COMP 490: Individual Primer Project

### Due Date: Sept 12, 2016 Submission Subject: Primer

## General Submission Criteria:

All laboratory assignments must be submitted using git. In addition to the submission of the assignment, the following criteria must be met for all assignments.

1. Your laboratory software project must be stored within a publically accessible git repository. Given a URL, a pull request can be made. I highly recommend[[1]](#footnote-0) that you use github.
2. This git repository must have been updated via a **series** of “commit”s and “push”es.
3. You must have a README file associated with your software project, and it must provide a log/journal of the activities you performed on your project and it must provide a summary of your project status.
4. An email is sent with the appropriate subject to [jeffw@csun.edu](mailto:jeffw@csun.edu) that
   1. announces that the assignment is complete and ready to be graded,
   2. contains a copy of your README document, and
   3. includes the git URL for download and testing.
5. Your submission must include everything to deploy your project within a “public\_html” directory.
6. I will be testing your application on Campus web environment: <http://www.csun.edu/~jeffw/>
7. I will review your application by visting the Campus web environment via the following URL: <http://www.csun.edu/~>*<uid>* where <uid> is a placeholder for your account name.

## Overview:

In this project, you are to create a simple web application. This web application can be written in any programming language of your choice. However, you must use the simple CGI interface. I.e., you can’t use the vendor supplied libraries to read access the HTTP Header information.

The functionality of your web application is to be defined by you. There is a minimal number of features that are required, you are free to add additional features.

## Features:

Your web application must have the following features:

* It must respond to the GET verb.
* It must have a different response based upon the URI provided to the application.
* It must return HTML and appropriate links to any associated CCS sheets or Javascript (I.e., do not inline style or dynamic behavior within your structure).
* It must have least one style sheet; it may have dynamic content, but it’s not required.
* It must consume information information from the file system.  
  I.e., your web application must make a call, via the CLI or system call, to the OS to get additional information from the filesystem that is integrated into your output.
* It must consume information from a remote web-server

I.e., your web application must make a call via HTTP to another web-server to get additional information that is integrated into your output.

## Conditions:

* You may use any programming language, but you must follow the CGI conventions.
* You must obtain all information about the request directly from environment variables.  
  (See ssh://ssh.csun.edu/~steve/webdrive/public\_html/cgi-bin/simple.cgi program)
* You must handle all URIs within your namespace.   
  (See Mod Rewrite Rules)
* You must emit both the HTTP header and body.

**Mod Rewrite Rules** (.htaccess)

|  |
| --- |
| <IfModule mod\_rewrite.c>    RewriteEngine On  # Redirect Trailing Slashes...  RewriteRule ^(.\*)/$ /$1 [L,R=301]  # Handle Front Controller...  RewriteCond %{REQUEST\_FILENAME} !-d  RewriteCond %{REQUEST\_FILENAME} !-f  Rewritps eRule ^ index.php [L]  </IfModule> |

**Simple CGI**

|  |
| --- |
| **$ cat simple.cgi**  #! /bin/bash  # This is a little CGI program  ###################################################################  # The following are environment variables that are available to you  #  # CONTENT\_TYPE: The desired MIME type for the response.  # CONTENT\_LENGTH: The length of the query information.  # GATEWAT\_INTERFACE: Currently CGI/1.1  # HTTP\_HOST: The name of the vhost of the server.  # HTTP\_USER\_AGENT: Information about the requesting client.  # QUERY\_STRING: The query string.  # REQUEST\_METHOD: The method used to make the request.  # REQUEST\_URI: The URI of the request.  # SERVER\_PROTOCOL: Currently “HTTP/1.1”.  # SCRIPT\_FILENAME: The full path to the CGI script.  # SCRIPT\_NAME: The name (i.e., URI) of the CGI script.  # SERVER\_NAME: The server's hostname or IP Address.  # SERVER\_PORT: The port of the server.  # Add a content type and a blank line  echo "X-COMP-490: ${USER}"  echo "Content-type: text/plain"  echo ""  if [ -n "${QUERY\_STRING}" ] ; then  cat ./${QUERY\_STRING}  fi |

1. Note that “highly recommend” is Steve’s code word for you should do this unless you have a compelling reason why you can not. [↑](#footnote-ref-0)