**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:

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

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

1. 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

1. 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_Perl_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

1. Star your Apache HTTP server through XAMPP control panel
2. Copy **hello.pl** program as shown in Example 1-2 (<http://www.etcs.ipfw.edu/~lin/Presentation/Perl/1_CGI.htm>) into Notepad editor
   1. 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.
   2. Save it in the **c:\xampp\cgi-bin** folder
   3. 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> )
   4. Repeat the same test using Google Chrome browser and Mozilla Firefox browser
3. 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.
4. 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";

}

1. 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> )

1. 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**

1. 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.
2. Submit your **hw7-YourName.docx** to Prof. Lin’s email at [lin@ipfw.edu](mailto:lin@ipfw.edu) before 3 PM, Oct. 21, 2014