

Lab Report

**ECPE 170 - Computer Systems and Networks -
Fall 2015**

Name: Zhiyun Yan

Lab Topic: Network Socket Programming (Basic)

Question (1) What is first line of the python script that starts with #! doing? Where in ECPE 170 have you seen this before?

Answer: The #! tells the OS that the file is a script, and from this line, the line is use python script. #!

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:

```
unix> netcat -C ecs-network.serv.pacific.edu 80
```

```
GET /ecpe-170/lab/ HTTP 1.1
```

```
Host: pacific.edu
```

```
connection: close
```

```
The response:
```

```
HTTP/1.1 200 OK
```

```
Date: Mon, 26 Oct 2015 06:25:11 GMT
```

```
Server: Zope/(2.13.22, python 2.6.5, linux2) ZServer/1.1
```

```
Content-Length: 22471
```

```
Expires: Sat, 01 Jan 2000 00:00:00 GMT
```

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

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

```
Content-Language: en
```

```
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://127.0.1.1/ecpe-170/lab/labs" /><!--[if lt IE 7]></base><![endif]-->
```

```
<link rel="stylesheet" type="text/css" media="screen" href="http://127.0.1.1/portal_css/Sunburst%20Theme/reset-cachekey-edbfa0d23fee42e92b0aa45b07b1b0e2.css" />
```

```
<link rel="stylesheet" type="text/css" href="http://127.0.1.1/portal_css/Sunburst%20Theme/basecachekey-
```

```
3a5d4a94853c0496f61ee438aec92e03.css" />
```

```
<link rel="stylesheet" type="text/css" media="all" href="http://127.0.1.1/portal_css/Sunburst%20Theme/ploneCustom-cachekey-588c532c4515fc3fd442641b0e0aa492.css" />
```

```
<script type="text/javascript" src="http://127.0.1.1/portal_javascripts/Sunburst
```

```
%20Theme/resourceplone.app.jquery-cachekey-54d51151330ccb8038050044e0e9d084.js"></script>
```

```
<script type="text/javascript" src="http://127.0.1.1/portal_javascripts/Sunburst%20Theme/kss-
```

```
bbbcachekey-
```

```
db6eb6bbcf87a8e5e67ea817af6cd80.js"></script>
```

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:

The request:

```
netcat -C www.yahoo.com 80
```

GET / HTTP/1.1

Host: www.yahoo.com

connection: close

The response:

<!DOCTYPE html>

<html lang="en-us"><head>

<meta http-equiv="content-type" content="text/html; charset=UTF-8">

<meta charset="utf-8">

<title>Yahoo</title>

<meta name="viewport" content="width=device-width,initial-scale=1,minimal-ui">

<meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">

<style>

html {

height: 100%;

}

body {

background: #fafa9c url(https://s.yimg.com/nn/img/sad-panda-201402200631.png) 50% 50%;

background-size: cover;

height: 100%;

text-align: center;

font: 300 18px "helvetica neue", helvetica, verdana, tahoma, arial, sans-serif;

} table {

height: 100%;

width: 100%;

table-layout: fixed;

border-collapse: collapse;

border-spacing: 0;

border: none;

}

h1 {

font-size: 42px;

font-weight: 400;

color: #400090;

}

p {

color: #1A1A1A;

}

#message-1 {

font-weight: bold;

margin: 0;

}

#message-2 {

display: inline-block;

*display: inline;

zoom: 1;

max-width: 17em;

_width: 17em;

}

</style>

```

</head>
<body>
<!-- status code : 400 -->
<!-- Host Header Required -->
<table>
<tbody><tr>
<td>

<h1 style="margin-top:20px;">Will be right back...</h1>
<p id="message-1">Thank you for your patience.</p>
<p id="message-2">Our engineers are working quickly to resolve the issue.</p>
</td>
</tr>
</tbody></table>
</body></html>

```

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
Note: Is there a good reason why it doesn't make sense to include the server response (at least, the data portion) in your lab report? On a related note, if your Terminal window hangs during this step, at least you'll know why!

Answer:

Request:

netcat -C www.google.com 80

GET /images/logos/google_logo_41.png HTTP 1.1

Host: www.google.com

connection: close

Response:

HTTP/1.0 400 Bad Request

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

Content-Length: 1419

Date: Mon, 26 Oct 2015 06:30:44 GMT

Server: GFE/2.0

<!DOCTYPE html>

<html lang=en>

<meta charset=utf-8>

<meta name=viewport content="initial-scale=1, minimum-scale=1, width=device-width">

<title>Error 400 (Bad Request)!!1</title>

<style>