

Comput 410

Lab3

Common Gateway Interface (CGI)

Using Python

Ali Sajedi

All or some parts of the slides of this presentation are duplicated / changed
from the References (last page)

Exercise

- Using CGI and Python, You should have two pages redirecting to each other.
 - In page 1, get the “name” and “family” from the user and send them to page 2 to show.
 - In page 2:
 - Show the above parameters
 - Get “birthdate” and “main hobby” and send them to page 1 to show.
- Manage your scripts in two separated folders;
 - Your server script in “server” folder and
 - All your other scripts in “cgi” folder.

* Follow the slides to guide

- **Submission:** Push all the files in your repo and submit the address of your repo in eclass.

Additional Exercise (If there is time!)

- Add additional components (like checkboxes) and some extra fields in each form.
- Embed “Form1”, “Form2” and “Home” links and manage those that should be disabled/hidden.
- Add any arbitrary feature.

2- Tutorials

1. <http://pointlessprogramming.wordpress.com/2011/02/13/python-cgi-tutorial-1/>
2. <http://pointlessprogramming.wordpress.com/2011/02/13/python-cgi-tutorial-2/>

CGI Concepts

- Common Gateway Interface
 - A standard method used to generate dynamic content on web pages and web applications.
 - Using CGI scripts (or simply, CGI's):
 - we can make an interface between the web server and programs that generate the web content
 - Did you notice sth like this in your browser's address bar?
 - `http://example.com/cgi-bin/printenv.pl/foo/bar?var1=value1&var2=with%20percent%20encoding`

Starting ...

- To start with we need to create a directory for our server and CGI scripts to reside in.
- We need a server file plus at least a CGI file
- Both files are Python files here

Example 1 - A simple server and a sample page

- Server is always running ...
- Server runs the Python file mentioned in address bar
- Creating contents html contents using Python

Introducing the interpreter - Examples:

under Mingw, python scripts use :

- `#!/c/python3k/python`

and under GNU/Linux distribution it is either:

- `#!/usr/local/bin/python`

or

- `#!/usr/bin/python`

and under the best commercial Unix sw/hw system of all (OS/X), it is:

- `#!/Applications/MacPython 2.5/python`

or on FreeBSD:

- `#!/usr/local/bin/python`

However all these differences can make the script portable across all by using:

- `#!/usr/bin/env python`

Example 2- CGI in/out

- Carrying parameters to the second page along with
- Get input from user using forms ...

Submission of the exercise

- Push all the files in your repo and submit the address of your repo in eclass.

References

All or some parts of this presentation were duplicated / changed from the References, thanks to all the authors:

1. <http://pointlessprogramming.wordpress.com/2011/02/13/python-cgi-tutorial-1/>
2. <http://pointlessprogramming.wordpress.com/2011/02/13/python-cgi-tutorial-2/>
3. <http://stackoverflow.com/questions/2429511/why-do-people-write-usr-bin-env-python-on-the-first-line-of-a-python-script>
4. https://en.wikipedia.org/wiki/Common_Gateway_Interface
5. http://webpython.codepoint.net/cgi_tutorial
6. http://www.cs.virginia.edu/~lab2q/lesson_1/
7. <https://wiki.python.org/moin/CgiScripts>
8. <http://anh.cs.luc.edu/python/hands-on/3.1/handsonHtml/dynamic.html>
9. <http://www.w3resource.com/python/cgi-programming.php>
10. <http://searchsoa.techtarget.com/definition/common-gateway-interface>