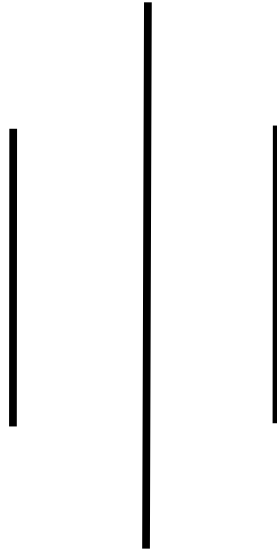# Deerwalk Institute Of Technology
Internet Technology

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CGI Scripts:

- CGI is abbreviation of Common Gateway Interface, a specification for transferring information between a World Wide Web server and a CGI program.
- A CGI program is any program designed to accept and return data that conforms to the CGI specification.
- The program could be written in any programming language, including C, Perl, Java, Python or Visual Basic.
- CGI programs are the most common way for Web servers to interact dynamically with users.
- CGI scripts can be written only in linux based OS.
- The CGI scripts are placed inside the directory: `/usr/lib/cgi-bin`
- The scripts can be in any language.

Example:
Bash CGI script to list all files and folders inside **/opt** directory:

```bash
#!/bin/bash
echo "Content-type: text/html"
echo ''

for eachdir in "/opt"/*
do
  echo "<h4>$eachdir</h4><br>"
done
```

First line is the path to the bash interpreter. If other languages, we specify the compiler location.
Then we set the content type to HTML as it is rendered in the web browser.
Then, we write the code for the bash scripts.

In web browser, the output can be seen in location:

http://localhost:<port>/cgi-bin/<filename>.<extension>

If output is not seen, we have to start the cgi service using command: `$ sudo a2enmod cgi`

Example:
Python script to display files and folder inside the /opt directory

```python
#!/usr/bin/python
import os
print "Content-type:text/html\r\n\r\n"
print '<html>'
print '<head>'
print '<title>List directory /opt</title>'
print '</head>'
print '<body>'
print '<h3>List of files and directories inside the /opt directory.</h3>'
print '<hr>'
print '</body>'
print '</html>'
files = os.listdir('/opt')
for each in files:
        print each+"<br/>"
```

Output:

List of files and directories inside the /opt directory.

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forTest
idea-IU-145.597.3
hadoop-2.7.1
sublime_text
WebStorm-143.1559.5
pt
pycharm-2016.1.2
Gitter
google
android-studio