_on_lot++</b> is the same to
PERL as <b>$cars_on_lot + 1.</b>';
```

2. Save the script as **autoplus.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

- `$cars_on_lot++;`

  The auto incrementer (`++`) adds 1 to the `$cars_on lot` variable.

- `print '<b>$cars_on_lot++</b> is the same to PERL as <b>$cars_on_lot = $cars_on_lot + 1</b>';`

  Prints the literal text: `$cars_on_lot++` is the same to PERL as `$cars_on_lot` + 1.

3. Upload **autoplus.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **autoplus.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/autoplus.pl">11. Advance a
number by 1 automatically.</a></p>
```

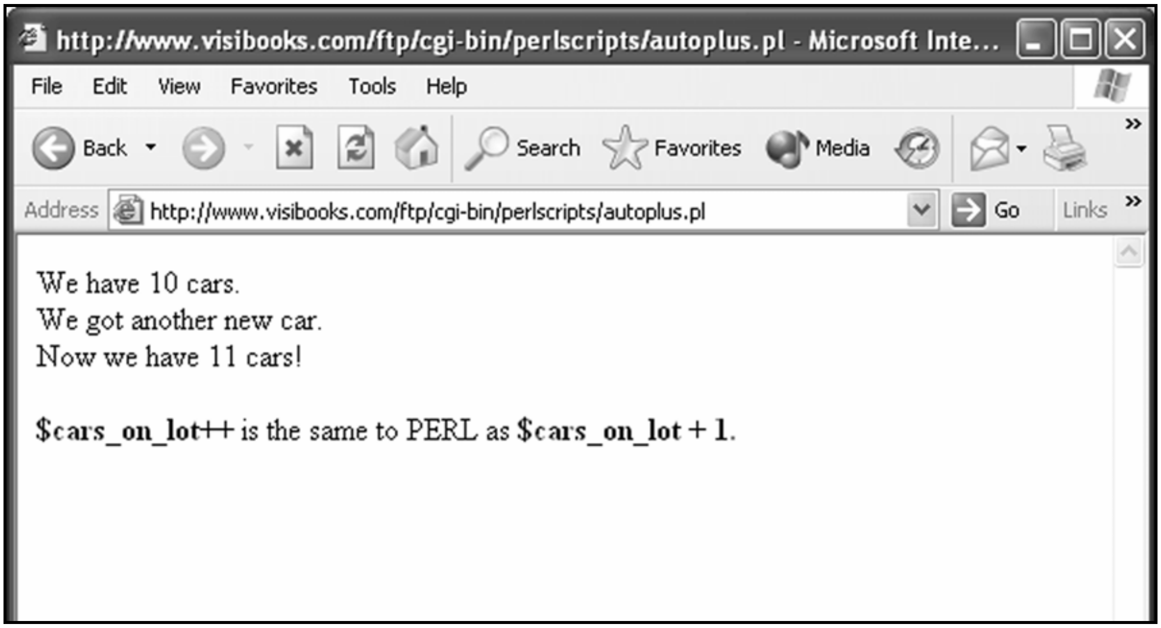
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

   www.yourwebsite.com/perllinks.html

7. Click the **Advance a number by 1 automatically** link.

   The output should look like this:

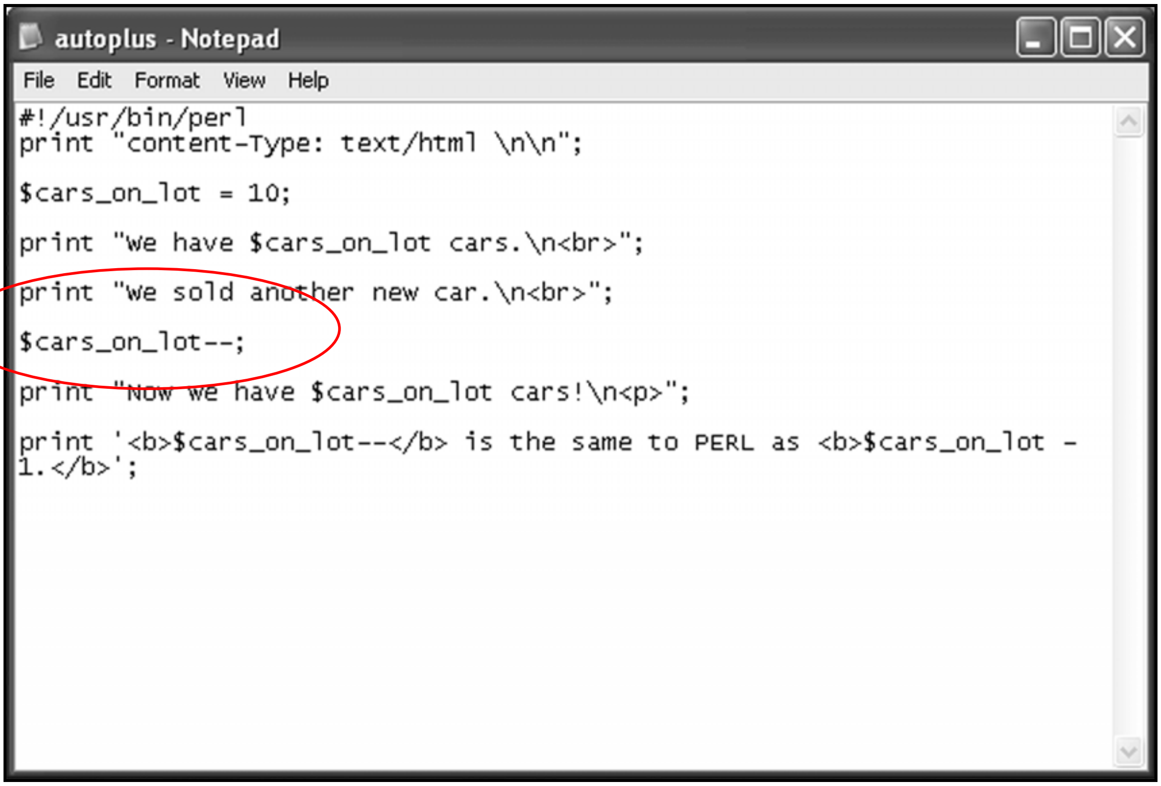


http://www.visibooks.com/ftp/cgi-bin/perlscripts/autoplus.pl - Microsoft Inte...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/autoplus.pl
Go
Links

```
We have 10 cars.
We got another new car.
Now we have 11 cars!

$cars_on_lot++ is the same to PERL as $cars_on_lot + 1.
```

Tip: *To automatically decrement by one, change the auto incrementer in the script above* (++) *to an auto decrementer:*

--



```
#!/usr/bin/perl
print "content-Type: text/html \n\n";

$cars_on_lot = 10;

print "We have $cars_on_lot cars.\n<br>";

print "We sold another new car.\n<br>";

$cars_on_lot--;

print "Now we have $cars_on_lot cars!\n<p>";

print '<b>$cars_on_lot--</b> is the same to PERL as <b>$cars_on_lot -
1.</b>';
```

Generate random numbers

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

$random_number = rand(10);

print "<p>Your Acme Auto Lucky Number from 1 to
10 is $random_number.</p>\n";

$random_integer = int(rand(10)) + 1;

print "<p>Your Acme Auto Lucky Integer from 1
to 10 is $random_integer.</p>\n";

print "Click the Reload button on your browser
to get a new random number.";
```

2. Save the script as **random.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

-
- **`$random_number = rand(10);`**

  Assigns a computer-generated random number to the scalar variable **`$random_number`**.

  Because the number 10 is inside the parenthesis:

  rand(**10**)

  the computer-generated number will be between 0 and 9.999999999999999.

  If you'd used the number 100—rand(100) it would be between 0 and 99. 999999999999999.

- **`print "<p>Your Acme Auto Lucky Number from 1 to 10 is  $random_number .</p>\n";`**

  Prints "**Your Acme Auto Lucky Number from 1 to 10 is 8.77515995948674.** "

  Because it is a random number, the number on your screen will be different.

- **`$random_integer = int(rand(10)) + 1;`**

  Creates a random number:

  ```
  $random_integer = int(rand(10)) + 1;
  ```

  Turns it into an integer:

  ```
  $random_integer = int(rand(10)) + 1;
  ```

  An integer is a whole number, without decimal points, like 1, 2, 3.

  Makes sure the number generated is between 1 and 10, and not 0 and 10:

  ```
  $random_integer = int(rand(10)) + 1;
  ```

  Then assigns it to the scalar variable `$random_integer`:

  ```
  $random_integer = int(rand(10)) + 1;
  ```

- **`print "<p>Your Acme Auto Lucky Integer from 1 to 10 is $random_integer.</p>\n";`**

  Prints "**Your Acme Auto Lucky Integer from 1 to 10 is 5.**"

  Of course, your lucky number may be different than 5, because it's a random number being generated.

3. Upload **random.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **random.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/random.pl">12. Generate random
numbers.</a></p>
```

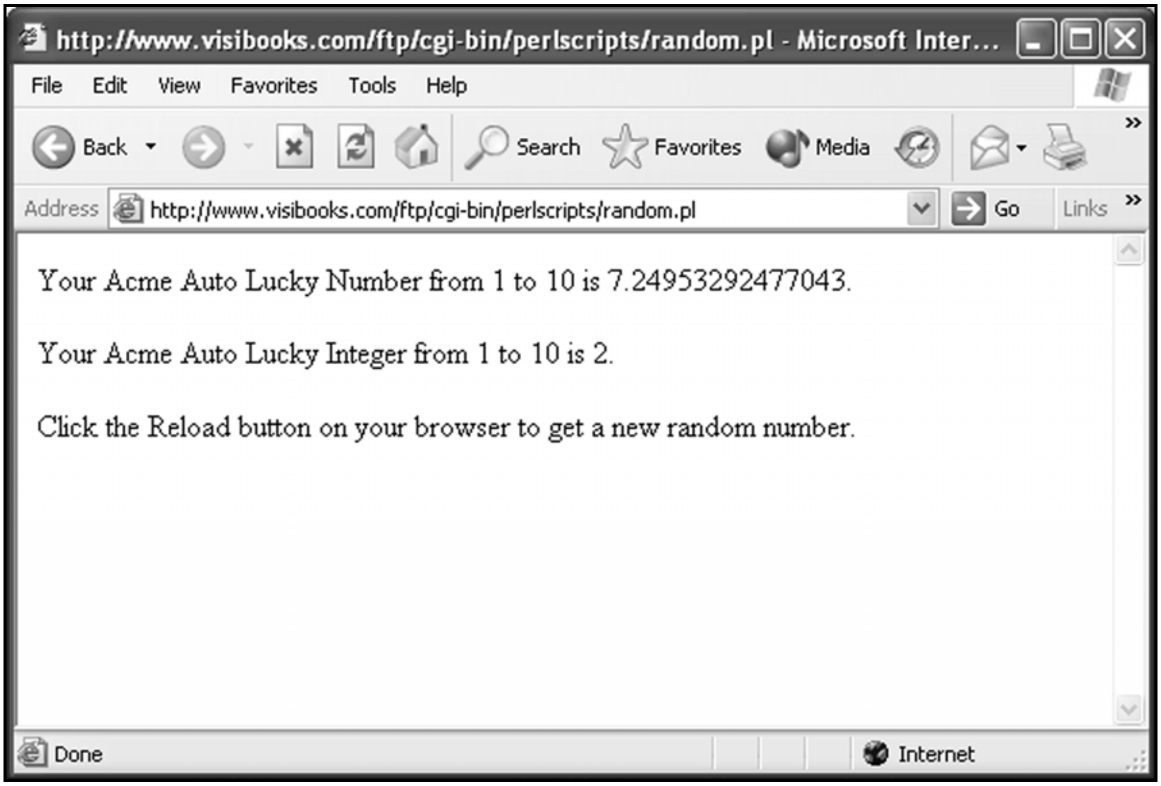
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

www.yourwebsite.com/perllinks.html

7. Click the **Generate random numbers** link.

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/random.pl - Microsoft Inter...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/random.pl
Go
Links
Done
Internet

Your Acme Auto Lucky Number from 1 to 10 is 7.24953292477043.

Your Acme Auto Lucky Integer from 1 to 10 is 2.

Click the Reload button on your browser to get a new random number.

Practice: Working with Numbers

1. Write a script that multiplies 347 * 221.

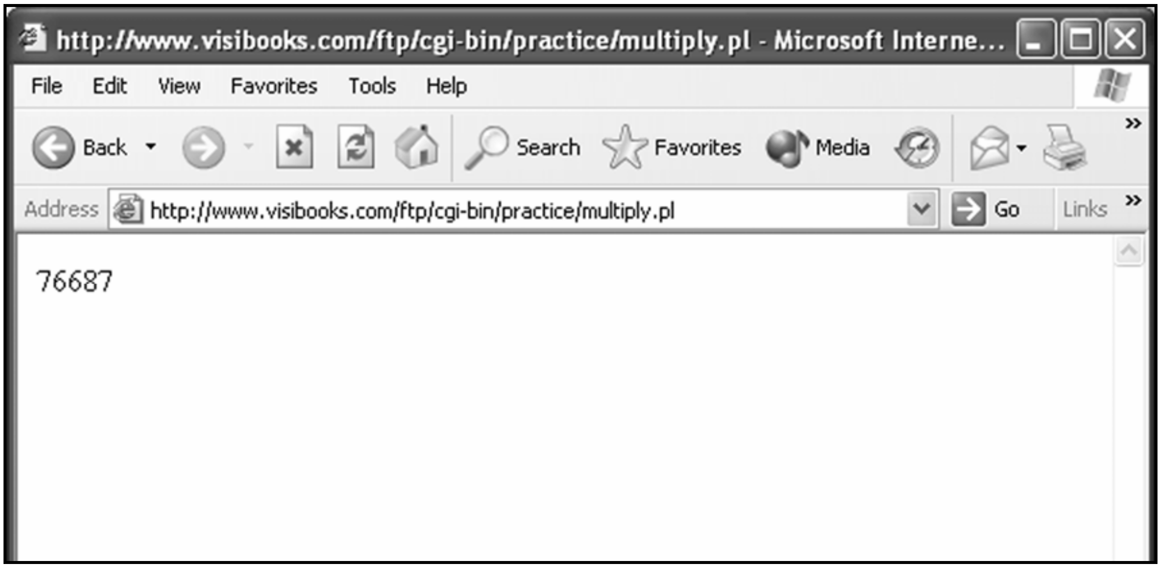
2. Save the script as **multiply.pl** in the **PERL PRACTICE** folder on your computer.

3. Upload it into the **practice** directory in your Web site, then change its permissions so that anyone can execute it.

4. Add the paragraph “What’s 347 times 221?” to **practice.html**, and link that paragraph to **multiply.pl**.

5. View **practice.html** in the browser, then click the new link.

   Its output should look like this:



http://www.visibooks.com/ftp/cgi-bin/practice/multiply.pl - Microsoft Interne...
File
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Tools
Help
Back
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Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/multiply.pl
Go
Links

```
76687
```

1. Write a script that generates a whole random number between 1 and 450.

   Then have the script advance that number by 1.

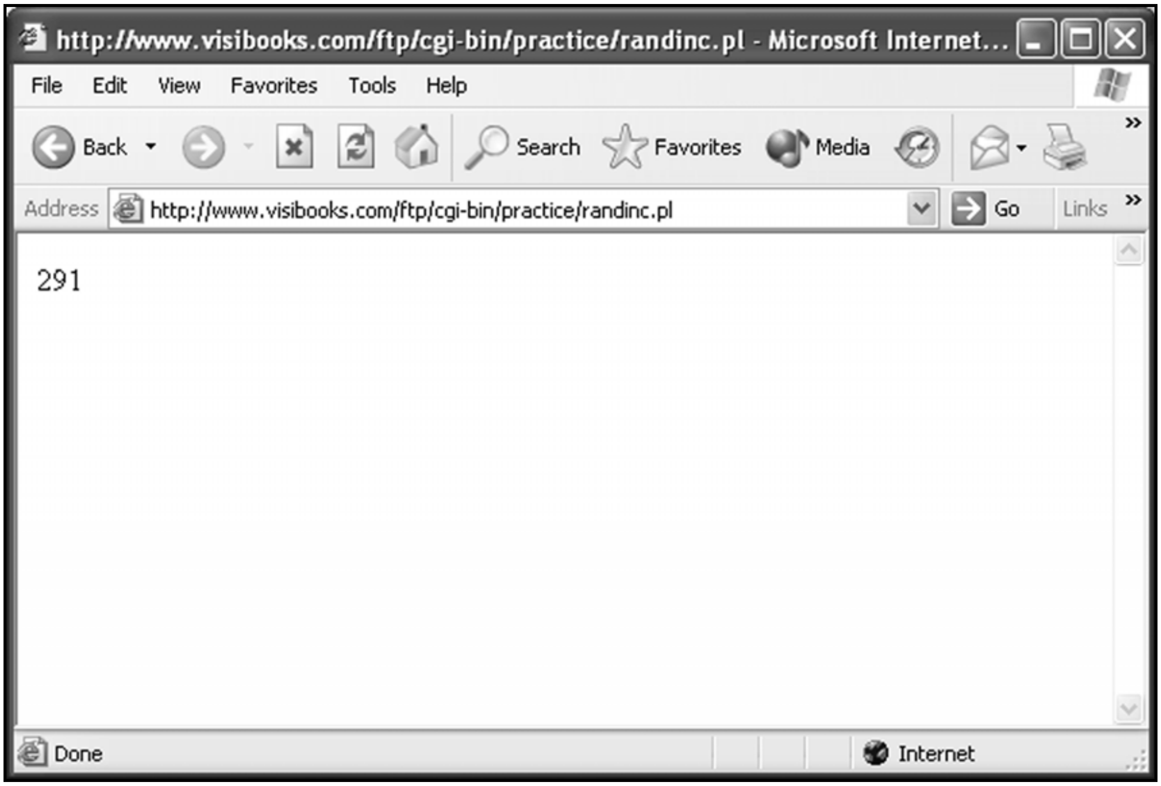
2. Save the script as **randinc.pl** in the **PERL PRACTICE** folder on your computer.

3. Upload it into the **practice** directory in your Web site, then change its permissions so that anyone can execute it.

4. Add the paragraph “Generate a random number, plus one” to **practice.html**, and link that paragraph to **randinc.pl**.

5. View **practice.html** in the browser, then click the new link.

   Its output should look like this:


http://www.visibooks.com/ftp/cgi-bin/practice/randinc.pl - Microsoft Internet...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/randinc.pl
Go
Links
Done
Internet

```
291
```

Subroutines

In this section, you'll learn how to:

- **Create a subroutine**
- **Parse form data with a subroutine**

Create a subroutine

What is a Subroutine?
A subroutine is block of reusable code that you create within your program.

Instructions within the subroutine can be called or executed from the main program more then once. This makes redundant tasks simpler.

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

print "Program starts.\n";

&bigHeader;

print "Program ends.\n";

# subroutines below this line

sub bigHeader {
   print "<h1>Welcome to Acme Auto!</h1>\n";
}
```

2. Save the script as **subsimple.pl** in the PERLSCRIPTS folder.

Here's what the relevant lines in this script do:

- `&bigHeader;`

  `bigHeader` is the name of the subroutine.

  The `&` sign before the name of the subroutine tells the Web server to execute the subroutine.

- `sub bigHeader {`

  `sub` defines this as a subroutine.

  `bigHeader` is the name of the subroutine. You can use any name you want, but it should describe what the subroutine does.

  { marks the beginning of what the subroutine does.

- `print "<h1>Welcome to Acme Auto</h1>\n";`

  This is what the subroutine does: it prints the phrase "**Welcome to Acme Auto!**" to the browser window in large, bold type.

  This is a very simple subroutine, but you can put as much PERL code as you want in a subroutine.

- `}`

  } marks the end of the subroutine.

3. Upload **subsimple.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **subsimple.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/subsimple.pl">13. Execute a
subroutine.</a></p>
```

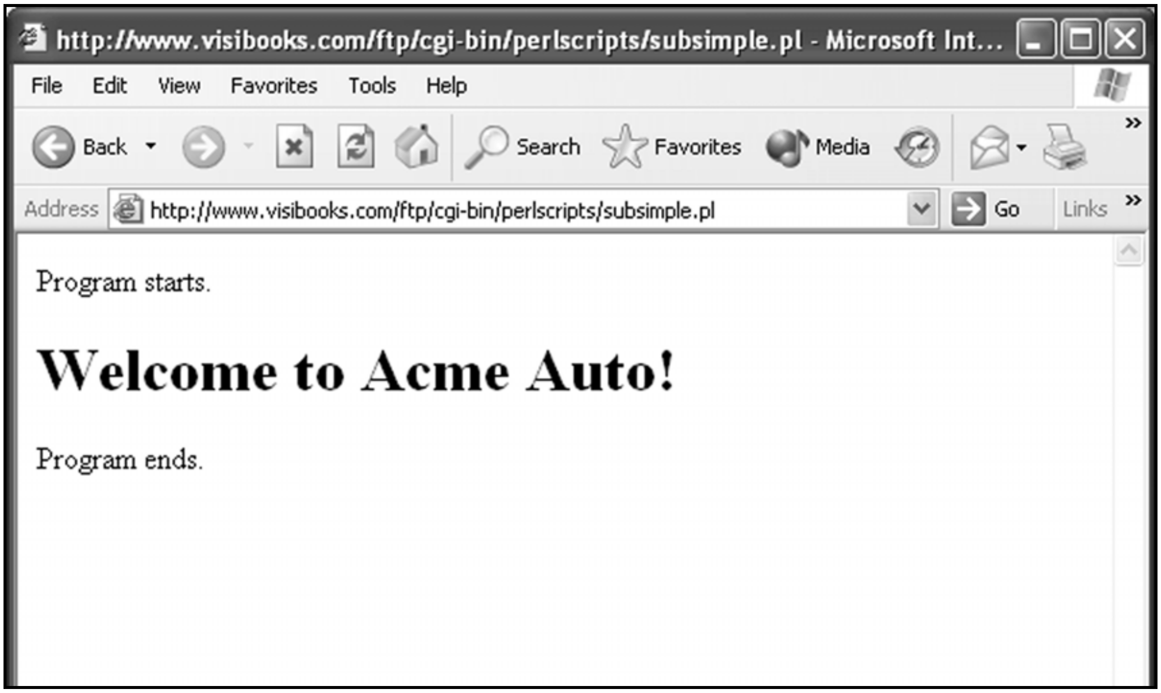
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

   www.yourwebsite.com/perllinks.html

7. Click the **Execute a subroutine** link.

   The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/subsimple.pl - Microsoft Int...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/subsimple.pl
Go
Links

Program starts.

Welcome to Acme Auto!

Program ends.

Parse form data with a subroutine

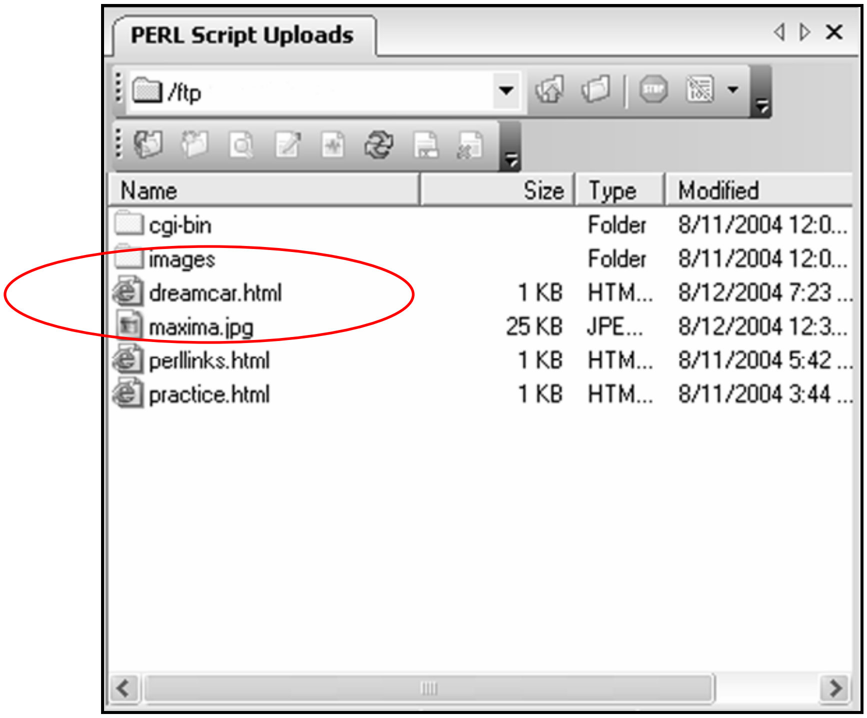
Create a form

1. Create a new Web page with this code:

```
<html>
<head>
<title>Dream Car</title>
</head>

<body>

<form method="post"
action="http://www.yourwebsite.com/cgi-
bin/perlscripts/dreamcar.pl">

<h2>What’s my dream car?</h2>

Make: <input type="text" name="make"><br>

Model: <input type="text" name="model"><br>

<input type="submit" value="Submit">

</form>

</body>
</html>
```

2. Save the page as **dreamcar.html** in the **PERLSCRIPTS** folder.

3. Upload it to the home directory in your Web site.



Name	Size	Type	Modified
cgi-bin		Folder	8/11/2004 12:0...
images		Folder	8/11/2004 12:0...
dreamcar.html	1 KB	HTM...	8/12/2004 7:23 ...
maxima.jpg	25 KB	JPE...	8/12/2004 12:3...
perllinks.html	1 KB	HTM...	8/11/2004 5:42 ...
practice.html	1 KB	HTM...	8/11/2004 3:44 ...

Parse form data

1. Create a new script with this code:

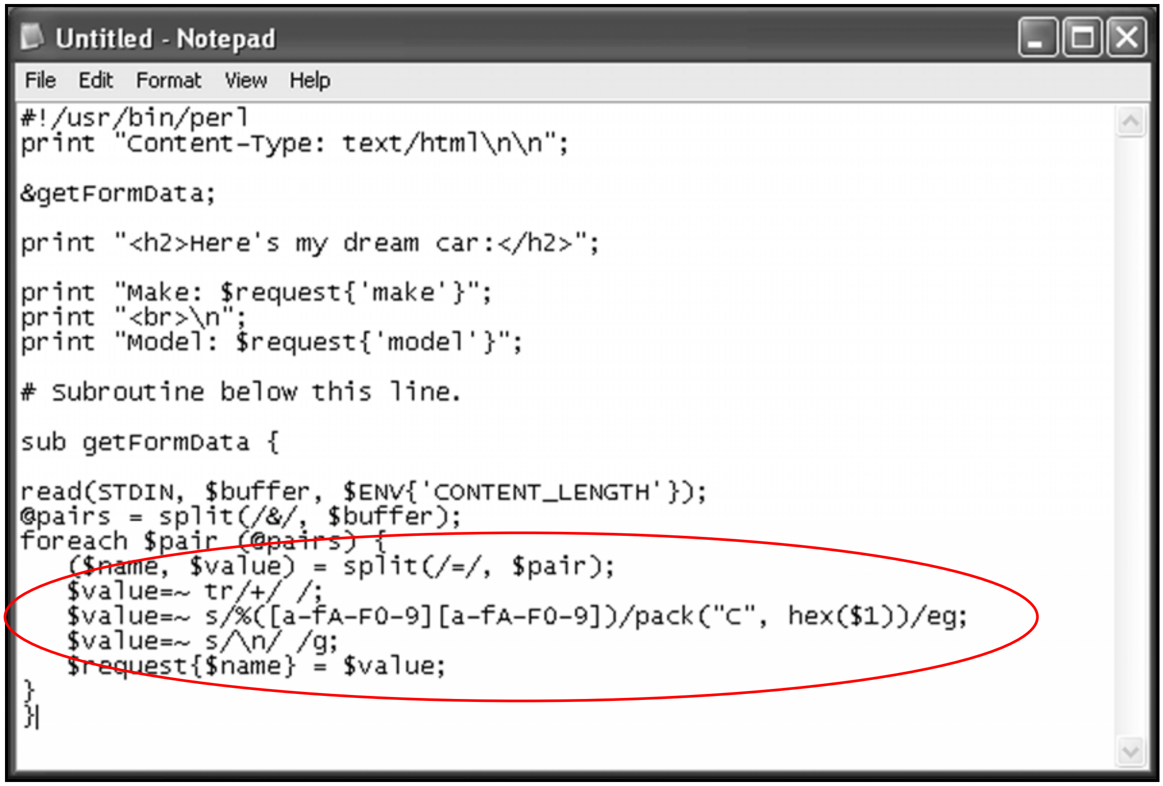
```
#!/usr/bin/perl
print "Content-type: text/html\n\n";

&getFormData;

print "<h2>Here’s my dream car:</h2>”;

print "Make: $request{'make'}”;
print "<br>\n";
print "Model: $request{'model'}”;

# Subroutine below this line.

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
  ($name, $value) = split(/=/, $pair);
  $value =~ tr/+/ /;
  $value =~ s/%([a-fA-F0-9][a-fA-F0-
  9])/pack("C", hex($1))/eg;
  $value =~ s/\n/ /g;
  $request{$name} = $value;
}
}
```

Tip: *When you write the code*

```
$value =~ s/%([a-fA-F0-9][a-fA-F0-
  9])/pack("C", hex($1))/eg;
```

in the script above, you must write it on a single line, or the script will not work.

It must look like this:



```
#!/usr/bin/perl
print "Content-Type: text/html\n\n";

&getFormData;

print "<h2>Here's my dream car:</h2>";

print "Make: $request{'make'}";
print "<br>\n";
print "Model: $request{'model'}";

# Subroutine below this line.

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
    ($name, $value) = split(/=/, $pair);
    $value=~ tr/+/ /;
    $value=~ s/%([a-fA-F0-9][a-fA-F0-9])/pack("C", hex($1))/eg;
    $value=~ s/\n/ /g;
    $request{$name} = $value;
}
}
```

4. Save the script as **dreamcar.pl** in the **PERLSCRIPTS** folder.

Here's what each line of the script means:

- **`&getFormData;`**

  Executes the subroutine **`getFormData`** to pull information from the form input boxes in **dreamcar.html**.

-
  ```
  print "Make: $request{'make'}”;
  print "<br>\n";
  print "Model: $request{'model'}”;
  ```

  This requests the information that **`getFormData`** pulled from the form input boxes in the Web page **dreamcar.html**:

  ```
  print "Model: $request{'model'}”;
  ```

  Remember, one of the input boxes in **dreamcar.html** is named “model:”

  ```
  <input type="text" name="model">
  ```

  Then it prints it to the browser window:

  ```
  print "Model: $request{'model'}”;
  ```

- **`sub getFormData {`**

  Defines **`getFormData`** as a subroutine, then starts it.

-
  ```
  read (STDIN, $buffer,
  ENV{'CONTENT_LENGTH'});
    @pairs = split(/&/, $buffer);
    foreach $pair (@pairs) {
  ($name, $value) = split(/=/, $pair);
  $value =~ tr/+/ /;
  $value =~ s/%([a-fA-F0-9][a-fA-F0-
  9])/pack("C", hex($1))/eg;
  $value =~ s/\n/ /g;
  $request{$name} = $value;
  ```

  This is the getFormData subroutine.

  It takes the raw text from the form input boxes and “parses” it, or puts it in a form that PERL can use.

  This subroutine uses environmental variables and regular expressions that are beyond the scope of this book.

  Don’t worry about not understanding it: after you’ve finished this book, you can move on to other, more advanced PERL books that explain parsing subroutines like this one in detail.

  Tip: *Remember that when you write the code*

  ```
  $value =~ s/%([a-fA-F0-9][a-fA-F0-
    9])/pack("C", hex($1))/eg;
  ```

  in the script above, you must write it on a single line, or the script will not work.

-
  ```
  }
  ```

  Ends the getFormData subroutine.

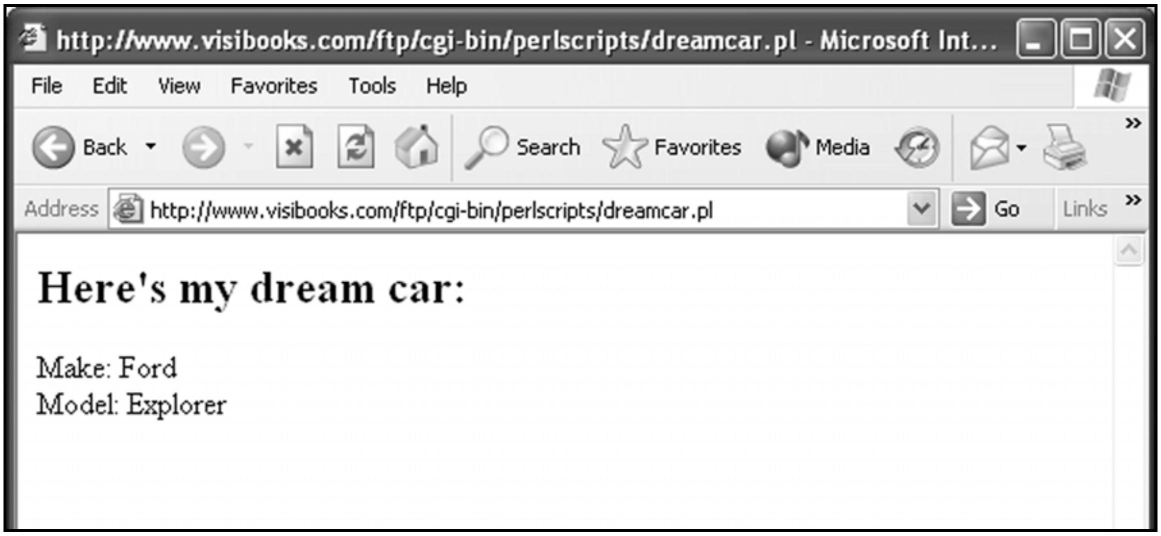
5. Upload **dreamcar.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

6. In the browser, go to:

   www.yourwebsite.com/dreamcar.html

7. Fill in the form boxes, then click the Submit button.

   The output should look something like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/dreamcar.pl - Microsoft Int...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/dreamcar.pl
Go
Links

Here's my dream car:

Make: Ford
Model: Explorer

Practice: Subroutines

1. Create a Web page with this code:

```
<html>
<head>
<title>Really Random</title>
</head>

<body>

<form method="post"
action="http://www.yourwebsite.com/cgi-
bin/practice/veryrandom.pl">

<h2>Generate a <i>really</i> random
number!</h2>

Enter a number: <input type="text"
name="number" size=”2”><p>

<input type="submit" value="Generate">

</form>

</body>
</html>
```

2. Save the page as veryrandom.html in the **PERL PRACTICE** folder on your computer, then upload it to the home directory in your Web site.

3. Write a script that:

- Executes a subroutine called `getFormData` to pull information from the form input box in **veryrandom.html**.

-Prints the paragraph “Here’s a really random number:” to the browser window.

- Executes a subroutine called `randomize`.

4. Add a subroutine called `randomize` to the script that:

-Creates a random number, then assigns it to a variable called `$random integer`:

```
$random_integer = int(rand(10))
```

-Requests the number put in the form field, then assigns it to a variable called `$number_input`:

```
$number_input = $request{'number'}
```

-Adds the variables, assigning the sum to the variable `$randomized`:

```
$randomized = $random_integer + $number_input
```

-Prints the randomized number to the browser window.

5. Copy the subroutine `getFormData` from **dreamcar.pl**, and paste it into the script.

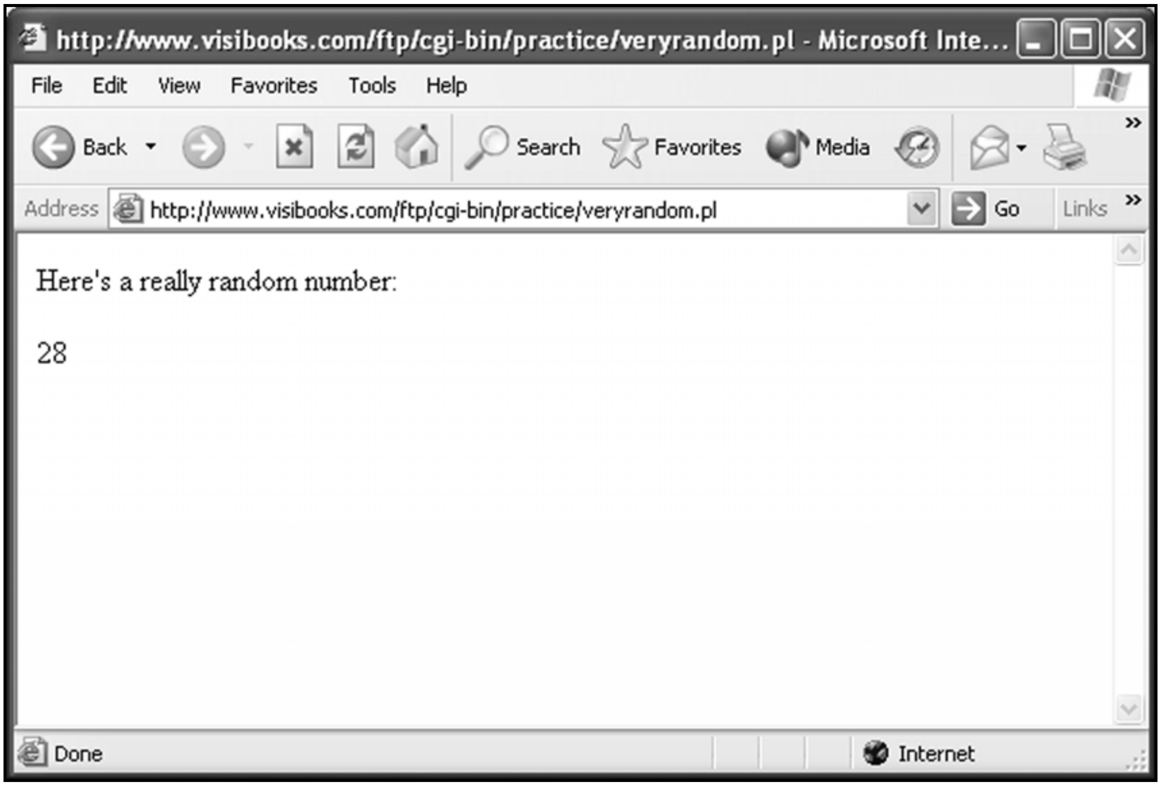
Tip: *There are now two subroutines in this script:* `getFormData` *and* `randomize`*.*

6. Save the script as **veryrandom.pl** in the **PERL PRACTICE** folder on your computer.

7. Upload it into the **practice** directory in your Web site, then change its permissions so that anyone can execute it.

8. View **veryrandom.html** in the browser, enter a number, then click the Generate button.

   Its output should look something like this:


http://www.visibooks.com/ftp/cgi-bin/practice/veryrandom.pl - Microsoft Inte...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/veryrandom.pl
Go
Links
Done
Internet

Here's a really random number:

28

Logic & Loops

In this section, you'll learn how to:

- **Employ conditional logic**
- **Employ looping**

Employ conditional logic

If statements

1. Create a new Web page with this code:

```
<html>
<head>
<title>If Statements</title>
</head>

<body>

<h2>Acme Logon Page</h2>

<form method="POST"
action="http://www.yourwebsite.com/cgi-
bin/perlscripts/if.pl">

<h2>Enter Password:</h2>

Password: <input type="password" name=
"password"><p>

<input type="submit" value="Submit">

</form>

</body>
</html>
```

2. Save the page as **if.html** in the **PERLSCRIPTS** folder.

3. Upload it to the home directory in your Web site.

4. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

&getFormData;

$GoodPassword = 'acme';

if ($request{'password'} eq $GoodPassword){
  print "<b>Acme Password verified!</b>\n";
}

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
  ($name, $value) = split(/=/, $pair);
  $value =~ tr/+/ /;
  $value =~ s/%([a-fA-F0-9][a-fA-F0-
  9])/pack("C", hex($1))/eg;
  $value =~ s/\n/ /g;
  $request{$name} = $value;
}
}
```

5. Save the script as **if.pl** in the **PERLSCRIPTS** folder, then upload it to the **perlscripts** directory in your Web site.

Here's what the relevant lines in this script do:

- **`$GoodPassword = 'acme';`**

  Assigns the value "acme" to the variable **`$GoodPassword`**.

- **`if ($request{'password'} eq $GoodPassword){`**

  Compares the password word typed in the text box on if.html to the password assigned to the variable **`$GoodPassword`**.

  If they're the same, then the code between the curly braces is executed:

  ```
  print "<b>Acme Password
  verified!</b><br>\n";
  ```

  Tip: *The command* `eq` *is used to compare to text variables. Don't use the* `=` *sign—that's for comparing numbers.*

6. Upload **if.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

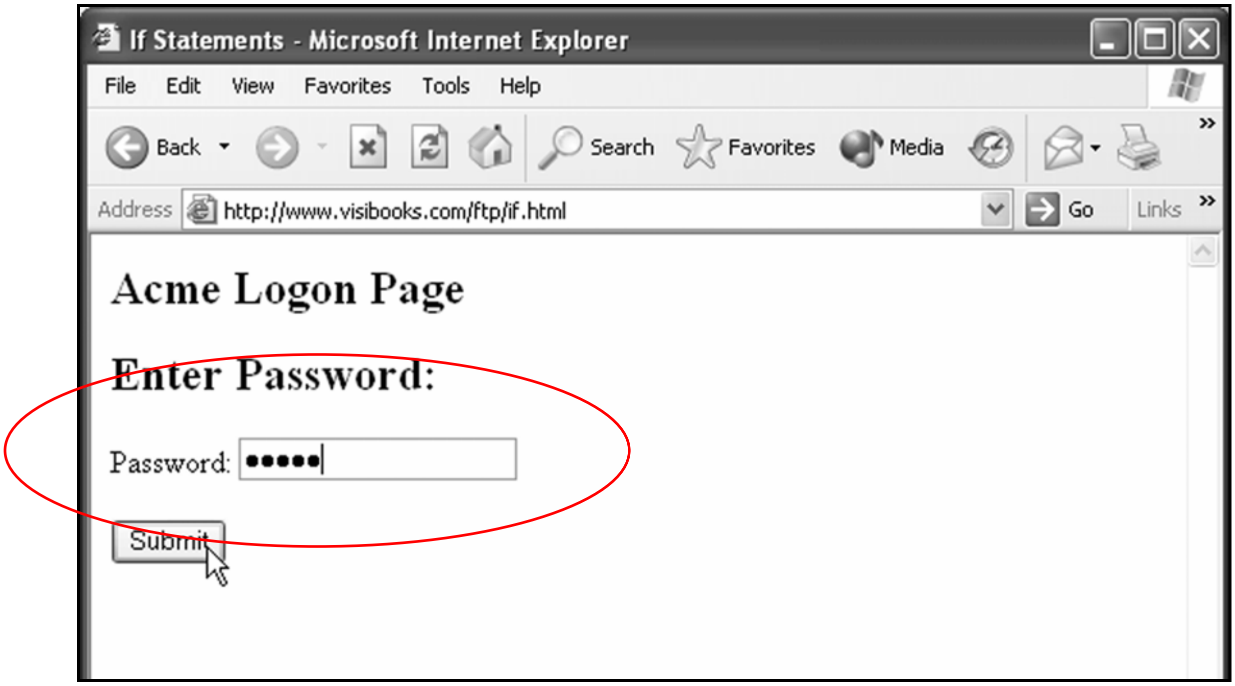
7. In the browser, go to:

www.yourwebsite.com/if.html

8. In the Password box, type:

pizza

then click the Submit button.

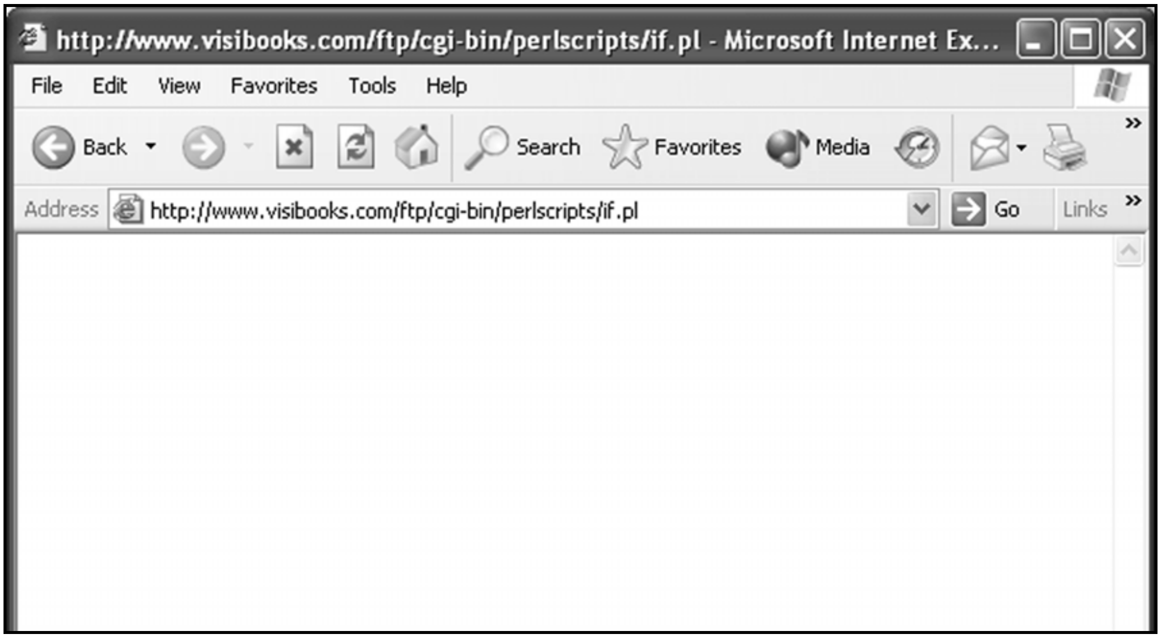

If Statements - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.visibooks.com/ftp/if.html
Go Links
Submit

Acme Logon Page

Enter Password:

Password: •••••

The output should look like this:

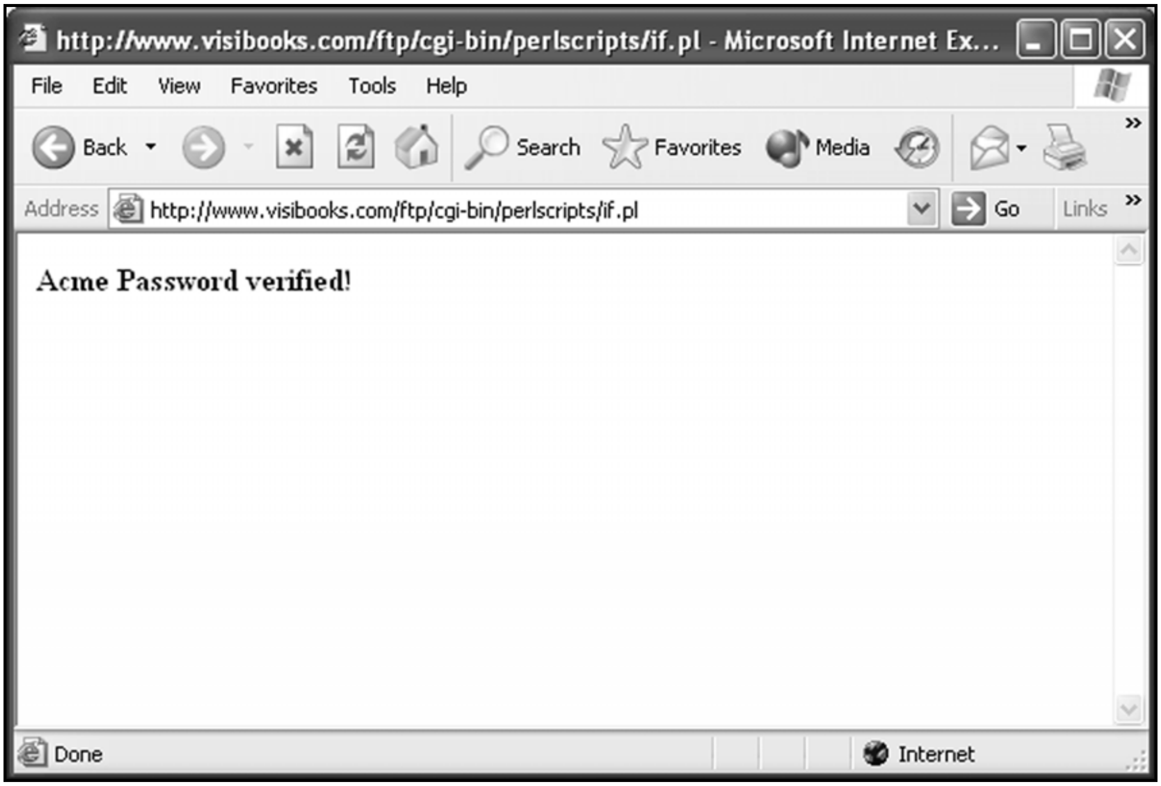

http://www.visibooks.com/ftp/cgi-bin/perlscripts/if.pl - Microsoft Internet Ex...
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/if.pl
Go Links

9. Go back to **if.html** and in the Password box, type:

acme

then click the Submit button.

The output should look like this:



http://www.visibooks.com/ftp/cgi-bin/perlscripts/if.pl - Microsoft Internet Ex...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/if.pl
Go
Links
Done
Internet

Acme Password verified!

If/else statements

1. In the Web page **if.html**, change the action of its `<form>` tag to use a script called **ifelse.pl**:

```
<form method="post"
action="http://www.yourwebsite.com/cgi-
bin/perlscripts/ifelse.pl">
```

2. Save the page as **ifelse.html** in the **PERLSCRIPTS** folder, then upload it to the home directory in your Web site.

3. In the script **if.pl**, change its code from this:

```
if ($request{'password'} eq $GoodPassword){
print "<b>Acme Password verified!</b>\n";
}
```

To this:

```
if ($request{'password'} eq $GoodPassword){
print "<b>Acme Password verified!</b>\n";
}

else {
print "<b>Acme Password incorrect.</b>\n";
}
```

4. Save the script as **ifelse.pl** in the **PERLSCRIPTS** folder.

   Here's what the relevant lines in this script do:

   - `if ($request{'password'} eq $GoodPassword){`

     Compares the password word typed in the text box on if.html to the password assigned to the variable `$GoodPassword`.

     If they’re the same, then the code between the curly braces is executed.

   - `else {`

     If the two values are NOT the same then the else condition is executed. The else condition is the block of code in between the curly braces after the word ‘else.’

     Tip: *Think of it this way:*

     ```
     if (this is true) { then do this }

     else { do this }
     ```

5. Upload **ifelse.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

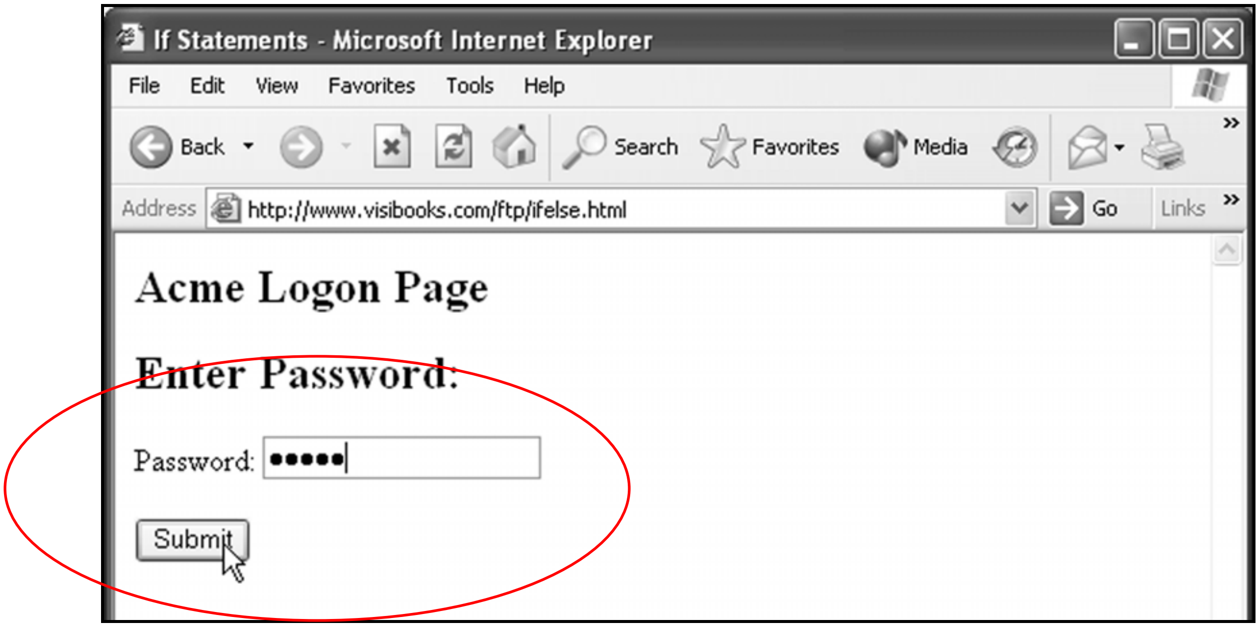
6. In the browser, go to:

   www.yourwebsite.com/ifelse.html

7. In the Password box, type:

pizza

then click the Submit button.


If Statements - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Go
Links

Address: http://www.visibooks.com/ftp/ifelse.html

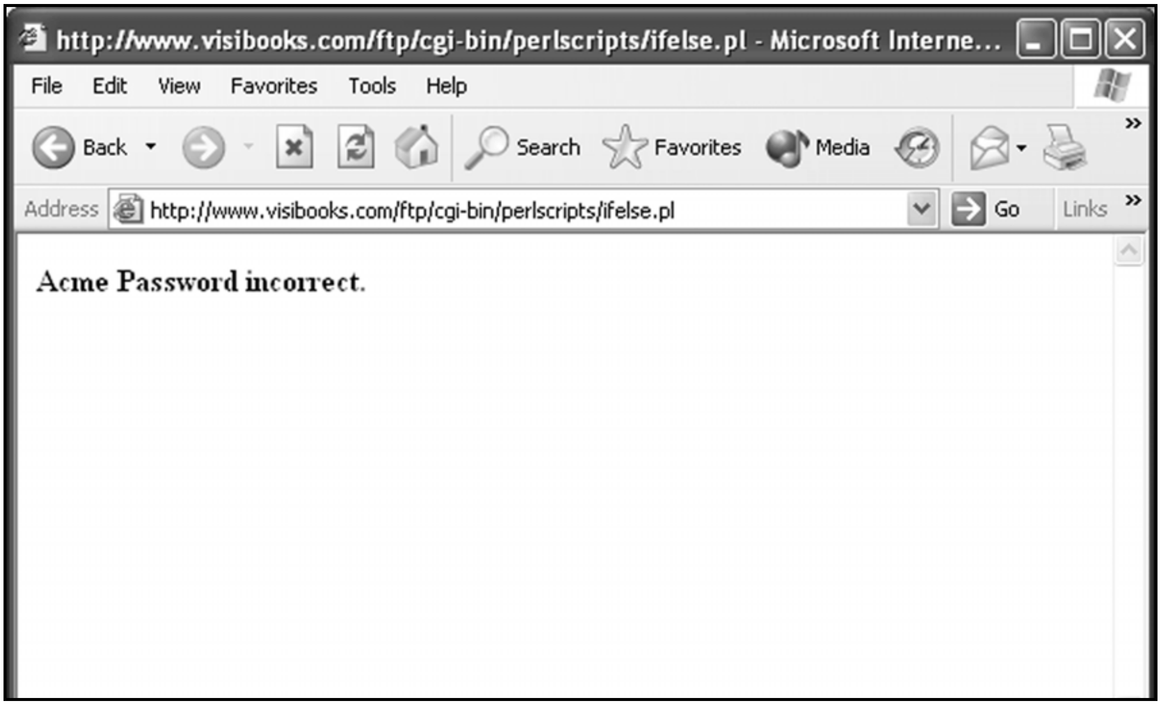
Acme Logon Page

Enter Password:

Password: •••••

Submit

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/ifelse.pl - Microsoft Interne...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Go
Links

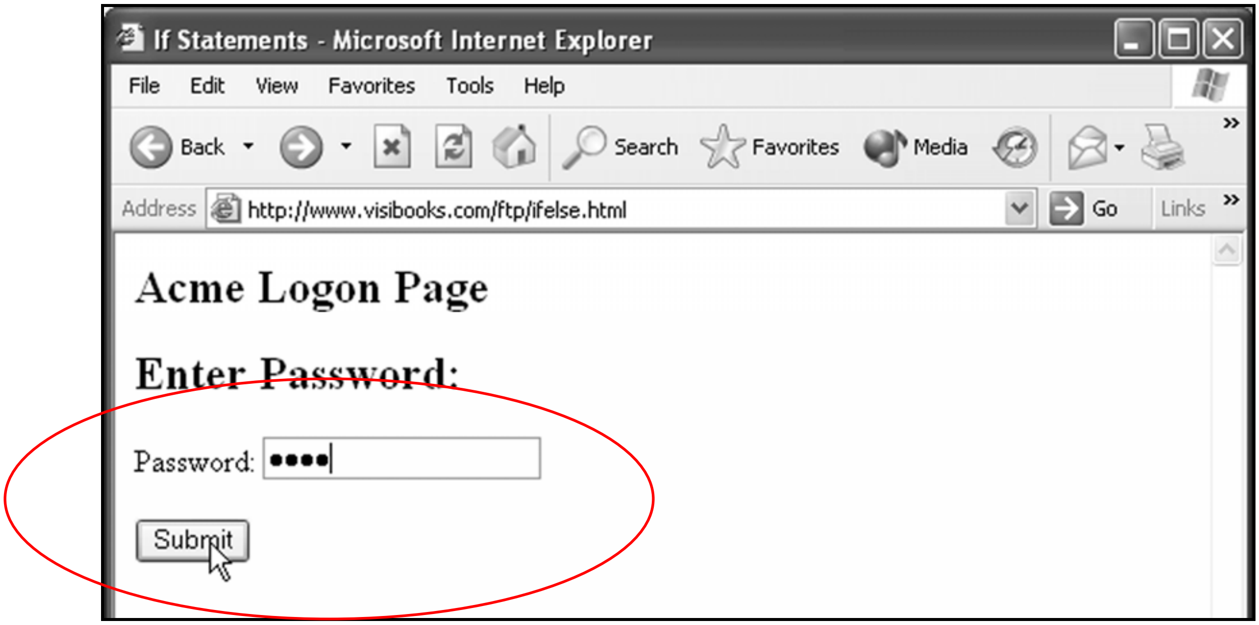
Address: http://www.visibooks.com/ftp/cgi-bin/perlscripts/ifelse.pl

Acme Password incorrect.

8. Go back to **ifelse.html** and In the Password box, type:

acme

then click the Submit button.

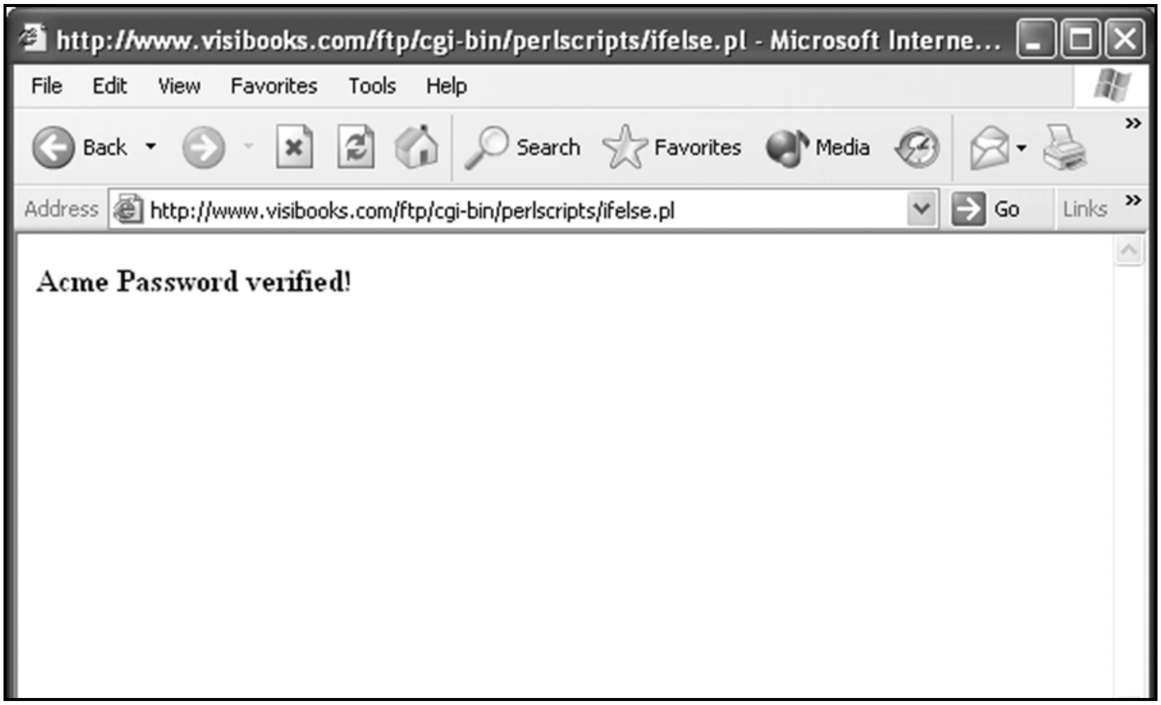

If Statements - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/ifelse.html
Go
Links

Acme Logon Page

Enter Password:

Password: ••••

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/ifelse.pl - Microsoft Interne...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/ifelse.pl
Go
Links

Acme Password verified!

The OR operator

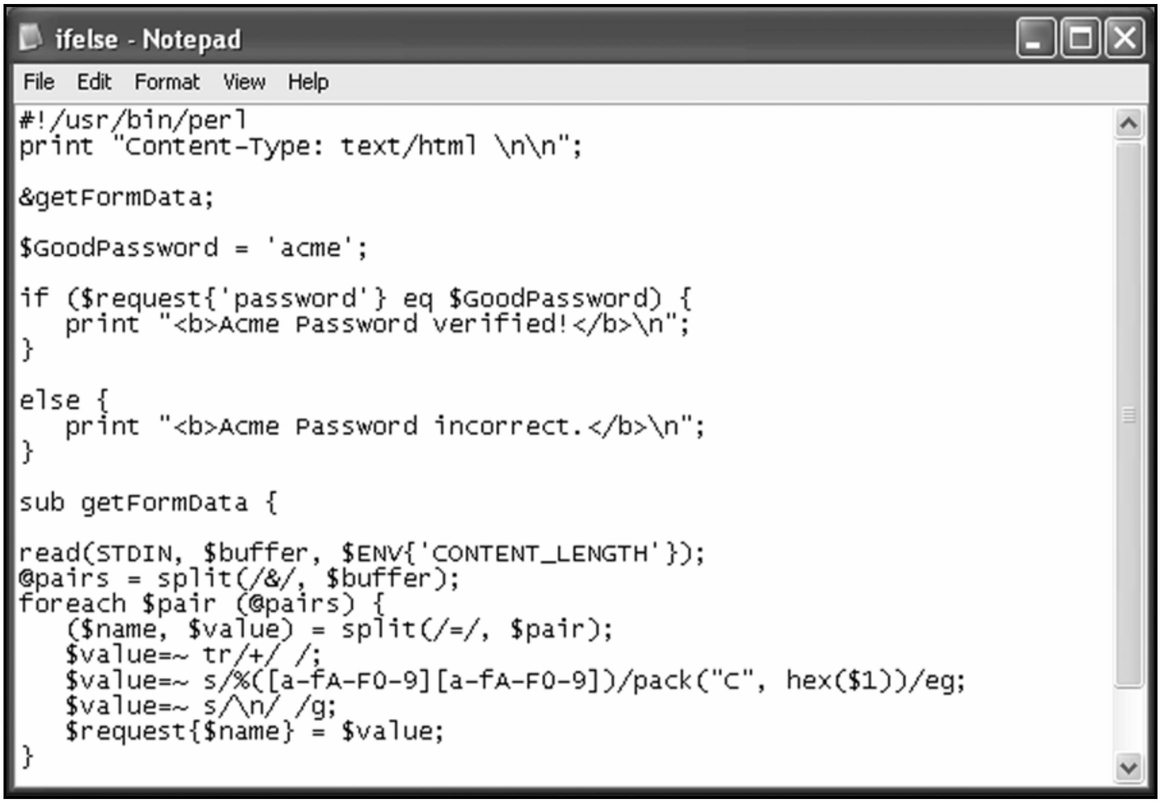
1. Create a new Web page with this code:

```
<html>
<head>
<title>The OR Operator</title>
</head>

<body>

<form method="post"
action="http://www.yourwebsite.com/cgi-
bin/perlscripts/or.pl">

<h2>Enter Acme Auto User Name</h2>

User Name: <input type="text" name= "username">

<input type="submit" value="Submit">

</form>

</body>
</html>
```

2. Save the page as **or.html** in the **PERLSCRIPTS** folder, then upload it to the home directory in your Web site.

3. Change the code in **ifelse.pl** from this:

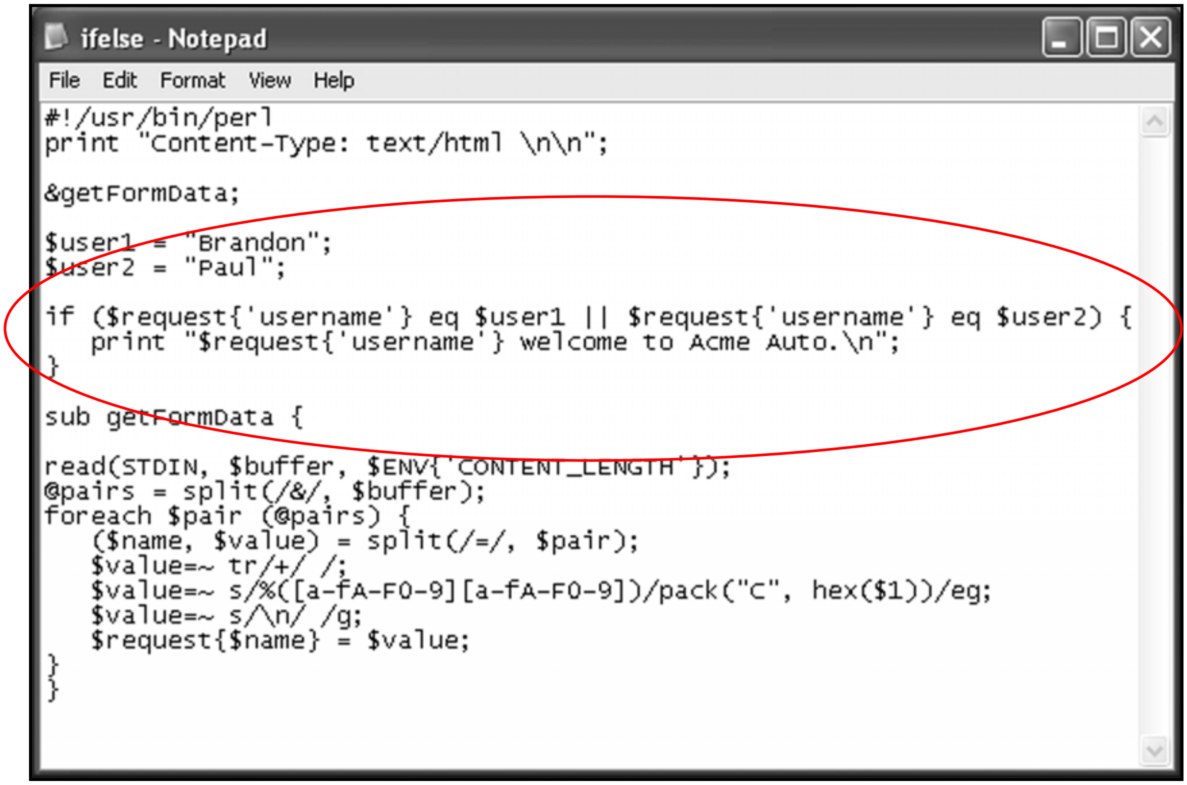
```
$GoodPassword = 'acme';

if ($request{'password'} eq $GoodPassword){
print "<b>Acme Password verified!</b>\n";
}
else {
print "<b>Acme Password incorrect.</b>\n";
}
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

&getFormData;

$GoodPassword = 'acme';

if ($request{'password'} eq $GoodPassword) {
   print "<b>Acme Password verified!</b>\n";
}

else {
   print "<b>Acme Password incorrect.</b>\n";
}

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
   ($name, $value) = split(/=/, $pair);
   $value=~ tr/+/ /;
   $value=~ s/%([a-fA-F0-9][a-fA-F0-9])/pack("C", hex($1))/eg;
   $value=~ s/\n/ /g;
   $request{$name} = $value;
}
```

To this:

```
$user1 = "Brandon";
$user2 = "Paul";

if ($request{'username'} eq $user1 ||
$request{'username'} eq $user2) {
print "$request{'username'} welcome to Acme
Auto.\n";
}
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

&getFormData;

$user1 = "Brandon";
$user2 = "Paul";

if ($request{'username'} eq $user1 || $request{'username'} eq $user2) {
   print "$request{'username'} welcome to Acme Auto.\n";
}

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
   ($name, $value) = split(/=/, $pair);
   $value=~ tr/+/ /;
   $value=~ s/%([a-fA-F0-9][a-fA-F0-9])/pack("C", hex($1))/eg;
   $value=~ s/\n/ /g;
   $request{$name} = $value;
}
}
```

4. Save the script as **or.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

- `if ($request{'username'} eq $user1 || $request{'username'} eq $user2)`

  Uses the OR operator:

  ||

  to compare two conditions.

  It is asking the question, “is condition one true, OR is condition two true?” Is the entered user name either Brandon OR Paul?

  If the entered user name is either Brandon or Paul, then the block of code in between the curly braces is executed.

5. Upload **or.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

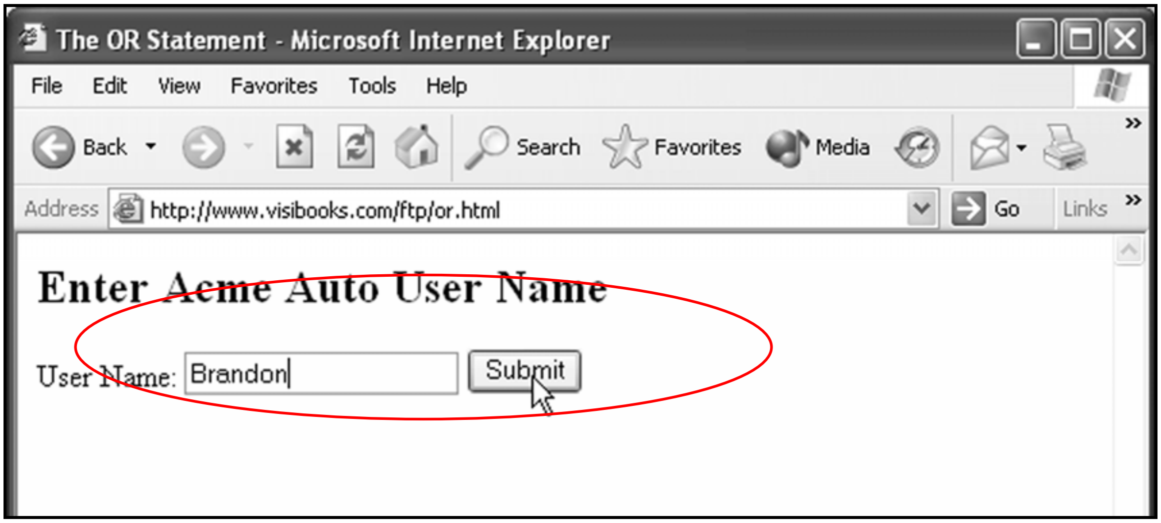
6. In the browser, go to:

www.yourwebsite.com/or.html

7. In the User Name box, type:

Brandon

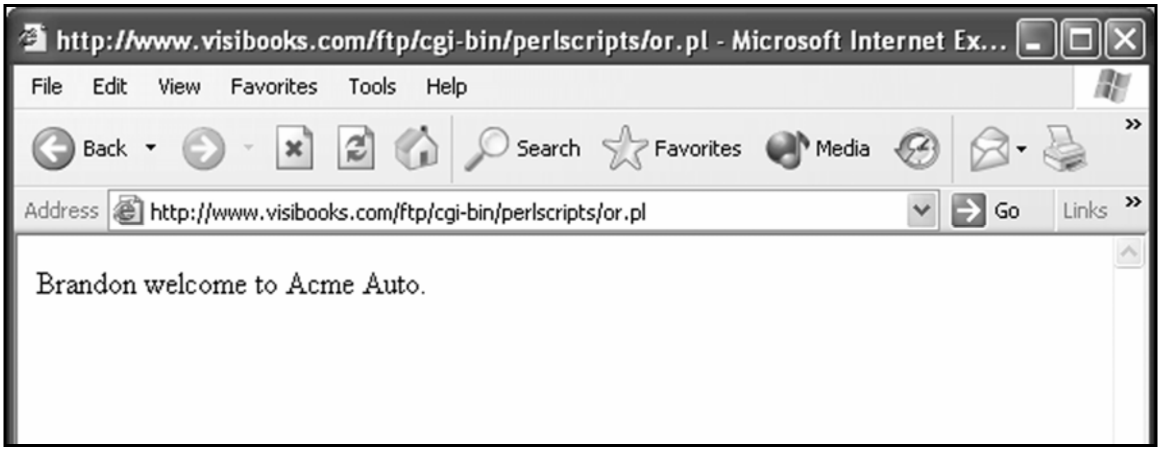
then click the Submit button.


The OR Statement - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/or.html
Go
Links

Enter Acme Auto User Name

User Name: Brandon Submit

The output should look like this:

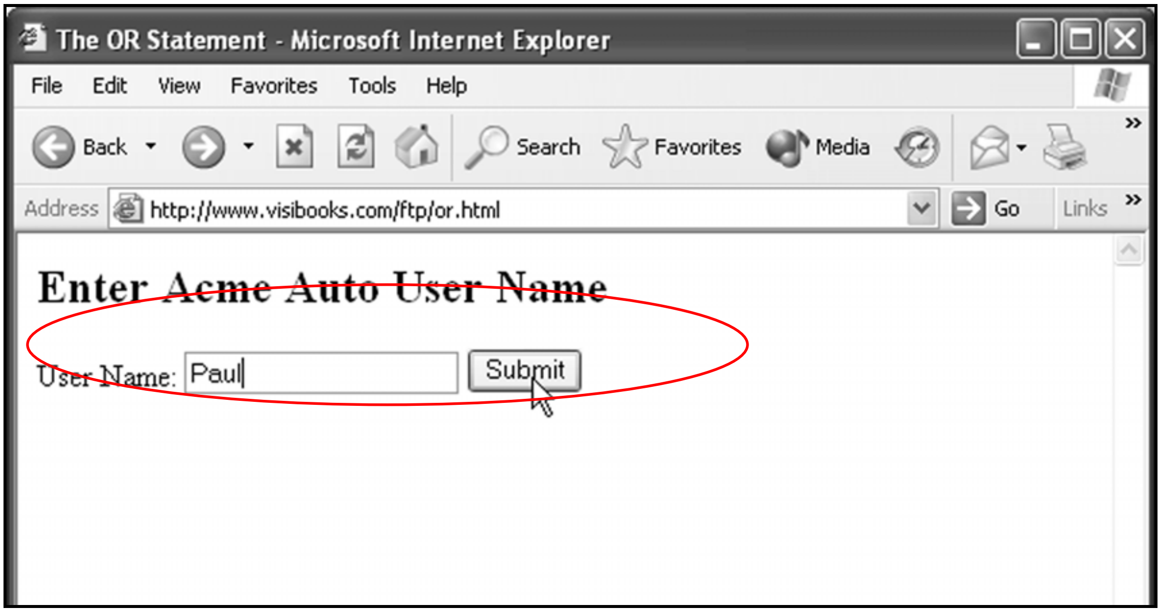

http://www.visibooks.com/ftp/cgi-bin/perlscripts/or.pl - Microsoft Internet Ex...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/or.pl
Go
Links

Brandon welcome to Acme Auto.

8. Go back to **or.html** and in the User Name box, type:

Paul

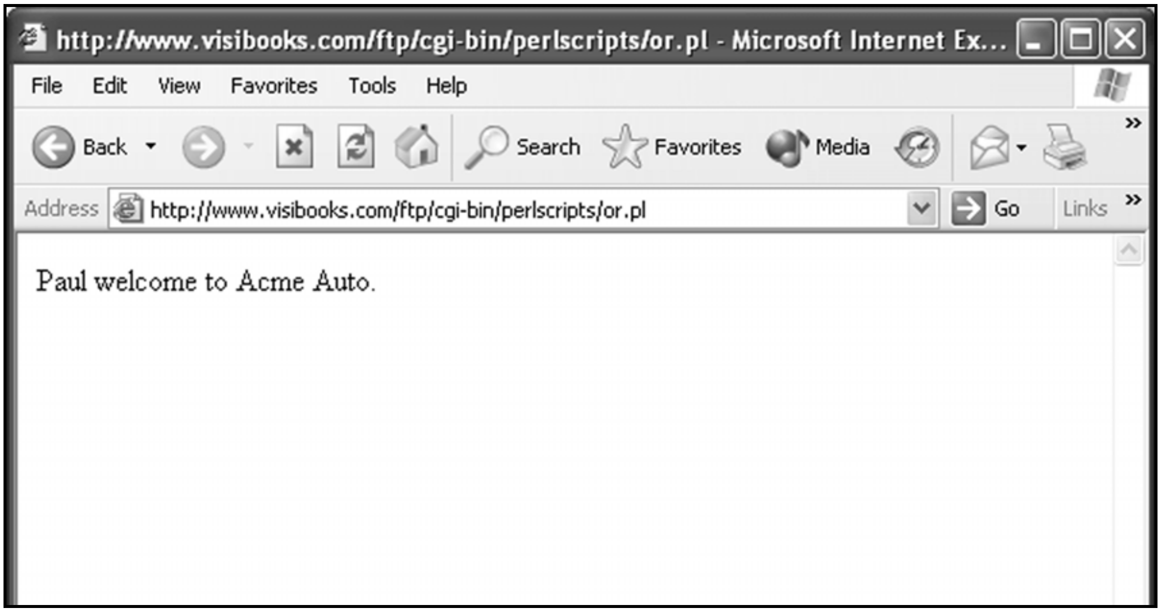
then click the Submit button.


The OR Statement - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.visibooks.com/ftp/or.html
Go Links

Enter Acme Auto User Name

User Name: Paul Submit

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/or.pl - Microsoft Internet Ex...
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/or.pl
Go Links

```
Paul welcome to Acme Auto.
```

The AND operator

1. Create a new Web page with this code:

```
<html>
<head>
<title>The AND Operator</title>
</head>
<body>

<form method="post" action="
http://www.yourwebsite.com/cgi-
bin/perlscripts/and.pl">

<h2>Acme Logon Page</h2>

<h3>Enter User Name & Password</h3>

User Name: <input type="text" name=
"username"><br>

Password: <input type="password"
name="password"><br>

<input type="submit" value="Submit">

</form>

</body>
</html>
```

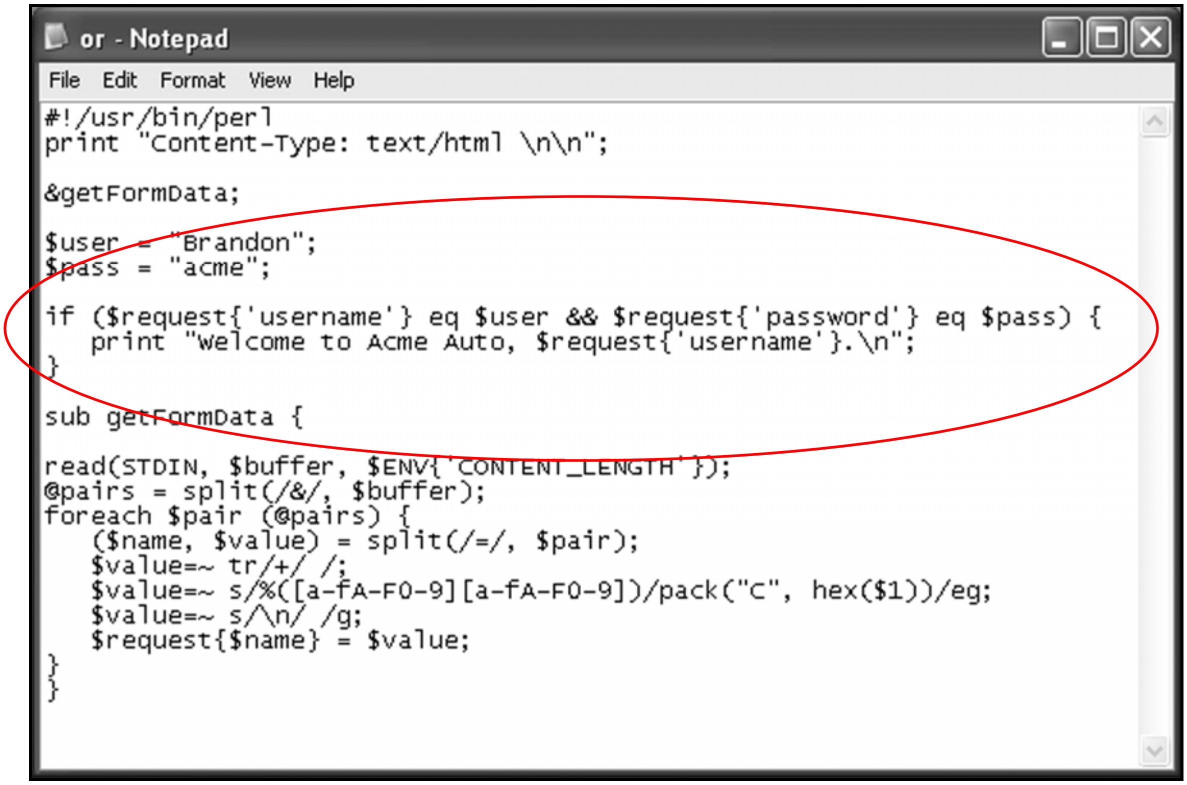
2. Save the page as **and.html** in the **PERLSCRIPTS** folder, then upload it to the home directory in your Web site.

3. Change the code in **or.pl** from this:

```
$user1 = "Brandon";
$user2 = "Paul";

if ($request{'username'} eq $user1 ||
$request{'username'} eq $user2) {
print "$request{'username'} welcome to Acme
Auto.\n";
}
```

To this:

```
$user = "Brandon";
$pass = "acme";

if ($request{'username'} eq $user &&
$request{'password'} eq $pass) {
print "Welcome to Acme Auto,
$request{'username'}.\n";
}
```



```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

&getFormData;

$user = "Brandon";
$pass = "acme";

if ($request{'username'} eq $user && $request{'password'} eq $pass) {
   print "Welcome to Acme Auto, $request{'username'}.\n";
}

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
   ($name, $value) = split(/=/, $pair);
   $value=~ tr/+/ /;
   $value=~ s/%([a-fA-F0-9][a-fA-F0-9])/pack("C", hex($1))/eg;
   $value=~ s/\n/ /g;
   $request{$name} = $value;
}
}
```

4. Save the script as **and.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

- `if ($request{'username'} eq $user && $request{'pass'} eq $pass)`

  Uses the AND operator:

  `&&`

  to compare two conditions.

  It’s asking:

  Is the word entered in the textbox named `username` the same as the word assigned to the variable `$user`?

  AND

  Is the word entered in the textbox named `password` the same as the word assigned to the variable `$pass`?

  If both these things are true, then execute the code in the curly braces.

5. Upload **and.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

6. In the browser, go to:

www.yourwebsite.com/and.html

7. In the User Name box, type:

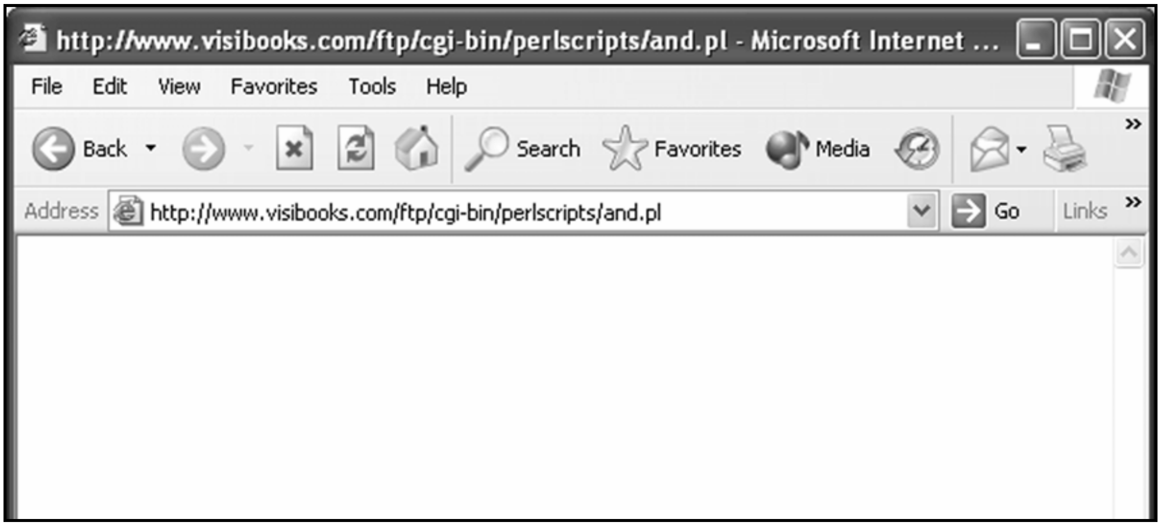
Brandon

8. In the Password box, type:

asdf

then click the Submit button.

The output should look like this:

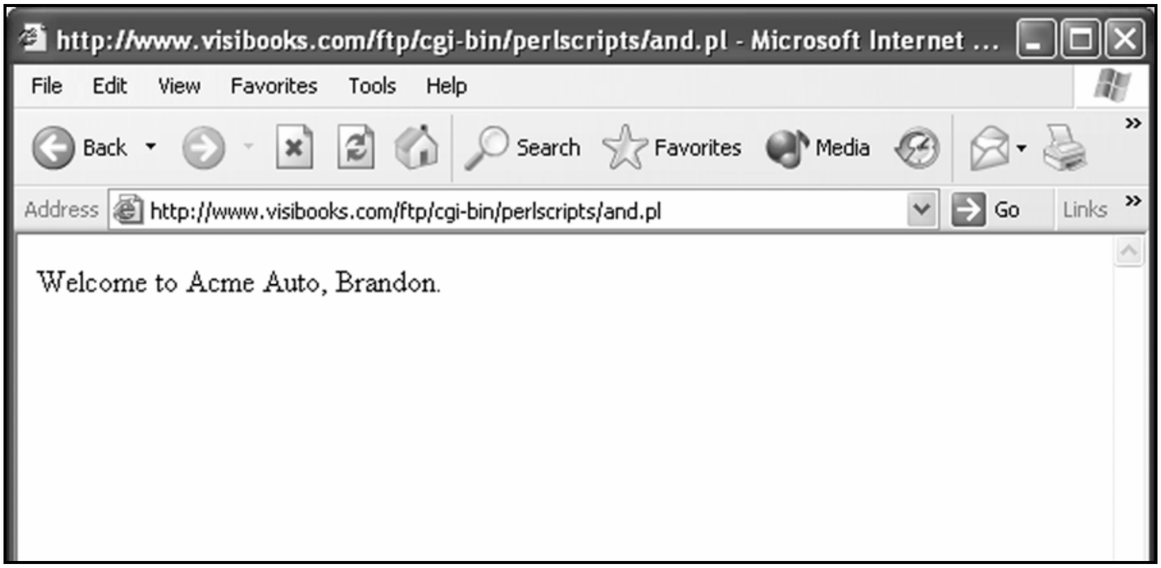


http://www.visibooks.com/ftp/cgi-bin/perlscripts/and.pl - Microsoft Internet ...

Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/and.pl

9. View **and.html** in the browser, enter **Brandon** as the User Name and **acme** as the Password, then click the Submit button.

The output should look like this:



http://www.visibooks.com/ftp/cgi-bin/perlscripts/and.pl - Microsoft Internet ...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/and.pl
Go
Links

```
Welcome to Acme Auto, Brandon.
```

Employ looping

Print a list of elements

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# This script demonstrates how to print
# an array using a foreach loop.

@AcmeCars = ("Ford","Dodge","Chevy");

print "<p>The text array contains:</p>";

foreach $thisCar (@AcmeCars){
    print "$thisCar<br>\n";
}
```

2. Save the script as **printlist.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in the script do:

- `@AcmeCars = ("Ford","Dodge","Chevy");`

  Creates the array variable `@AcmeCars` and places the “Ford”, “Dodge”, and “Chevy” values into the array.

- **`foreach $thisCar (@AcmeCars){`**

  `foreach` tells the Web server to “loop” through the **`@AcmeCars`** array, going through each value in the array, one by one.

  `$thisCar` is a scalar variable: it tells the Web server to pull out each separate element in the **`@AcmeCars`** array.

3. Upload **printlist.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to printlist.pl:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/printlist.pl">14. Print a list
of elements using a loop.</a></p>
```

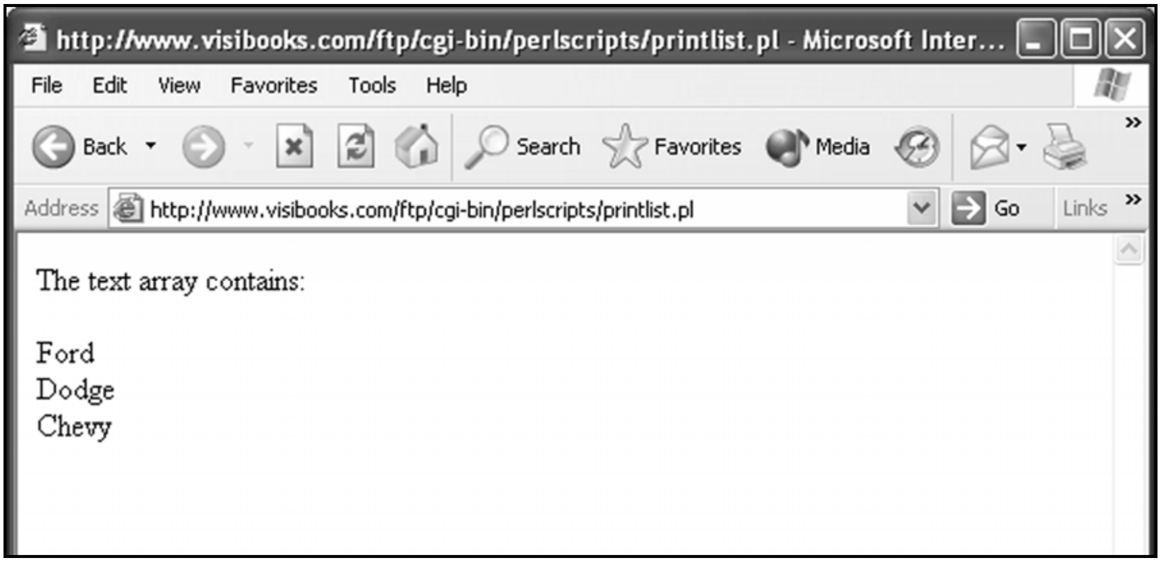
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

www.yourwebsite.com/perllinks.html

7. Click the **Print a list of elements using a loop** link.

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/printlist.pl - Microsoft Inter...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/printlist.pl
Go
Links

```
The text array contains:

Ford
Dodge
Chevy
```

Print elements in an HTML table

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-Type: text/html \n\n";

# This script demonstrates how to print
# array elements within a table.

@AcmeCars = ("Ford","Dodge","Chevy");

print "<html><head><title>Table
Example</title></head><body>\n";

print "<table border=1 bgcolor=yellow>\n";

foreach $thisCar (@AcmeCars){
    print "<tr><td>$thisCar</td></tr>\n";
}

print "</table></body></html>";
```

2. Save the script as **tablelist.pl** in the **PERLSCRIPTS** folder.

   Here's what the relevant lines in this script do:

   - **`print "<html><head><title>Table Example</title></head><body>\n";`**

     Prints the HTML tags that begin a Web page.

   - **`print "<table border=1 bgcolor=yellow>\n";`**

     Prints the tags that set up an HTML table.

   - **`foreach $thisCar (@AcmeCars){`**

     This line tells the Web server to pull out each separate element (**`$thisCar`**) in the **`@AcmeCars`** array, then start doing something to **`$thisCar`**.

   - **`print "<tr><td>$thisCar</td></tr>\n";`**

     Tells the Web server to create a table cell for each element, with the elements inside the cells.

   - **`}`**

     Tells the Web server to stop doing things with each element in the **`@AcmeCars`** array.

   - **`print "</table></body></html>";`**

     Prints HTML tags that complete the table and Web page.

3. Upload **tablelist.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

4. Open **perllinks.html** and insert a new link to **tablelist.pl**:

```
<p><a
href="http://www.yourwebsite.com/cgi-
bin/perlscripts/tablelist.pl">15. Print a list
in a table.</a></p>
```

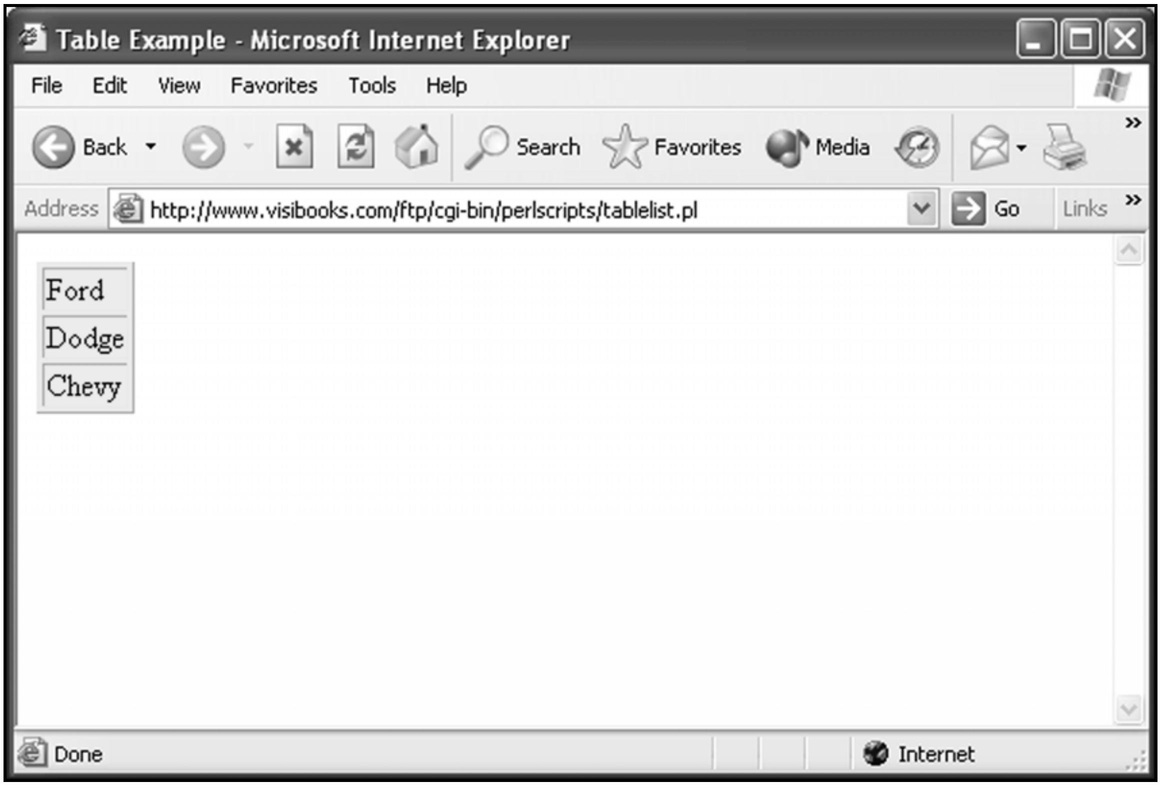
5. Save **perllinks.html**, then upload it to the home directory in your Web site.

6. In the browser, go to:

www.yourwebsite.com/perllinks.html

7. Click the **Print a list in a table** link.

The output should look like this:



Address http://www.visibooks.com/ftp/cgi-bin/perlscripts/tablelist.pl

Ford
Dodge
Chevy

Practice: Logic & Loops

1. Create a Web page and script, entry.html and entry.pl, that work together to password-protect a Web page.

Write the script so that IF the proper username/password combination is entered, the user is taken to the page at:

http://www.yourwebsite.com/presidents.html

Tip: *Refer to the script used in the If/Else statements task, but instead of printing text if the if condition is fulfilled, have it do this:*

```
print "<script>window.location.replace
(\"http://www.visibooks.com\")</script>";
```

ELSE, have **entry.pl** *print this:*

Sorry, it didn’t work. Try again.

2. Link the words **Try again** to the page at:

http://www.yourwebsite.com/entry.html

3. Save **entry.html** and **entry.pl** in the **PERL PRACTICE** folder on your computer.

4. Upload **entry.html** to the home directory in your Web site, then upload **entry.pl** to the **practice** directory in your Web site, and change its permissions so that anyone can execute it.

5. Create a page called **presidents.html** and save it in the **PERL PRACTICE** folder.

The page should have this code:

```
<h3>Who were our three greatest
presidents?</h3>

<input type="text" name="prez1">
<p>
<input type="text" name="prez2">
<p>
<input type="text" name="prez3">
```

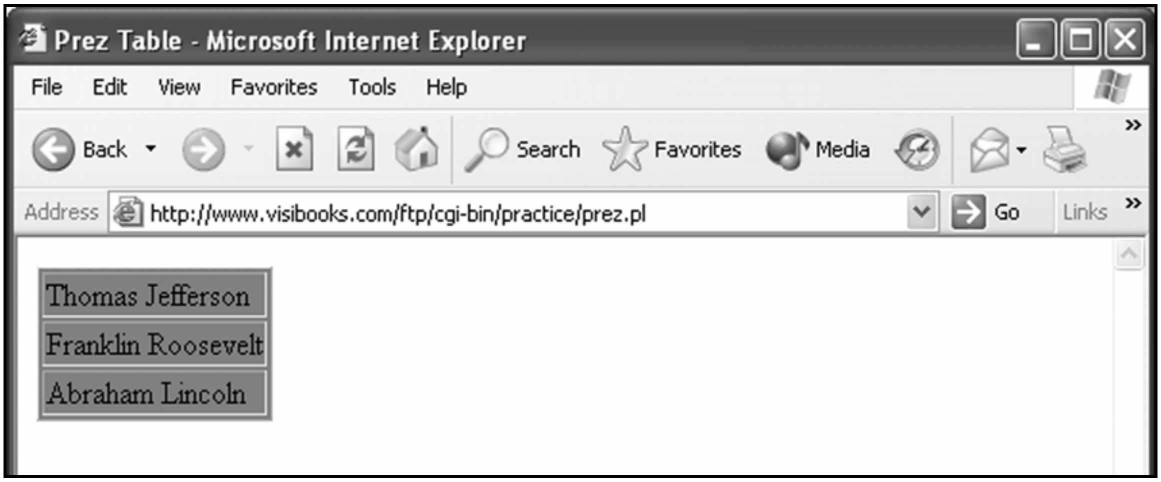
6. Create a script that:

-Requests the names entered in the input boxes on **presidents.html**.

Tip: *Re-use the subroutine* `getFormData` *to parse the form data—just cut and paste.*

-Checks to see if the names “George Washington” or “Abraham Lincoln” were input.

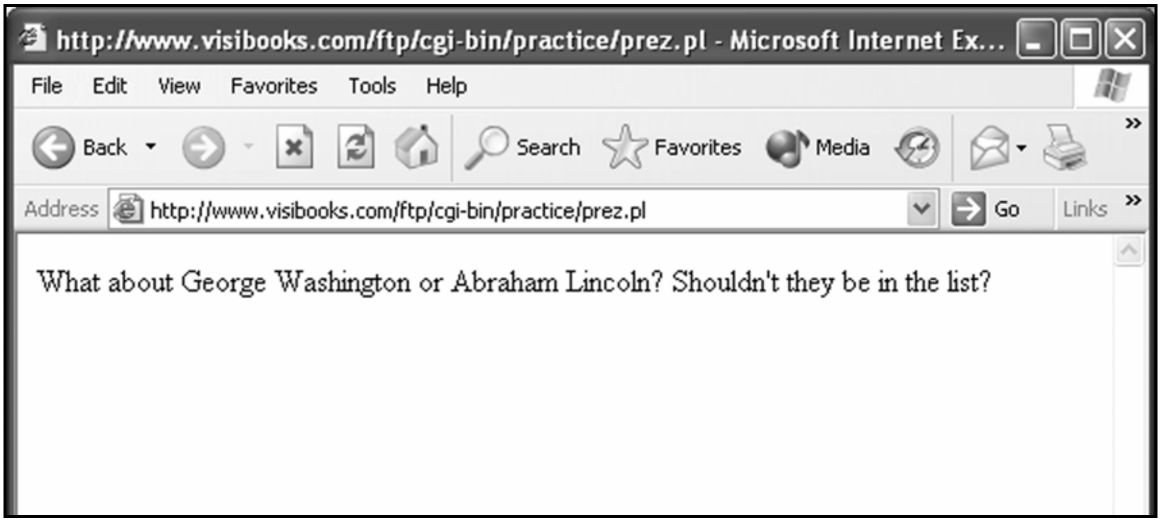
-If either name was input, the script prints out all three names in an HTML table with a gray background.


Prez Table - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/prez.pl
Go
Links

Thomas Jefferson
Franklin Roosevelt
Abraham Lincoln

-If neither name was input, it prints:

What about George Washington or Abraham Lincoln? Shouldn’t they be in the list?


http://www.visibooks.com/ftp/cgi-bin/practice/prez.pl - Microsoft Internet Ex...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/prez.pl
Go
Links

What about George Washington or Abraham Lincoln? Shouldn't they be in the list?

Working With Files

In this section, you'll learn how to:

- **Create a text file**
- **Display files**
- **Append to files**

Create a text file

1. Create a new Web page with this code:

```
<html>
<head>
<title>Create Text File</title>
</head>

<body>

<h2>Today's Thought</h2>

<form name="thought"
action=”http://www.yourwebsite.com/cgi-
bin/perlscripts/textwriter.pl" method=”post”>

<input type="hidden" name="filename"
value="textthought.txt">

<textarea name="comments" rows=3 cols=50
wrap></textarea>

<p><input type="submit" value="Create Thought"
name="submit">

</form>

</body>
</html>
```

2. Save the page as **textwriter.html** in the **PERLSCRIPTS** folder, then upload it to the home directory in your Web site.

3. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-type: text/html\n\n";

&getFormData;

$mycomments = $request{"comments"};
$myfile     = $request{"filename"};

open(MYFILE,">$myfile");
print MYFILE "$mycomments";
close(MYFILE);

print "<p>The $myfile file is created with the
following thought:</p>";

print "<p>$mycomments</p>";
print "<p>$myfile</p>";

print "<a
href=\"http://www.yourwebsite.com/textwriter.ht
ml\">Enter a new thought</a><br>\n";

print "<a href=\"$myfile\">View the $myfile
text file</a>\n";

sub getFormData {

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
  ($name, $value) = split(/=/, $pair);
  $value =~ tr/+/ /;
  $value =~ s/%([a-fA-F0-9][a-fA-F0-
  9])/pack("C", hex($1))/eg;
  $value =~ s/\n/ /g;
  $request{$name} = $value;
}
}
```

4. Save the file as **textwriter.pl** in the **PERLSCRIPTS** folder.

Here's what the relevant lines in this script do:

- `$mycomments = $request{"comments"};`

  Requests the text entered in the text area named `comments` in **textwriter.html**, then assigns it to the variable **$mycomments**.

- `$myfile = $request{"filename"};`

  The form in **textwriter.html** has a hidden text field named **filename**. Here the script requests the value assigned to it in the form—**textthought.txt**—then assigns that value to the variable **$myfile**.

- `open(MYFILE,">$myfile");`

  The PERL command **open** opens the **MYFILE** file variable. Then, the > sign tells the Web server that the value of `$myfile`—**textthought.txt**—can be overwritten.

  If **textthought.txt** does not exist, the Web server will create the file. If it does exist, then the old file will be completely overwritten with the new data.

  Tip: *When using the* `open()` *command, there are three ways a file can be opened:*

  > *Overwrites an existing file—all previous data is lost*
  >> *Appends data to the end of an existing file*
  < *Used for reading data as an input file*

- `print MYFILE "$mycomments";`

  Puts, or “prints,” the text associated with the **$mycomments** variable (the text entered in the **comments** textbox in the form) into the file assigned to the **MYFILE** file variable—**textthought.txt**.

  Since **textthought.txt** doesn’t exist yet, a new text file called **textthought.txt** is created to hold the text coming in from **$mycomments**.

- `close(MYFILE);`

  The `close` command tells the Web server that you’re done using the `MYFILE` file variable.

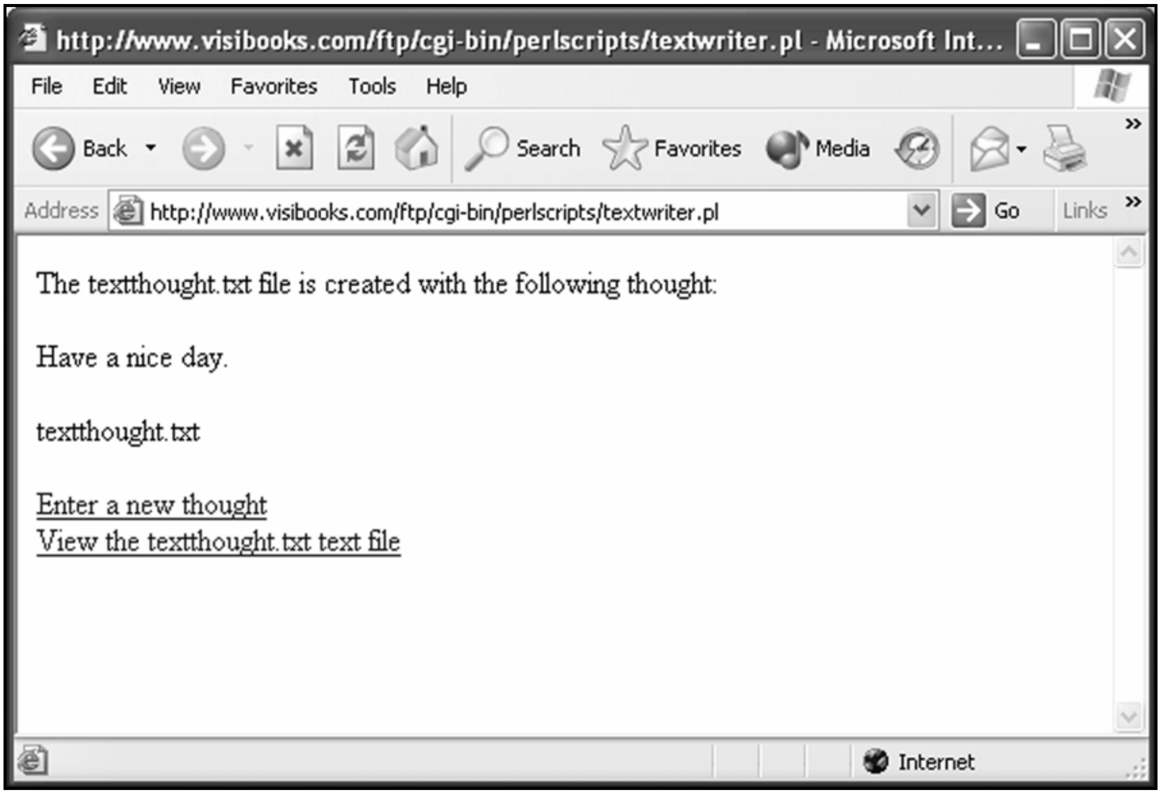
5. Upload **textwriter.pl** to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

6. In the browser, go to:

   www.yourwebsite.com/textwriter.html

7. Enter some text in the comments area, then click the Create Thought button.

The output should look something like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/textwriter.pl - Microsoft Int...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/textwriter.pl
Go
Links
Internet

The textthought.txt file is created with the following thought:

Have a nice day.

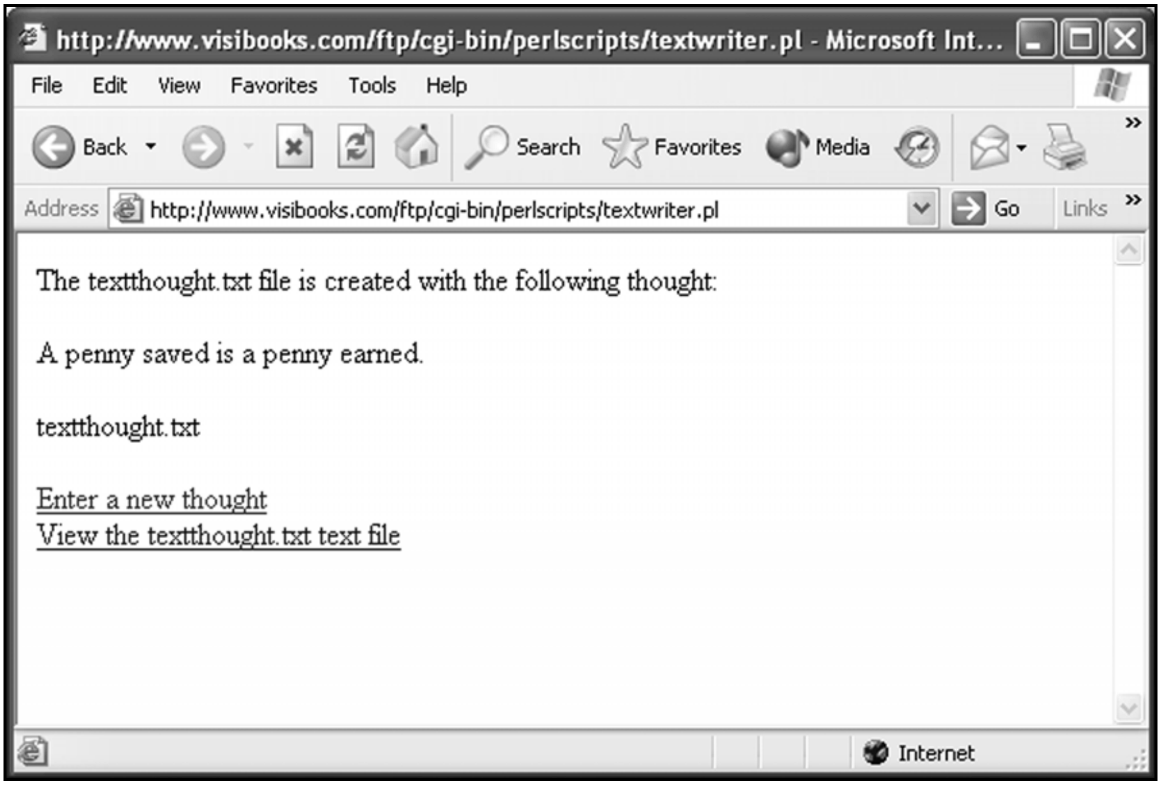
textthought.txt

Enter a new thought
View the textthought.txt text file

8. Return to the **textwriter.html** page.

Enter different text in the comments area, then click the Create Thought button again.

The output should be different.


http://www.visibooks.com/ftp/cgi-bin/perlscripts/textwriter.pl - Microsoft Int...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/textwriter.pl
Go
Links
Internet

The textthought.txt file is created with the following thought:

A penny saved is a penny earned.

textthought.txt

Enter a new thought
View the textthought.txt text file

Display files

1. Create a new script with this code:

```
#!/usr/bin/perl
print "Content-type: text/html\n\n";

open (THISFILE,"textthought.txt");

foreach $line(<THISFILE>) {
print "$line<br>\n";
}

close (THISFILE);
```

2. Save the file as **textviewer.pl** in the **PERLSCRIPTS** folder, upload it to the **perlscripts** directory in your Web site, then set its permissions so that anyone can execute it.

   Here's what the relevant lines in this script do:

   - `open (THISFILE,"textthought.txt")`

     Opens the file **textthought.txt**, and assigns the text in it to the file variable **THISFILE**.

   - `foreach $line (<THISFILE>) {`

     The `foreach` loop loops though every line in the `THISFILE` variable. In other words, it goes through each line of the **textthought.txt** file.

     At each line, it assigns the value of that line to the scalar variable `$line`.

- **`print "$line<br>\n";`**

  Prints the text in each line of **textthought.txt** as the script loops through them.

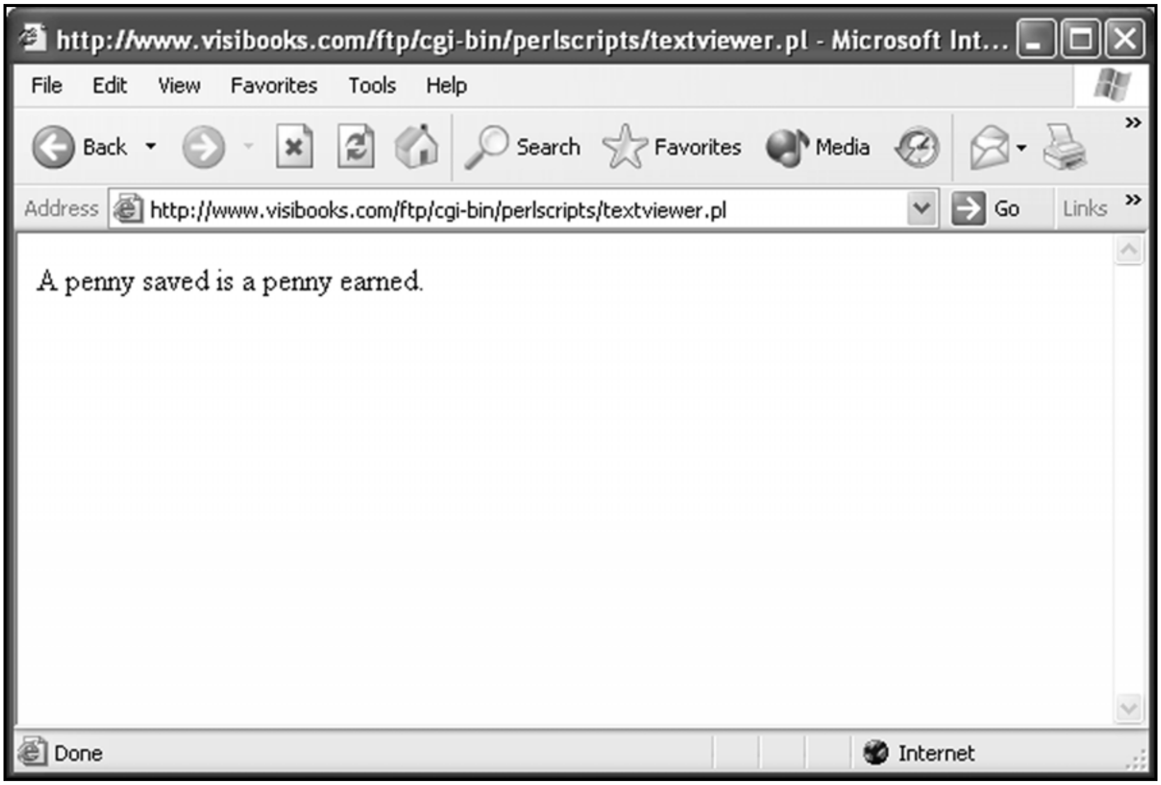
  `close (THISFILE);`

  Once the **`foreach`** loop is finished, the file variable that stands for **textthought.txt** file is closed.

3. In the browser, go to:

www.yourwebsite.com/cgi-bin/perlscripts/textviewer.pl

The output should look something like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/textviewer.pl - Microsoft Int...
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/textviewer.pl
Go
Links
Done
Internet

A penny saved is a penny earned.

Append to files

1. Create a new Web page with this code:

```
<html>
<head>
<title>Append to files</title>
</head>

<body>

<h2>Add to Today's Thought</h2>

<form name="thought"
action="http://www.yourwebsite.com/cgi-
bin/perlscripts/textappender.pl" method=”post”>

<input type="hidden" name="filename"
value="textthought.txt">

<textarea name="comments" rows=3 cols=50
wrap></textarea>

<br><input type="submit" value="Update
Thought">

</form>

</body>
</html>
```

2. Save the page as **textappender.html** in the **PERLSCRIPTS** folder, then upload it to the home directory in your Web site.

3. Open **textwriter.pl** and replace this code:

```
open(MYFILE,">$myfile");
print MYFILE "$mycomments";
close(MYFILE);

print "<p>The $myfile file is created with the
following thought:</p>";

print " p>$mycomments</p>";
print "<p>$myfile</p>";

print "<a href=\"textwriter.html\">Enter a new
thought</a><br>\n";

print "<a href=\"$myfile\">View the $myfile
text file</a>\n";
```

with this code:

```
open(MYFILE,">>$myfile");

print MYFILE "$mycomments";

close(MYFILE);

print "<br>The $myfile file is updated with the
following text: <p>$mycomments</p>";
```

4. Save the file as **textappender.pl** in the **PERLSCRIPTS** folder, then upload it to the **perlscripts** directory in your Web site.

Set its permissions so that anyone can execute it.

Here's what the relevant lines in this script do:

-
- **`open(MYFILE,">>$myfile");`**

  Opens the the **`MYFILE`** variable (**textthought.txt**), then tells the Web server, with the >> sign, to add comments entered in **textappender.html** to **textthought.txt**.

- **`print MYFILE "$mycomments";`**

  Puts, or “prints,” the text associated with the **`$mycomments`** variable (the text entered in the **`comments`** textbox in the form) into the file assigned to the **`MYFILE`** file variable—**textthought.txt**.

  However, because **`MYFILE`** was opened for append (>>), the old text remains in **texxthought.txt**, and the new text is added to the end of it.

- **`close(MYFILE);`**

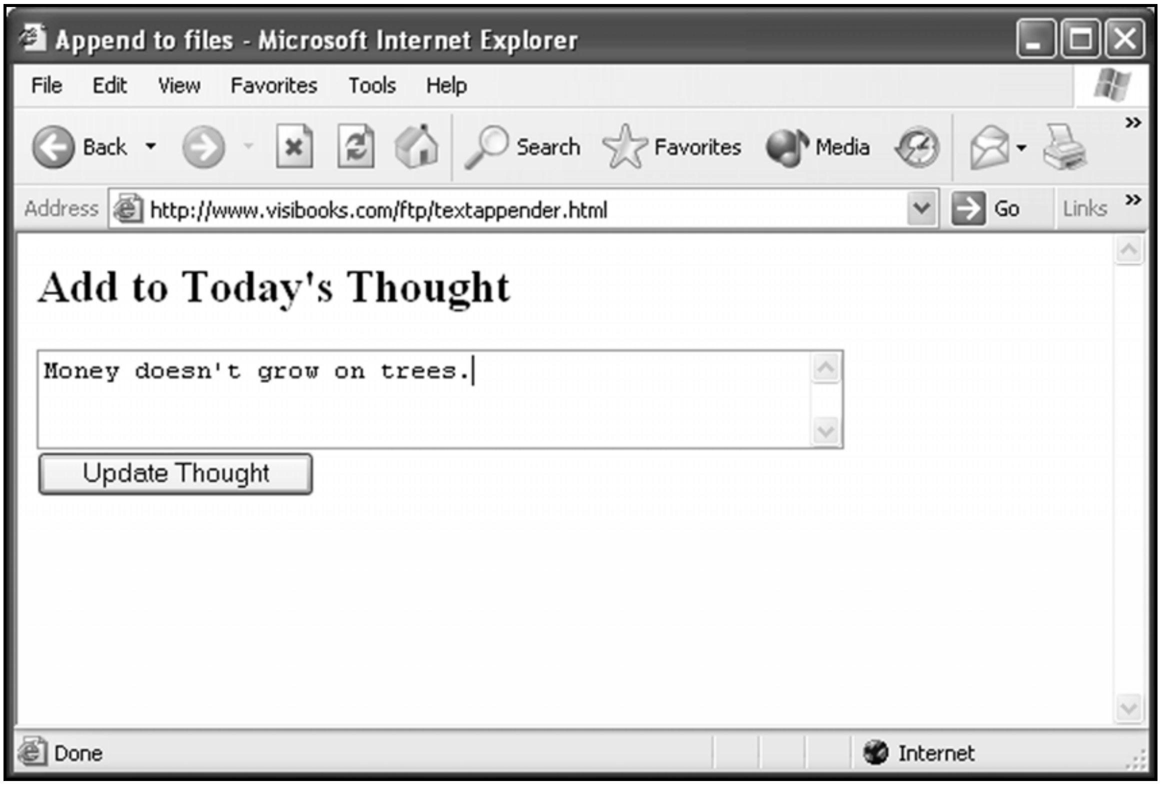
  After **`MYFILE`** has been appended, it’s closed.

5. In the browser, go to:

www.yourwebsite.com/textappender.html

6. In its comments box, type:

Money doesn't grow on trees.

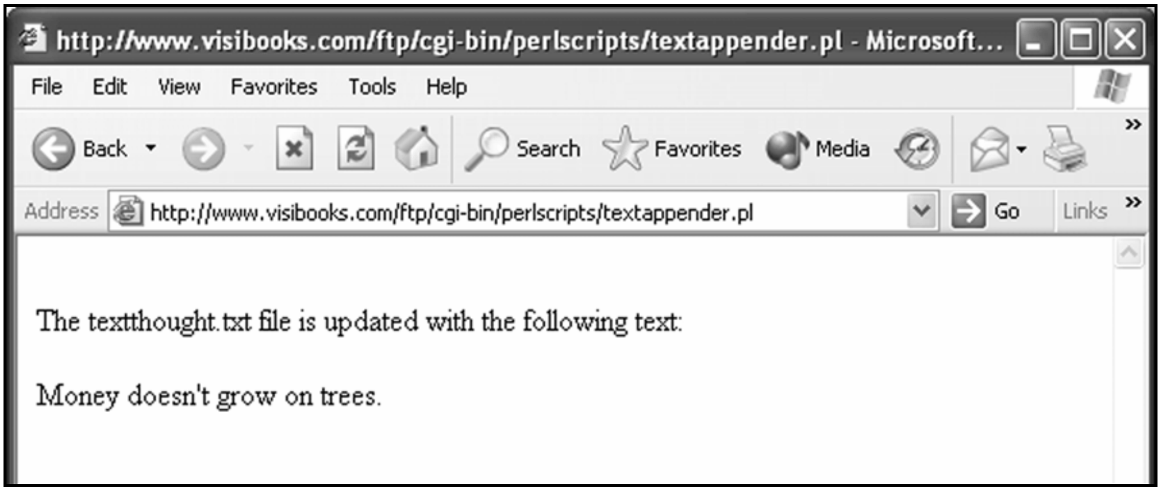

Append to files - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/textappender.html
Go
Links
Done
Internet

Add to Today's Thought

```
Money doesn't grow on trees.
```

7. Click the Update Thought button.

The output should look like this:


http://www.visibooks.com/ftp/cgi-bin/perlscripts/textappender.pl - Microsoft...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/perlscripts/textappender.pl
Go
Links

The textthought.txt file is updated with the following text:

Money doesn't grow on trees.

Practice: Working With Files

1. Create a Web page and script, **quotes.html** and **quotes.pl**, that work together to create a new text file named **quotes.txt**.

   Make sure that **quotes.pl** generates links that allow you to change and view **quotes.txt**.

2. Save **quotes.html** and **quotes.pl** in the **PERL PRACTICE** folder on your computer.

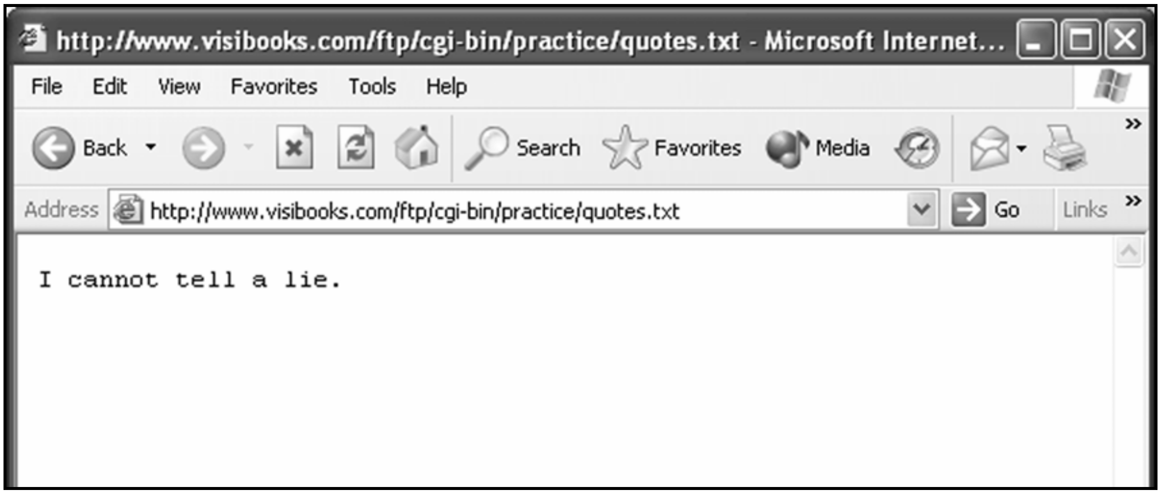
3. Upload **quotes.html** to the home directory in your Web site, then upload **quotes.pl** to the practice directory in your Web site, and change its permissions so that anyone can execute it.

4. Using **quotes.html**, enter and submit this quote:

   I cannot tell a lie.

5. Click the link to view **quotes.txt**.

It should look like this:


http://www.visibooks.com/ftp/cgi-bin/practice/quotes.txt - Microsoft Internet...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/quotes.txt
Go
Links

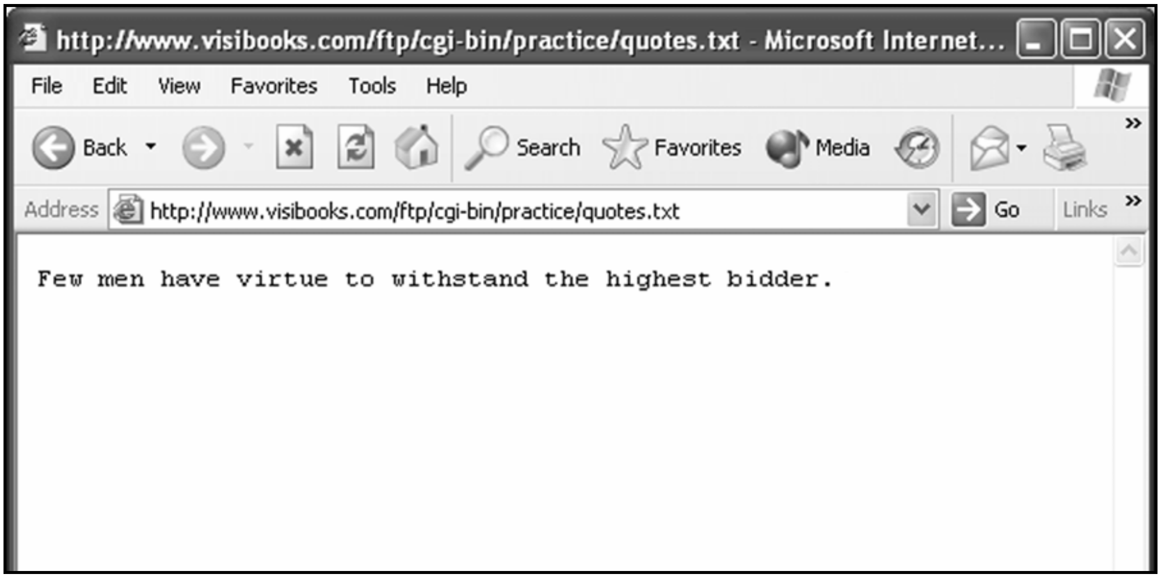
```
I cannot tell a lie.
```

6. Enter and submit another quote:

Few men have virtue to withstand the highest bidder.

7. Click the link to view **quotes.txt**.

It should look like this:


http://www.visibooks.com/ftp/cgi-bin/practice/quotes.txt - Microsoft Internet...
File Edit View Favorites Tools Help
Back
Search
Favorites
Media
Address
http://www.visibooks.com/ftp/cgi-bin/practice/quotes.txt
Go
Links

```
Few men have virtue to withstand the highest bidder.
```

1. Create a Web page and script, **append.html** and **append.pl**, that work together to allow you to add more than one quote to **quotes.txt**.

2. Save **append.html** and **append.pl** in the **PERL PRACTICE** folder on your computer.

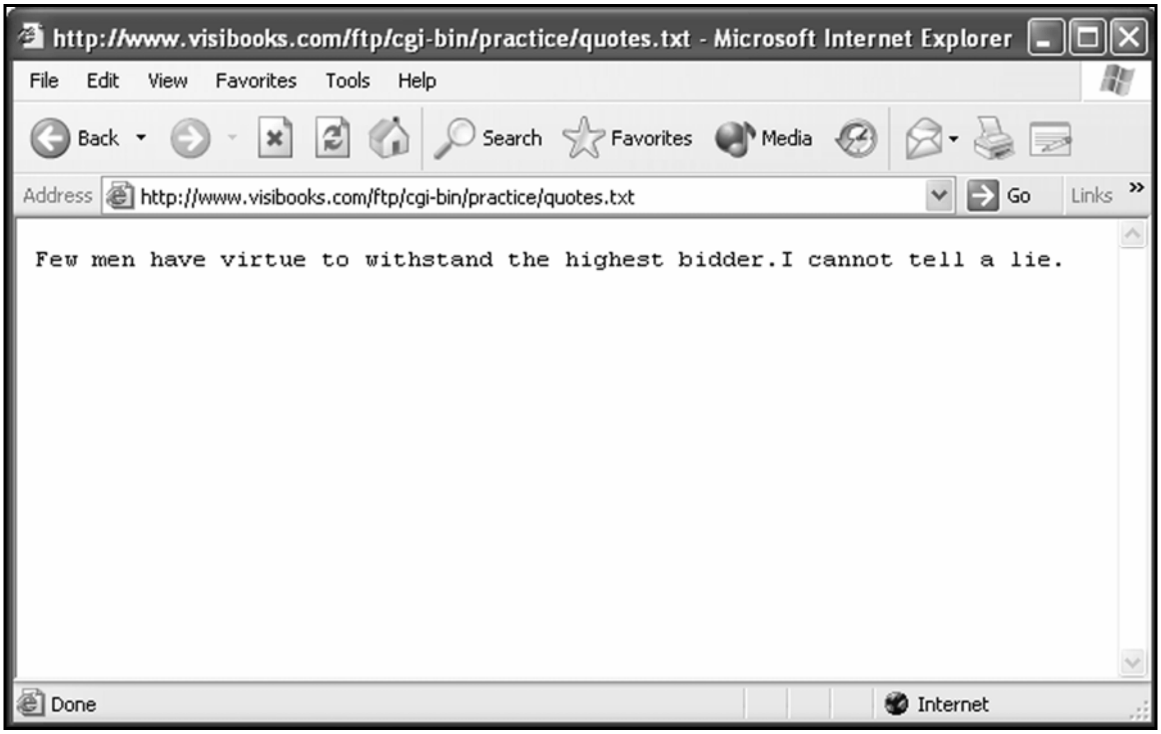
3. Upload **append.html** to the home directory in your Web site, then upload **append.pl** to the practice directory in your Web site, and change its permissions so that anyone can execute it.

4. Using **append.html**, enter and submit this quote:

   I cannot tell a lie.

5. Create a script that allows you to view **quotes.txt**.

   It should show both quotes:



http://www.visibooks.com/ftp/cgi-bin/practice/quotes.txt - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.visibooks.com/ftp/cgi-bin/practice/quotes.txt Go Links
Done
Internet

```
Few men have virtue to withstand the highest bidder.I cannot tell a lie.
```

Modifying scripts

Modifying downloaded scripts

Just about any basic script you'd need has already been written by someone else. Do a Web search on "perl scripts" and you'll find many sites with good, useful scripts. Most are either free or inexpensive to use.

Now that you're familiar with PERL, you can download an existing script that generally does what you want, then modify it to meet your specific needs.

Below is an example of a script downloaded from a Web site. It takes form data from a Web page and sends it to an email address. Modify a few sections, and you can use it on your Web site.

Parsing code. Takes text from form inputs and puts it in a format PERL can work with.

```
#!/usr/bin/perl -w

read(STDIN, $buffer, $ENV{'CONTENT_LENGTH'});
@pairs = split(/&/, $buffer);
foreach $pair (@pairs) {
($name, $value) = split(/=/, $pair);
$value =~ tr/+/ /;
$value =~ s/%([a-fA-F0-9][a-fA-F0-9])/pack("C",
hex($1))/eg;
$value =~ s/\n/ /g;
$request{$name} = $value;
}
```

Email address to which you'd like the form input sent.

```
$myemail = "you\@yourserver.com";
```

```
$maillocation = "/usr/sbin/sendmail";

$name="$request{'name'}" ;
$email="$request{'email'}" ;
```

Location of the email program on your Web server.

Script requests text from two form inputs on a Web page. One input is named “name,” the other is named “email.”

If the “name” input is left blank, print the HTML text below.

```
if ($name eq "") {
    print "Content-type: text/html\n\n";
    print "<HTML>
<HEAD>
<TITLE>Enter name</TITLE>
</HEAD>
<BODY>Please enter your name.</BODY>
</HTML>\n";
    exit;
    }
```

If the “email” input is left blank, print the HTML text below.

```
if ($email eq "") {
    print "Content-type: text/html\n\n";
    print "<HTML>
<HEAD>
<TITLE>Enter email</TITLE>
</HEAD>
<BODY>Please enter your email address.</BODY>
</HTML>\n";
    exit;
    }
```

If both inputs are filled in, print the “Thanks!” message.

```
print "Content-type: text/html\n\n";
print "<HTML>
<HEAD>
<TITLE>Thanks for subscribing</TITLE>
</HEAD>
<BODY>Thanks!</BODY>
```

```
</HTML>\n";

open (MAIL, "| $maillocation") || die "aw, cant
use $maillocation";
print MAIL "To: $myemail\n";
print MAIL "From: $email\n";
print MAIL "Subject: Info from form\n";
print MAIL "\n";
print MAIL "Here’s the info:\n\n";
print MAIL "Name: $name\n";
print MAIL "Email: $email\n";
close (MAIL);
```

Open the email program at $maillocation on the server.

After the email program is open, have it print an email with the form date, then send it to $myemail.

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