

ITC 250/CPET 499 Web Systems
Fall 2014

Homework Assignment #7

Assigned Date: Oct. 9, 2014
Due Date: Oct. 21, 2014 before 3:00 PM (as email attachments)

Individual assignment

Perl CGI Server-Side Perl Script Programming Exercises through XAMPP for Windows installed at your own computer.

Part 1. Understand your XAMPP configuration and locate your Perl.exe setup location

According to <http://www.apachefriends.org/en/xampp.html> , the XAMPP is a free and open source cross-platform server solution stack package which consists of the Apache HTTP server, MySQL database, PHP and Perl etc. Reexamine your installation and answer the following:

- A. Where is the folder (directory) for storing the server homepage and all related web pages? (Give the complete path or your installation)
- B. Find the folder and path for the install perl.exe.
- C. Start your Windows' command , by clicking the Windows's icon located on lowest-left task-bar,
 - a) then enter "**cmd**" in the command box, to see the command window; at the command prompt
 - b) use "**cd /**" command to move to the root of C drive
 - c) use "**cd xampp/perl**" command to move to the perl installation folder or directory
 - d) Then enter the following command to see the installed perl.exe application and it's version: "**perl -v**"
 - e) Copy the installation message for use in your lab report

Part 2. Understand Perl programming environment, program editing and testing

- A. Copy the **test1.pl** located on Example 1-1 (Chapter 1. Web Servers and CGI/Programming, http://www.etcs.ipfw.edu/~lin/Presentation/Perl/1_CGI.htm) to notepad editor, and save it into **c:\xampp\cgi-bin** folder
 - Move to c:\xampp\cgi-bin folder, by typing the following two commands
cd ..
cd cgi-bin
 - Then verify you can run Perl at this c:\xampp\cgi-bin folder, by typing "**perl -v**"
 - Run the test1.pl script by typing the following command
perl test1.pl
 - Copy the script running result for use in your lab report
- B. Use the notepad to edit the Perl program: **printex.pl** as shown in Chapter 2. Perl Programming

Environment: http://www.etcs.ipfw.edu/~lin/Presentation/Perl/2_Pperl_IntroNoDiagram.htm)

- Save the printex.pl into c:\xampp\cgi-bin folder
- Use the command “**dir**” to see all save perl program
- Run this program, by typing
perl printex.pl
- Save the result for use in the lab report

Part 3. Perl CGI Programming Exercises

- Star your Apache HTTP server through XAMPP control panel
- Copy **hello.pl** program as shown in Example 1-2 (http://www.etcs.ipfw.edu/~lin/Presentation/Perl/1_CGI.htm) into Notepad editor
 - Change the first line of the program **#!/usr/bin/perl** to **#!/c:\xampp\perl\bin\perl.exe** where the Perl.exe located in the XAMPP, and note that the pair of double quotes is required.
 - Save it in the **c:\xampp\cgi-bin** folder
 - Open an Internet Explorer browser, assume the port 80 is available, you enter <http://localhost/cgi-bin/hello.pl> , observe and save the running results for lab report. (or if the TCP port is opened at 5555, <http://localhost:5555/cgi-bin/hello.pl>)
 - Repeat the same test using Google Chrome browser and Mozilla Firefox browser
- Copy **browserinfo.pl** (Example 3-1 of Chapter 3. CGI Environment Variables, http://www.etcs.ipfw.edu/~lin/Presentation/Perl/3_CGIParaCcess.htm), and edit the first line statement which shows the path to the HTTP Webserver for where the Perl.exe is located; repeat the same testing process as shown in Part 3. B.
- Find the **printenv.pl** located in **c:\xampp\cgi-bin** folder, open it with Notepad editor

```
#!/C:\xampp\perl\bin\perl.exe"
##
## printenv -- demo CGI program which just prints its environment
##
```

```
print "Content-type: text/plain; charset=iso-8859-1\n\n";
foreach $var (sort(keys(%ENV))) {
    $val = $ENV{$var};
    $val =~ s|\n|\n|g;
    $val =~ s|\"|\"|g;
    print "${var}=\"${val}\"\\n";
}
```

- Run the printenv.pl program using IE browser, by entering the following <http://localhost/cgi-bin/printenv.pl>; or the TCP port is open at 5555, <http://localhost:5555/cgi-bin/printenv.pl>)
- Study the related link for CGI Environment Variables that shows: Document Root, HTTP Server Name, Server Port, Server Protocol, Version of HTTP

protocol, Home of MySQL database, Request URI. Use those info for your report.

Hand In Requirement

- Prepare your homework 7 report “**hw7-YourName.docx**” using format “ECET Laboratory Report Guidelines, <http://www.etcs.ipfw.edu/~lin/InfoForAllCourses/laboratoryreport.htm>”, include all the information, copy and paste: source code Perl scripts, running results; also don't forget add your Lesson learned and summary.
- Submit your **hw7-YourName.docx** to Prof. Lin's email at lin@ipfw.edu before 3 PM, Oct. 21, 2014