

Lab Report

ECPE 170 – Computer Systems and Networks – Fall 2016

Name: Drew Overgaard

Lab Topic: Network Socket Programming (Basic) (Lab #: 08)

Question #1:

What is first line of the python script that starts with `#!` doing? Where in ECPE 170 have you seen this before?

Answer:

This line is stating where the interpreter is located so that it can be executed as a python script when its run in the command line. If this line wasn't included there would be no way for the command line to know that it's a python script. This is also used in other scripting languages and it was used to run python programs in the command line in some of the previous labs in ECPE 170.

The full output for questions 2 – 4 are in my Lab 8 Folder they're named:

connection_log_ECPE170.txt

connection_log_yahoo.txt

connection_log_googleImage.txt

Question #2:

Document the HTTP request and the server response when you manually download the HTML file at <http://ecs-network.serv.pacific.edu/ecpe-170/lab/> via Netcat.

(By "document", you should provide the full *client request* and a partial *server response* (top 40-50 lines is sufficient for me to tell if you downloaded the right file). The script utility can make this capture easy for you - see below.)

Answer:

GET /ecpe-170/ HTTP/1.1

Host: ecs-network.serv.pacific.edu

Connection: close

HTTP/1.1 200 OK

Date: Thu, 24 Mar 2016 16:29:22 GMT

Server: Zope/(2.13.23, python 2.6.5, linux2) ZServer/1.1

Content-Length: 13563

X-Cache-Operation: plone.app.caching.weakCaching

X-RAMCache: plone.app.caching.operations.ramcache

Content-Language: en

Expires: Mon, 27 Mar 2006 16:36:58 GMT

ETag: "||26303|en|0|Sunburst Theme|0|1444436487.33"

X-Ua-Compatible: IE=edge,chrome=1

Cache-Control: max-age=0, must-revalidate, private

X-Cache-Rule: plone.content.itemView

Content-Type: text/html; charset=utf-8

Vary: Accept-Encoding

Connection: close

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml" lang="en">

<head>

<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />

<base href="http://ecs-network.serv.pacific.edu/ecpe-170/course-info" /><!--[if lt IE 7]></base><![endif]-->

<link rel="stylesheet" type="text/css" media="screen" href="http://ecs-network.serv.pacific.edu/portal_css/Sunburst%20Theme/reset-cachekey-98ff9e8df1b4fd171b62e48ffc65224f.css" />

<link rel="stylesheet" type="text/css" href="http://ecs-network.serv.pacific.edu/portal_css/Sunburst%20Theme/base-cachekey-803ad09633d08acda5752564121f4b50.css" />

<link rel="stylesheet" type="text/css" media="all" href="http://ecs-network.serv.pacific.edu/portal_css/Sunburst%20Theme/ploneCustom-cachekey-8c9f97440082c6d2229c29664804ef20.css" />

<script type="text/javascript" src="http://ecs-network.serv.pacific.edu/portal_javascripts/Sunburst%20Theme/resourceplone.app.jquery-cachekey-a341ea3d731b88c9fd863112717f2bd2.js"></script>

<script type="text/javascript" src="http://ecs-network.serv.pacific.edu/portal_javascripts/Sunburst%20Theme/kss-bbb-cachekey-24af0b5057943fbc4aea189df4d79398.js"></script>

```
<title>ECPE 170 - Computer Systems and Networks - Spring 2016 &mdash; ECS Networking</title>

<link rel="canonical" href="http://ecs-network.serv.pacific.edu/ecpe-170" />

<link rel="shortcut icon" type="image/x-icon" href="http://ecs-network.serv.pacific.edu/favicon.ico"
/>
<link rel="apple-touch-icon" href="http://ecs-network.serv.pacific.edu/touch_icon.png" />


<link rel="search" href="http://ecs-network.serv.pacific.edu/@@search" title="Search this site" />
```

Question #3:

Document the HTTP request and the server response when you manually download the HTML file at <http://www.yahoo.com/> via Netcat

Answer:

GET /about/ HTTP/1.1

Host: www.yahoo.com

Connection: close

HTTP/1.1 301 Redirect

Date: Thu, 24 Mar 2016 04:08:47 GMT

Via: https/1.1 ir4.fp.gq1.yahoo.com (ApacheTrafficServer)

Server: ATS

Location: https://www.yahoo.com/about/

Content-Type: text/html

Content-Language: en

Cache-Control: no-store, no-cache

Connection: keep-alive

Y-Trace:

BAEAQAAAAAD0GPe3KHbZVwAAAAAAAAAAAAA26yIh8nG6uQAAAAAAAAAAAAAFLsOaaXciAAUuw5ppfX1UNowgAAAAAA--

Content-Length: 310

```
<HTML>
<HEAD>
<TITLE>Document Has Moved</TITLE>
</HEAD>

<BODY BGCOLOR="white" FGColor="black">
<H1>Document Has Moved</H1>
<HR>

<FONT FACE="Helvetica,Arial"><B>
Description: The document you requested has moved to a new location. The new location is
"https://www.yahoo.com/about/".
</B></FONT>
<HR>
</BODY>
```

Script done on Wed 23 Mar 2016 09:08:39 PM PDT

Question #4:

Document the HTTP request and the server response when you manually download the PNG image file at http://www.google.com/images/logos/google_logo_41.png via Netcat

Answer:

```
GET /images/logos/google_logo_41.png HTTP/1.1
Host: www.google.com
Connection: close
```

HTTP/1.1 200 OK

Content-Type: image/png

Date: Thu, 24 Mar 2016 16:32:39 GMT

Expires: Thu, 24 Mar 2016 16:32:39 GMT

Cache-Control: private, max-age=31536000

Last-Modified: Wed, 11 Dec 2013 16:03:07 GMT

X-Content-Type-Options: nosniff

Server: sffe

Content-Length: 2357

X-XSS-Protection: 1; mode=block

Connection: close

\89PNG

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Script done on Thu 24 Mar 2016 09:32:37 AM PDT