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CS 356-006  
HTTP Programming assignment

Python client and server test cases:  
Case 1 and 2: GET followed by conditional GET  
Client:

```
client : bash — Konsole

File Edit View Bookmarks Settings Help

Sending request...
GET /filename.html HTTP/1.1
Host: localhost:12000

Received response...
HTTP/1.1 200 OK
Date: Wed, 28 Mar 2018 16:13:38 GMT
Last-Modified: Wed, 28 Mar 2018 15:57:11 GMT
Content-Length: 720
Content-Type: text/html; charset=UTF-8
Wed, 28 Mar 2018 15:57:11 GMT

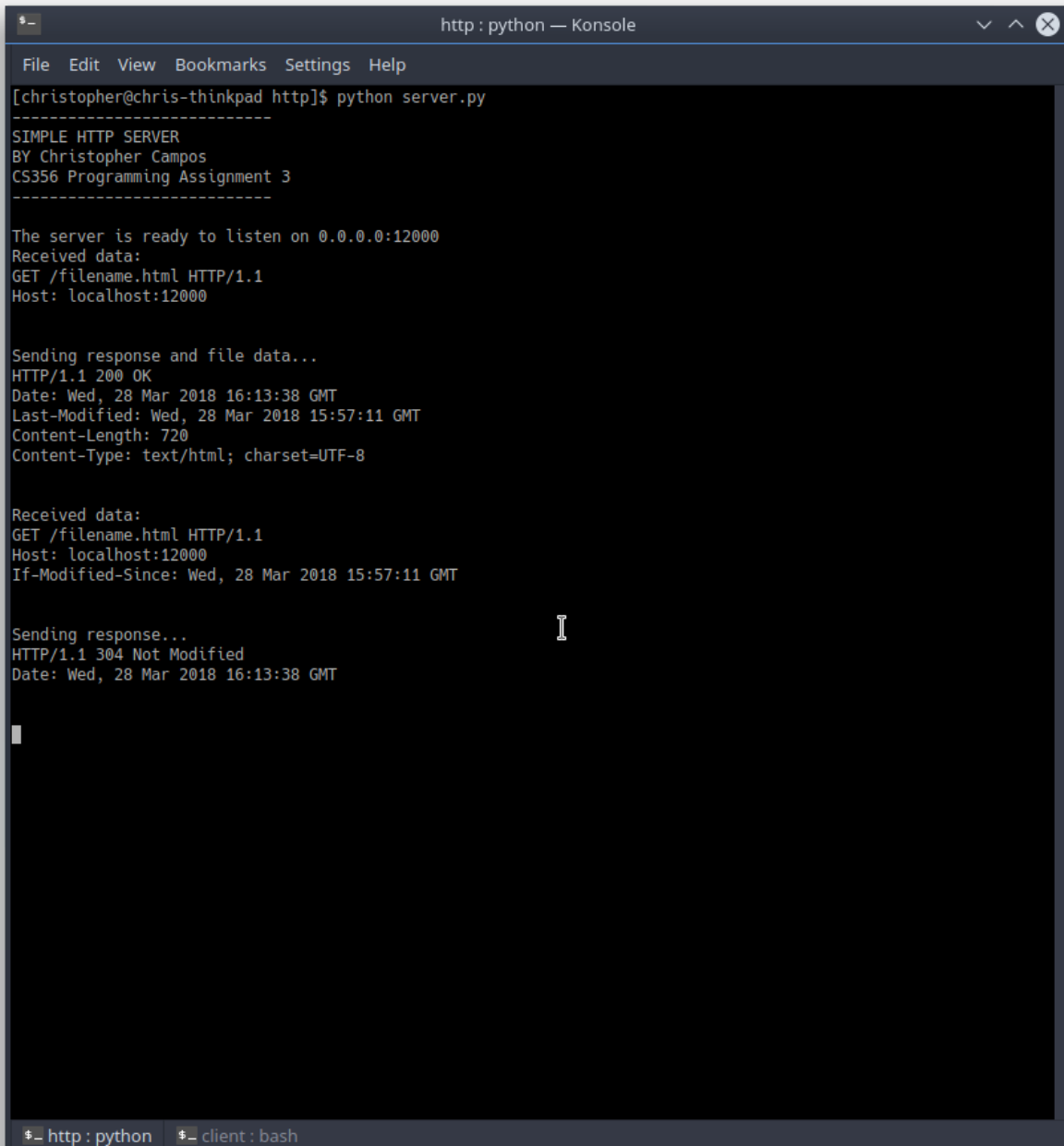
Saving data to filename.html
File contents:
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8">
  <meta http-equiv="Content-Style-Type" content="text/css">
  <title></title>
  <meta name="Generator" content="Cocoa HTML Writer">
  <meta name="CocoaVersion" content="1404.47">
  <style type="text/css">
    p.p1 {margin: 0.0px 0.0px 0.0px 0.0px; font: 12.0px Helvetica}
  </style>
</head>
<body>
  <p class="p1">&lt;html&gt;</p>
  <p class="p1">&lt;p&gt;First Line&lt;br /&gt;</p>
  <p class="p1">Second Line&lt;br /&gt;</p>
  <p class="p1">Third Line&lt;br /&gt;</p>
  <p class="p1">COMPLETE&lt;p&gt;</p>
  <p class="p1">&lt;html&gt;</p>
</body>
</html>

Round 2: Sending a Conditional GET request...
Sending request...
GET /filename.html HTTP/1.1
Host: localhost:12000
If-Modified-Since: Wed, 28 Mar 2018 15:57:11 GMT

Received response...
HTTP/1.1 304 Not Modified
Date: Wed, 28 Mar 2018 16:13:38 GMT

Received 304 response - file has not been modified
[christopher@chris-thinkpad client]$
```

Server:



```
http: python — Konsole
File Edit View Bookmarks Settings Help
[christopher@chris-thinkpad http]$ python server.py
-----
SIMPLE HTTP SERVER
BY Christopher Campos
CS356 Programming Assignment 3
-----

The server is ready to listen on 0.0.0.0:12000
Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000

Sending response and file data...
HTTP/1.1 200 OK
Date: Wed, 28 Mar 2018 16:13:38 GMT
Last-Modified: Wed, 28 Mar 2018 15:57:11 GMT
Content-Length: 720
Content-Type: text/html; charset=UTF-8

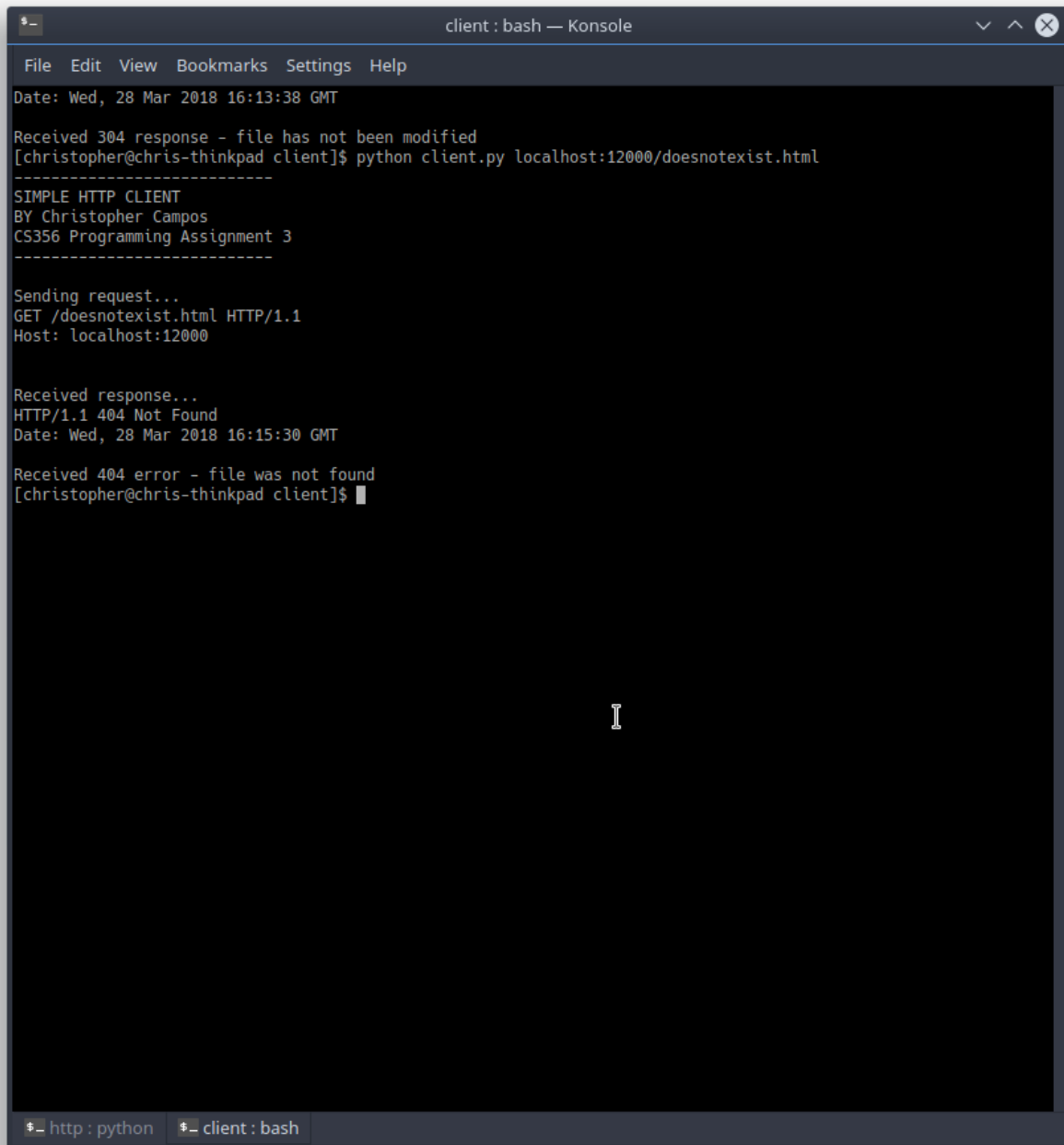
Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000
If-Modified-Since: Wed, 28 Mar 2018 15:57:11 GMT

Sending response...
HTTP/1.1 304 Not Modified
Date: Wed, 28 Mar 2018 16:13:38 GMT

$ http: python $ client: bash
```

### Case 3: 404 File not found error

Client:



```
client : bash — Konsole
File Edit View Bookmarks Settings Help
Date: Wed, 28 Mar 2018 16:13:38 GMT
Received 304 response - file has not been modified
[christopher@chris-thinkpad client]$ python client.py localhost:12000/doesnotexist.html
-----
SIMPLE HTTP CLIENT
BY Christopher Campos
CS356 Programming Assignment 3
-----

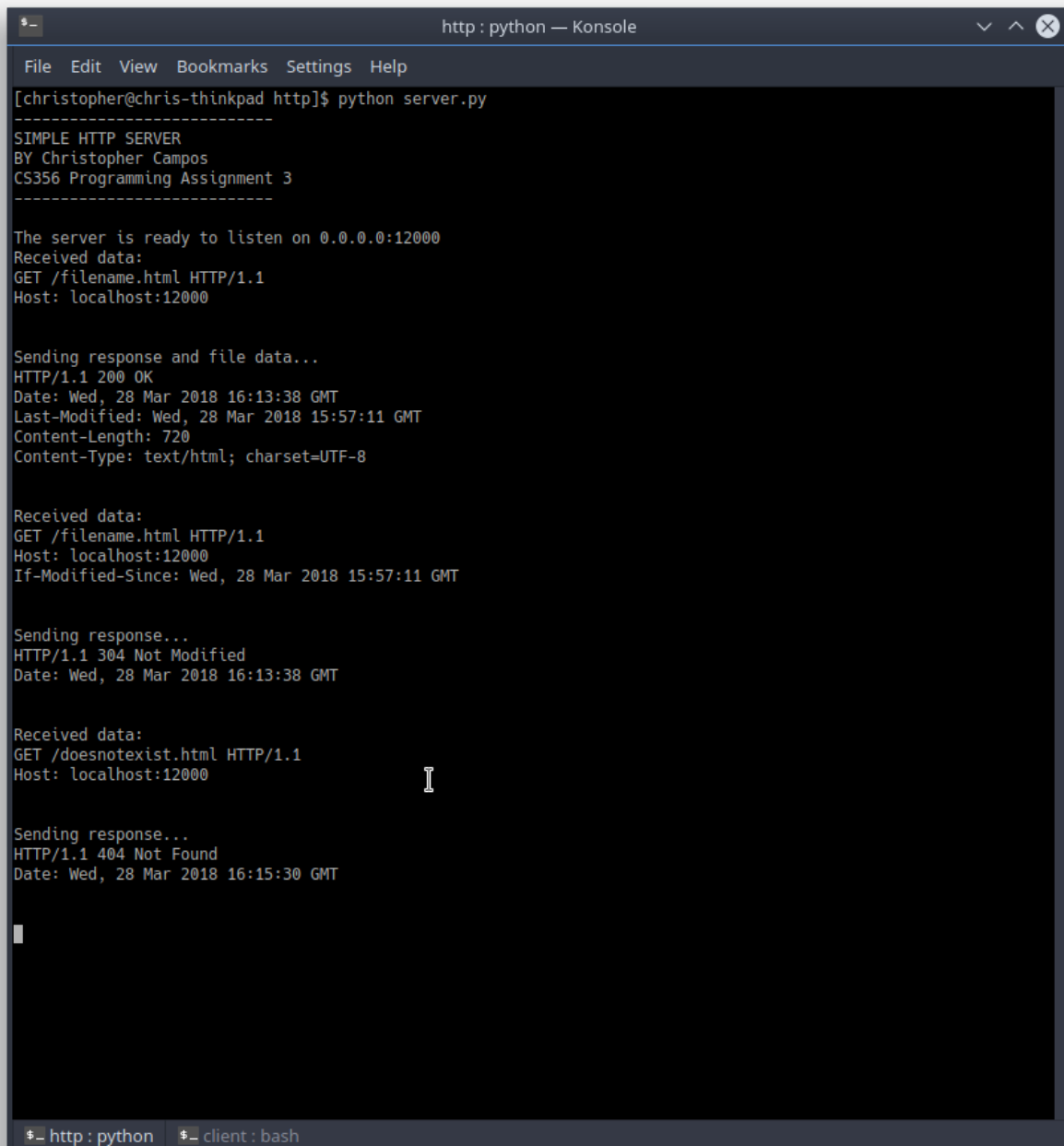
Sending request...
GET /doesnotexist.html HTTP/1.1
Host: localhost:12000

Received response...
HTTP/1.1 404 Not Found
Date: Wed, 28 Mar 2018 16:15:30 GMT

Received 404 error - file was not found
[christopher@chris-thinkpad client]$
```

The screenshot shows a terminal window titled "client : bash — Konsole". It displays the output of a Python script named "client.py" which acts as a simple HTTP client. The script sends a GET request to "localhost:12000/doesnotexist.html". The response received is "HTTP/1.1 404 Not Found" with a date of "Wed, 28 Mar 2018 16:15:30 GMT". The script then prints a message: "Received 404 error - file was not found". The terminal also shows the prompt "[christopher@chris-thinkpad client]\$". At the bottom of the terminal, there are two tabs: "http : python" and "client : bash".

Server:



```
http: python — Konsole
File Edit View Bookmarks Settings Help
[christopher@chris-thinkpad http]$ python server.py
-----
SIMPLE HTTP SERVER
BY Christopher Campos
CS356 Programming Assignment 3
-----

The server is ready to listen on 0.0.0.0:12000
Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000

Sending response and file data...
HTTP/1.1 200 OK
Date: Wed, 28 Mar 2018 16:13:38 GMT
Last-Modified: Wed, 28 Mar 2018 15:57:11 GMT
Content-Length: 720
Content-Type: text/html; charset=UTF-8

Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000
If-Modified-Since: Wed, 28 Mar 2018 15:57:11 GMT

Sending response...
HTTP/1.1 304 Not Modified
Date: Wed, 28 Mar 2018 16:13:38 GMT

Received data:
GET /doesnotexist.html HTTP/1.1
Host: localhost:12000

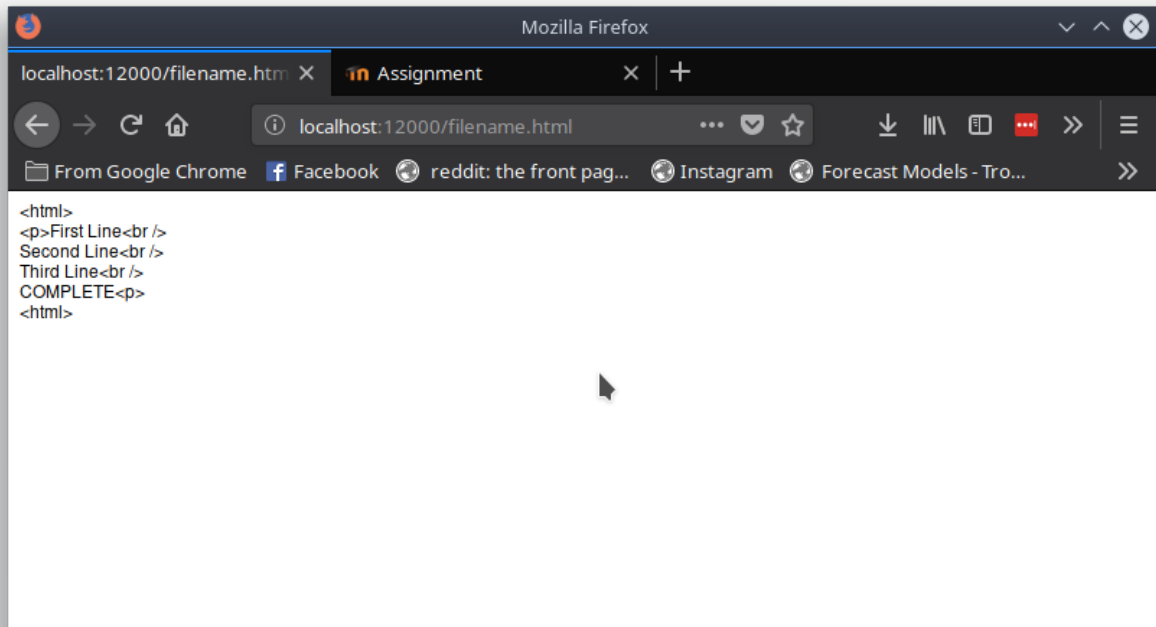
Sending response...
HTTP/1.1 404 Not Found
Date: Wed, 28 Mar 2018 16:15:30 GMT

$ http: python $ client: bash
```

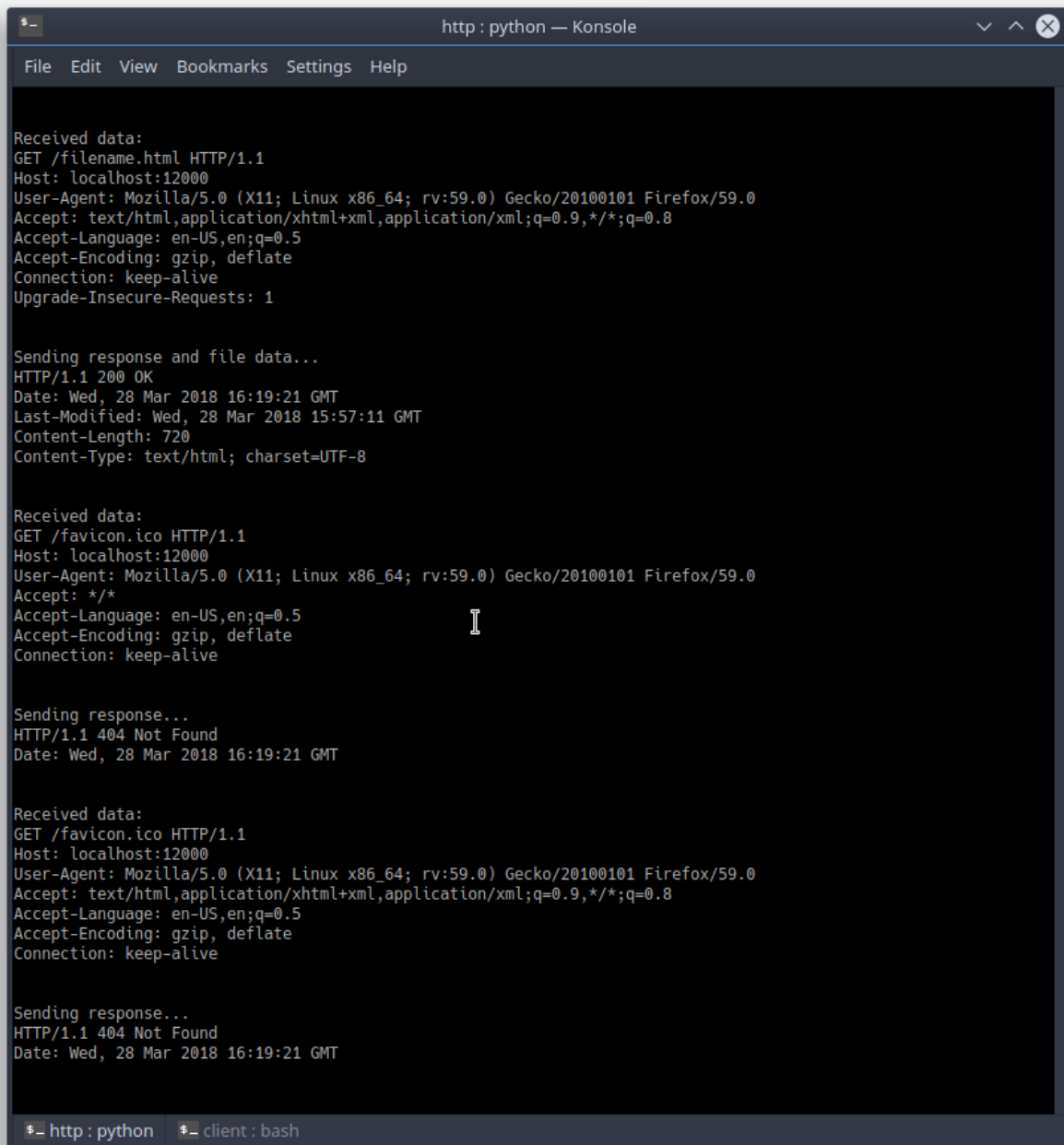
Web Browser test cases:

Case 1: GET filename.html

Browser:



Server:



```
http: python — Konsole
File Edit View Bookmarks Settings Help

Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:59.0) Gecko/20100101 Firefox/59.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive
Upgrade-Insecure-Requests: 1

Sending response and file data...
HTTP/1.1 200 OK
Date: Wed, 28 Mar 2018 16:19:21 GMT
Last-Modified: Wed, 28 Mar 2018 15:57:11 GMT
Content-Length: 720
Content-Type: text/html; charset=UTF-8

Received data:
GET /favicon.ico HTTP/1.1
Host: localhost:12000
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:59.0) Gecko/20100101 Firefox/59.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive

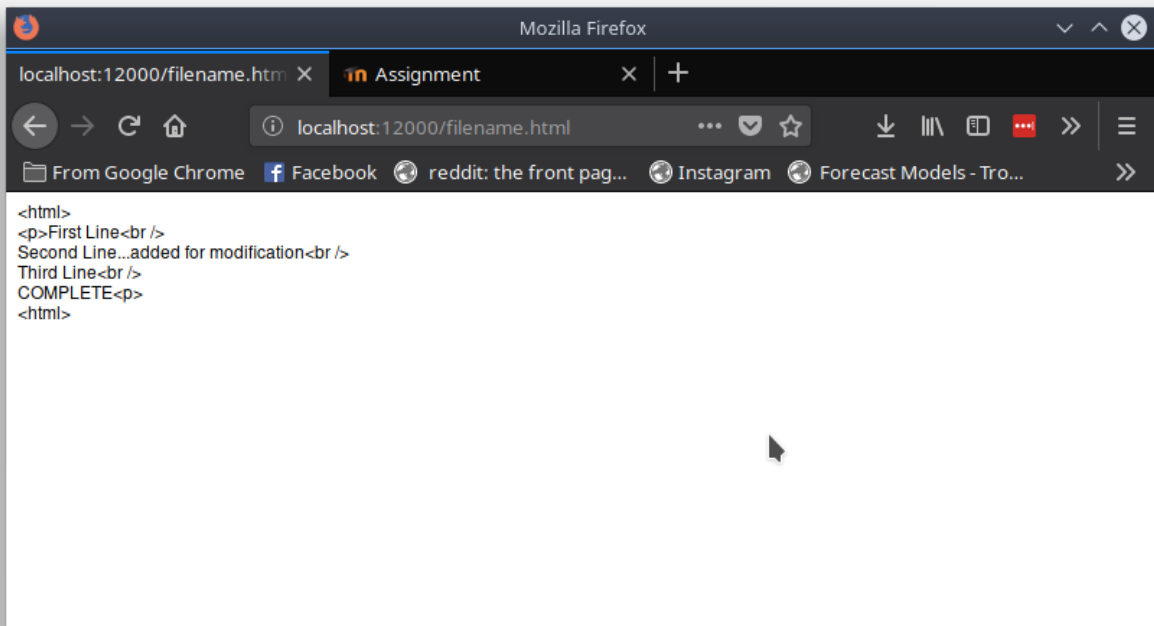
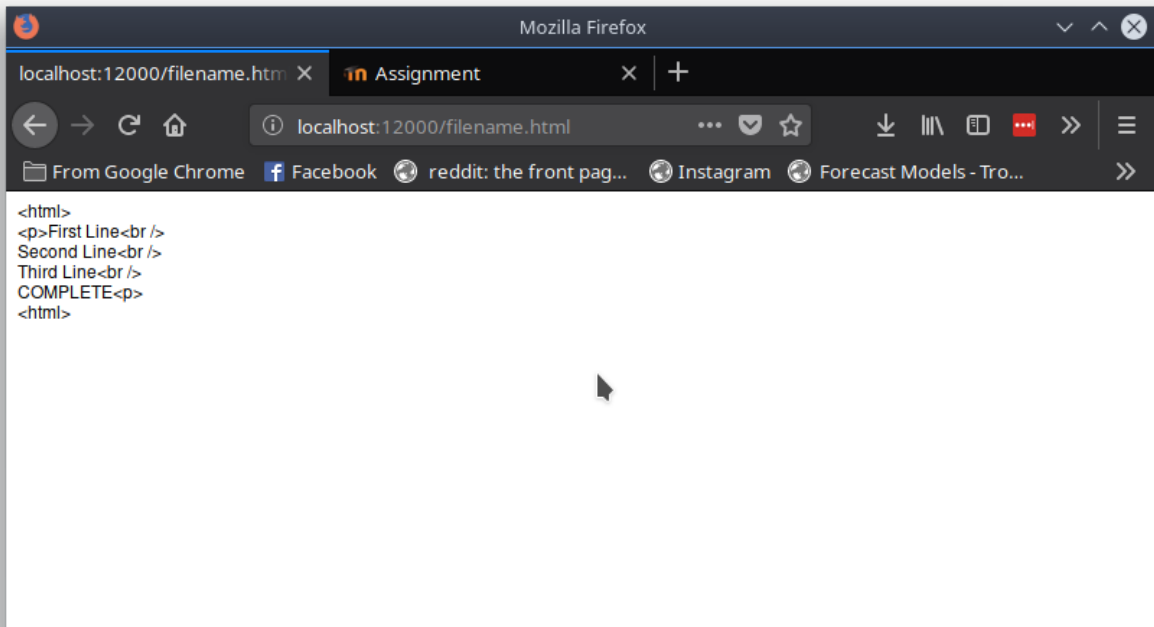
Sending response...
HTTP/1.1 404 Not Found
Date: Wed, 28 Mar 2018 16:19:21 GMT

Received data:
GET /favicon.ico HTTP/1.1
Host: localhost:12000
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:59.0) Gecko/20100101 Firefox/59.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive

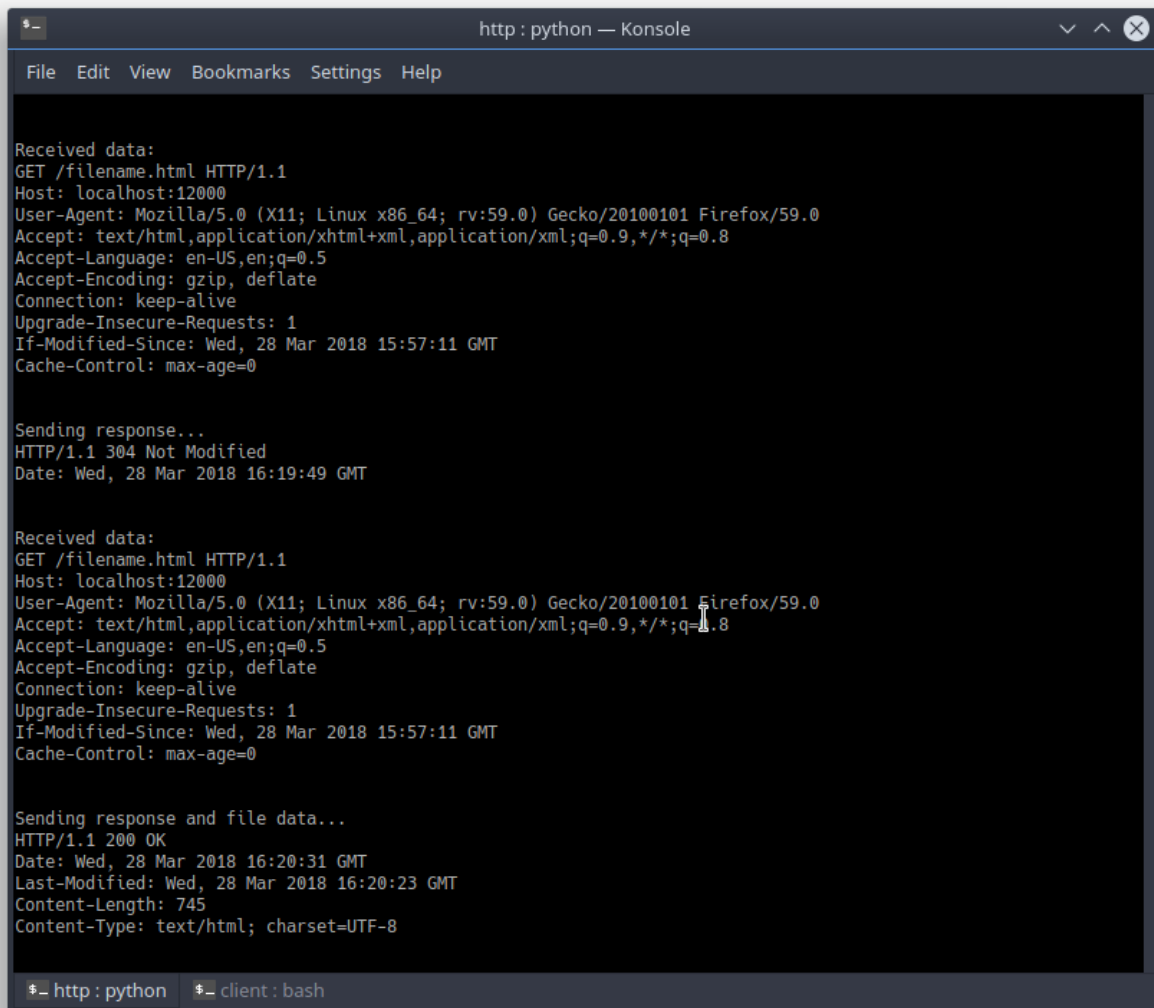
Sending response...
HTTP/1.1 404 Not Found
Date: Wed, 28 Mar 2018 16:19:21 GMT

$ http: python $ client: bash
```

Case 2: Conditional GET followed by regular GET response  
Browser:



Server:



```
http: python — Konsole
File Edit View Bookmarks Settings Help

Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:59.0) Gecko/20100101 Firefox/59.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive
Upgrade-Insecure-Requests: 1
If-Modified-Since: Wed, 28 Mar 2018 15:57:11 GMT
Cache-Control: max-age=0

Sending response...
HTTP/1.1 304 Not Modified
Date: Wed, 28 Mar 2018 16:19:49 GMT

Received data:
GET /filename.html HTTP/1.1
Host: localhost:12000
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:59.0) Gecko/20100101 Firefox/59.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive
Upgrade-Insecure-Requests: 1
If-Modified-Since: Wed, 28 Mar 2018 15:57:11 GMT
Cache-Control: max-age=0

Sending response and file data...
HTTP/1.1 200 OK
Date: Wed, 28 Mar 2018 16:20:31 GMT
Last-Modified: Wed, 28 Mar 2018 16:20:23 GMT
Content-Length: 745
Content-Type: text/html; charset=UTF-8

$ http: python $ client: bash
```