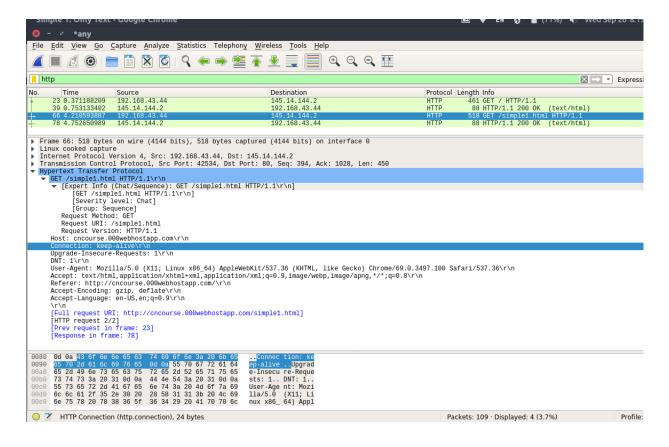
Assignment 4 Computer Networks

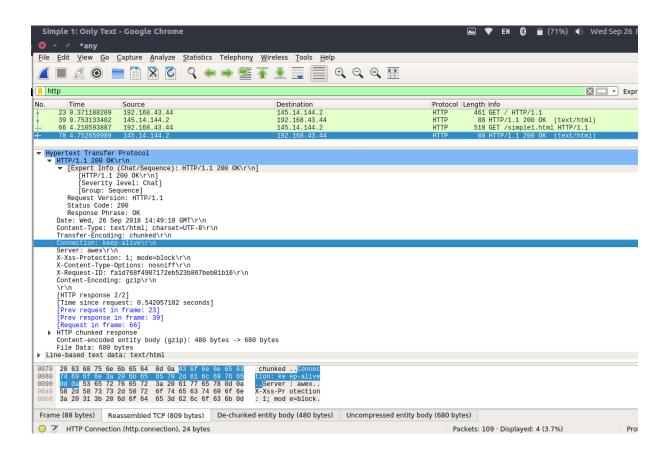
Vikas Gola: 2016UCS0023

September 26, 2018

SET 1: The Basic HTTP GET/response interaction

Images for first seven questions and captured packets for simple1.html page





Question 1 Is your browser running HTTP version 1.0 or 1.1? What version of HTTP is the server running?

Answer My browser is running HTTP version 1.1 . Server is also running HTTP version 1.1 .

Question 2 What languages (if any) does your browser indicate that it can accept to the server?

Answer My browser can accept en-US, en.

Question 3 What is the IP address of your computer? Of the cncourseweb server?

Answer IP address of my computer: 192.168.43.44

IP address of server: 145.14.144.2

Question 4 What is the status code returned from the server to your browser?

Answer Status Code: 200

Question 5 When was the HTML file that you are retrieving last modified at the server?

Answer last modified not given in response and can be verified in snapshots.

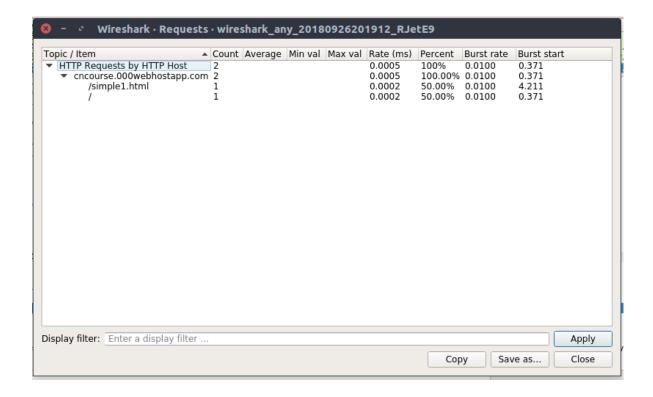
Question 6 How many bytes of content are being returned to your browser? Answer Content length is not given in response to browser but Bytes length of File data is given which is 680 bytes.

Question 7 By inspecting the raw data in the packet content window, do you see any headers within the data that are not displayed in the packet-listing window? If so, name one.

Answer no, I don't see any in the HTTP Message.

Question 8 Click the following command on Wireshark menu: Statistics>http->Requests. Find out how many requests were sent by your browser and how many did the server respond, with?

Answer 2 requests were sent by browser one for index page and second for simple1 page and 2 respond received from the server.



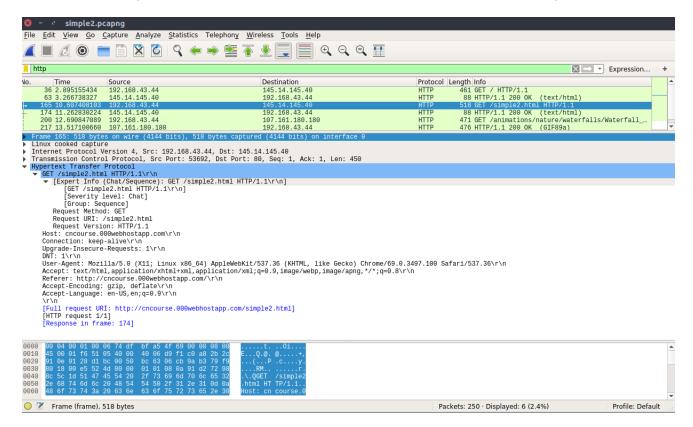
Question 9 Find out how to obtain the http traffic flow graph showing the packet exchanges between the client and the server and take a dump of the flow graph for http packets and paste in your answer sheet after all the questions above are answered.

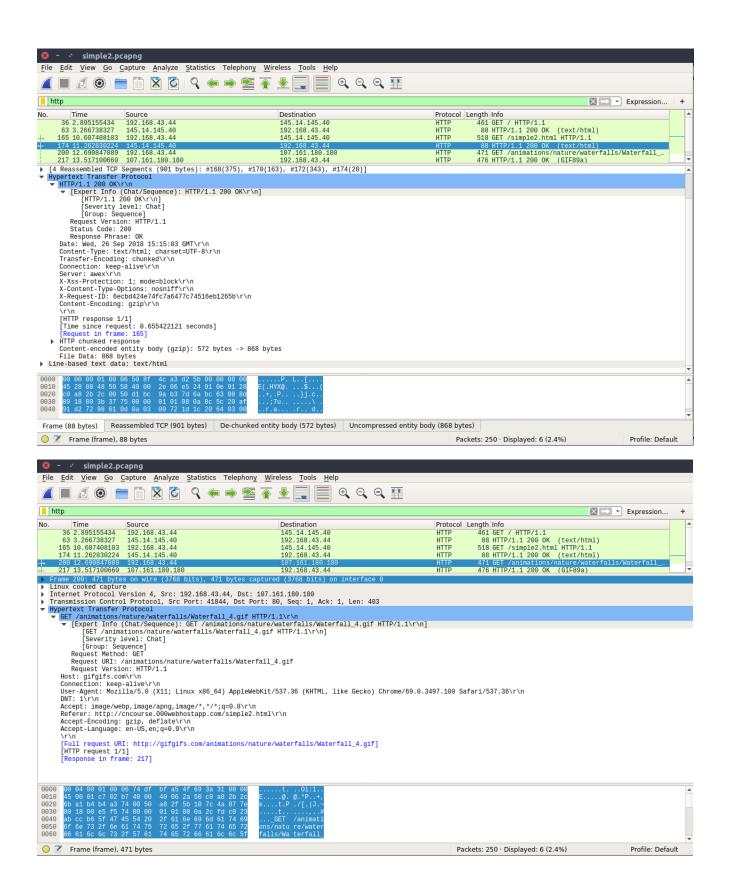
Answer To obtain the flow graph go to Statistics->flow graph. Here is flow graph:

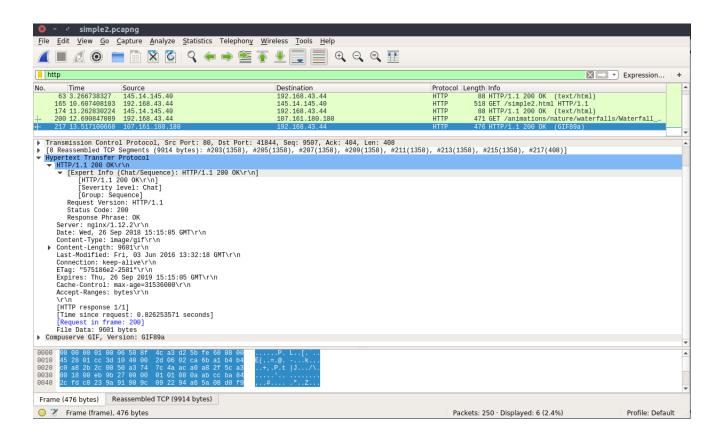


Question 10 Now, enter the following URL to your browser, and answer the questions 5,6, 8 and 9 for the following file: http://cncourse.000webhostapp.com/simple2.ht. **Answer**

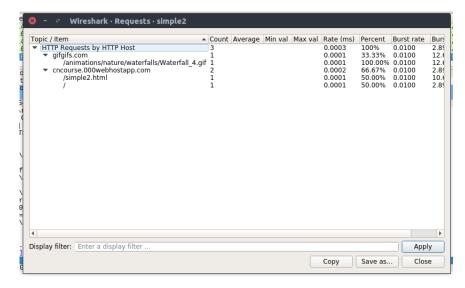
Images for captured packets for simple2.html page



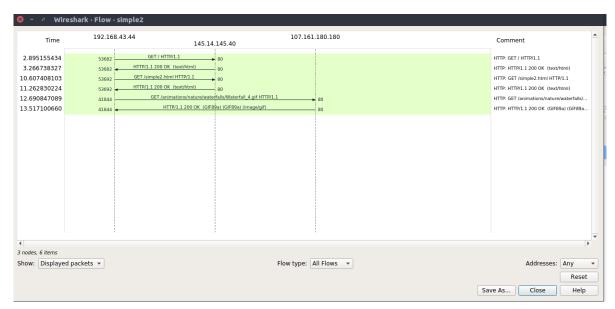




- Ans 5: last modified not given in response and can be verified in snapshots.
- Ans 6: File Data: 868 bytes(/simple2.html) + 9601 bytes(of gif)
- Ans 8: 3 requests(1 for index page, 1 for simple2.html and one for gif)

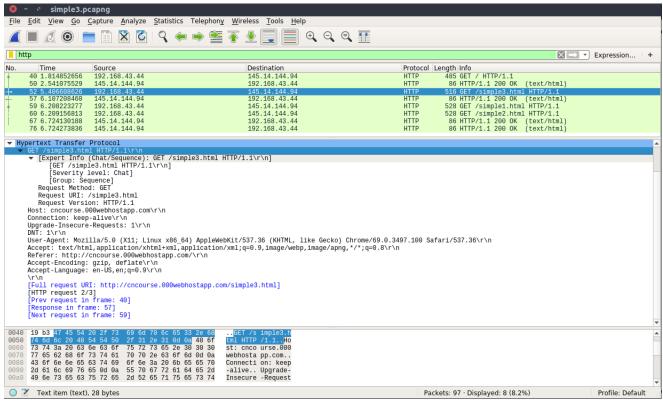


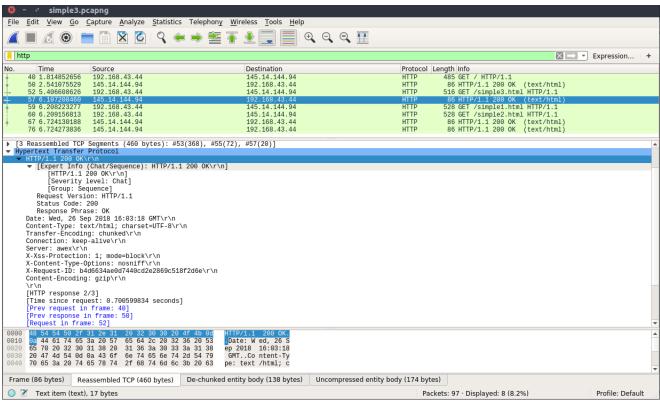
• **Ans 9:** Here is flow graph:



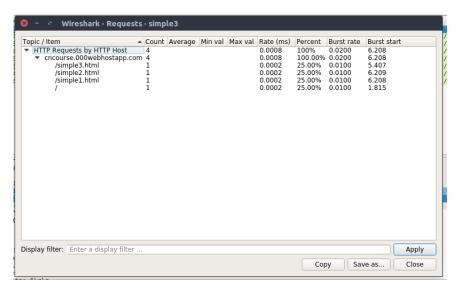
Question 11 Now, enter the following URL to your browser, and answer the questions 5,6,8 and 9 for the following file: http://cncourse.000webhostapp.com/simple3.ht **Answer**

Images for captured packets for simple3.html page

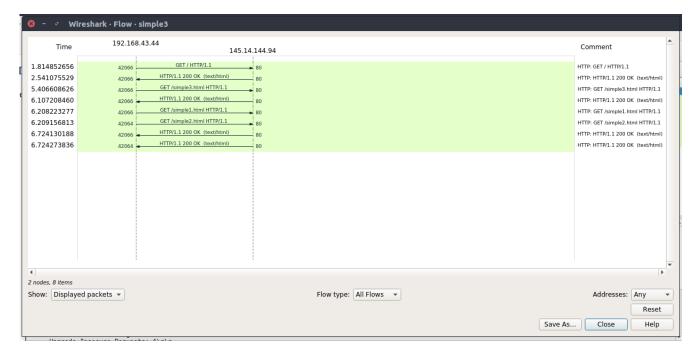




- **Ans 5:** last modified not given in response and can be verified in snapshots.
- Ans 6: File Data: 174 bytes(/simple3.html) + 680 bytes(for /simple1.html) + 868 bytes(for /simple2.html)
- Ans 8: 4 requests(1 for index page, 1 for simple2.html,1 for simple1.html and 1 for simple3.html)

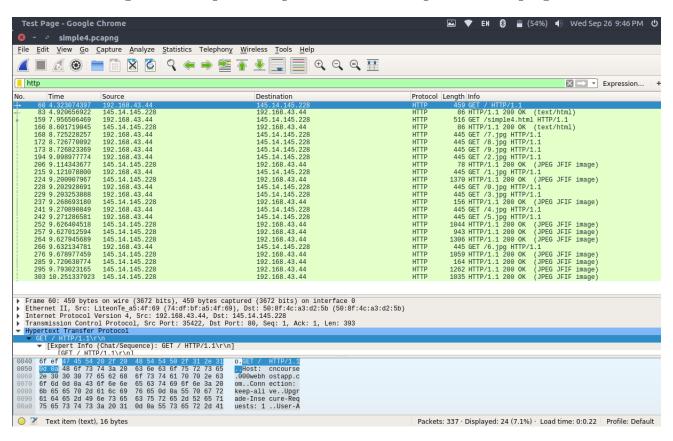


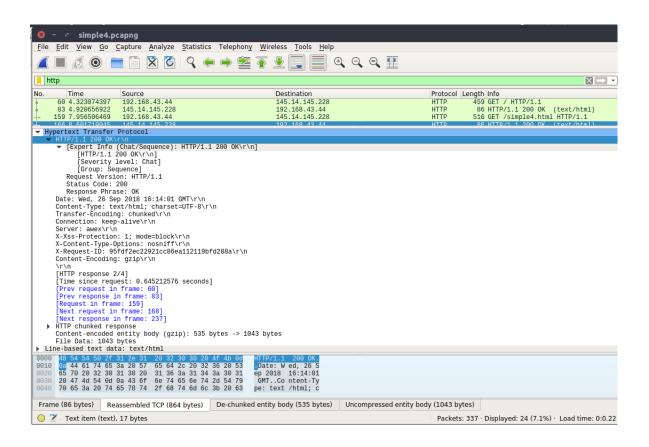
• **Ans 9:** Here is flow graph:



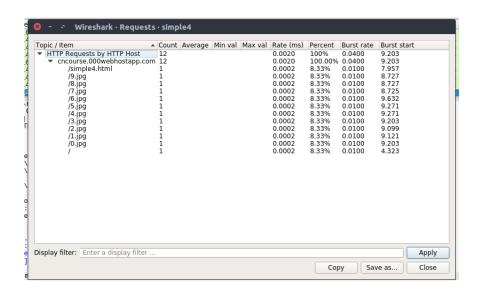
Question 12 Now, enter the following URL to your browser, and answer the questions 5,6, 8 and 9 for the following file: http://cncourse.000webhostapp.com/simple4.ht. Can you tell whether your browser downloaded the ten images serially, or whether they were downloaded from the two web sites in parallel? Explain? Answer

Images for captured packets for simple4.html page

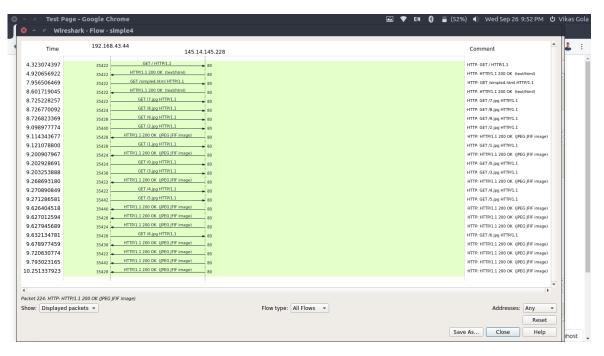




- Ans 5: last modified not given in response and can be verified in snapshots.
- **Ans 6:** File Data: 1043 bytes(/simple4.html) + (5259+5193+3840+4867+3269+5129 bytes(of 10 images)
- Ans 8: 12 requests(1 for index page, 1 for simple4.html,10 for images of 0 to 9)

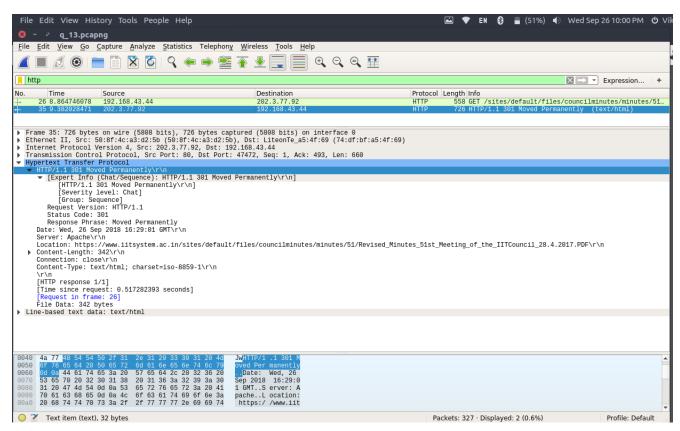


• **Ans 9:** Here is flow graph:



My browser downloaded the images in parallel as images has been requested continuously without for wait to download or get the first image which have been requested first. ${f Question~13~Now,~enter~the~following~URL~to~your~browser:~http://www.iitsystem.ac.in/}$ Find the time required to access this file.

Answer Time Required to access the file = 0.517282393



Question 14 Note the time required to access the files viz. simple1.html, simple2.html, simple3.html also and prepare table that shows the time required to access each of the files simple1.html, simple2.html, simple3.html, the pdf files in Q13 and the html file about counties in US, in question in section 3 that follows.

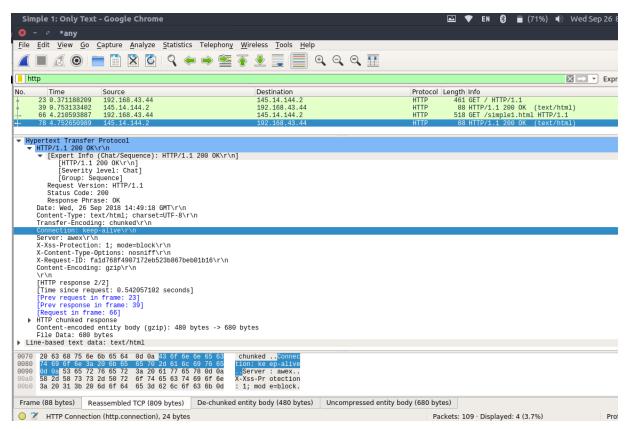
${f Answer}$

SET 2: The HTTP CONDITIONAL GET/response interaction

Question 1 Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an IF-MODIFIED-SINCE line in the HTTP

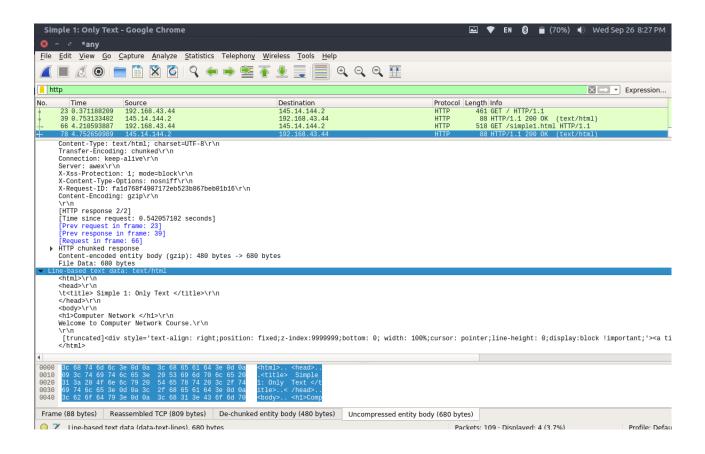
GET?

Answer No, ther is no IF-MODIFIED-SINCE line in HTTP GET from my browser to the server.



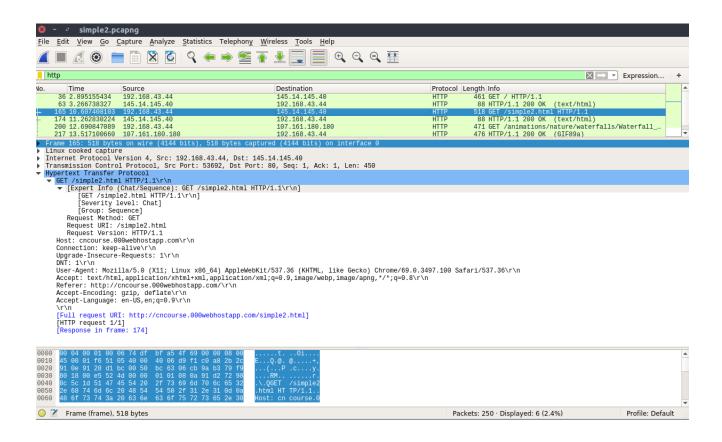
Question 2 Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?

Answer Here is text returned in response of get method in the (Line Based text):



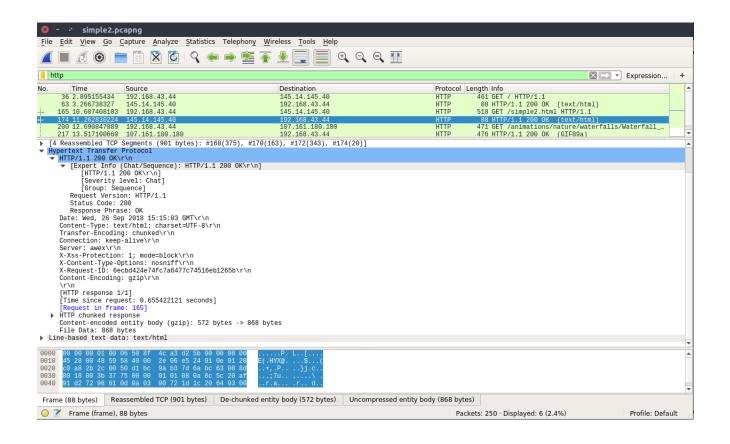
Question 3 Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see IF-MODIFIED-SINCE: line in the HTTP GET? If so, what information follows the IF-MODIFIED-SINCE: header?

Answer No, Second get request doesn't has IF-MODIFIED-SINCE.



Question 4 What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.

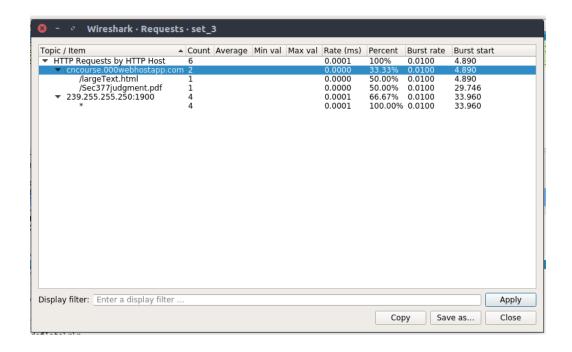
Answer HTTP status code is 200 and the content is returned in response from the server.



SET 3: Retrieving Long Documents

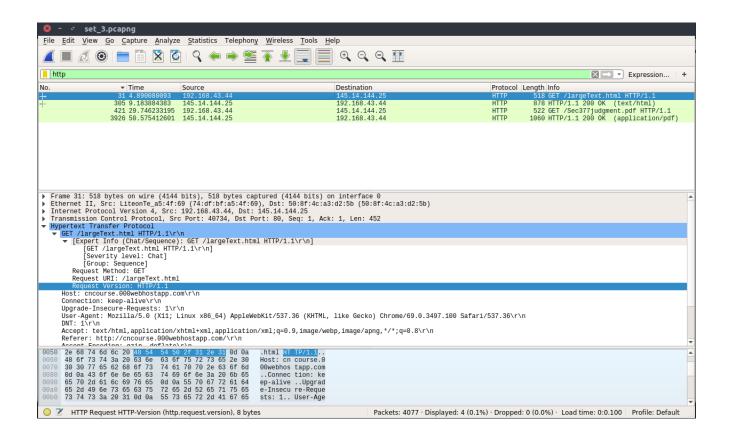
Question 1 How many HTTP GET request messages did your browser send? Which packet number in the tracecontains the GET message?

Answer 6 requests has been send by my browser totally for pdf and html file from which 1 for pdf and 1 for html file. Packet number 31 for 'Large Text' and 421 for 'pdf file'.

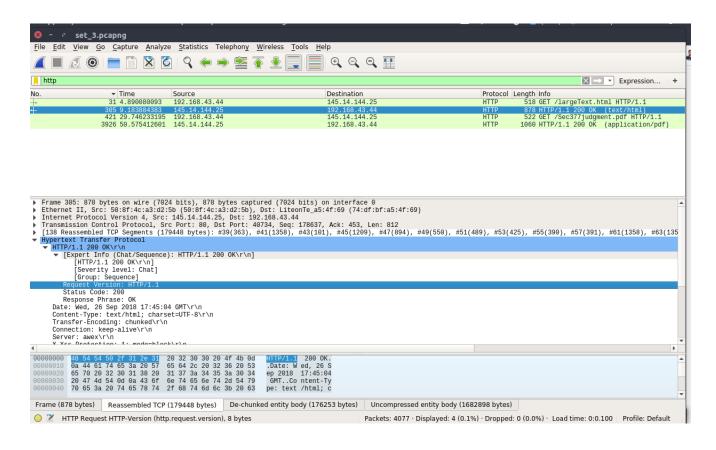


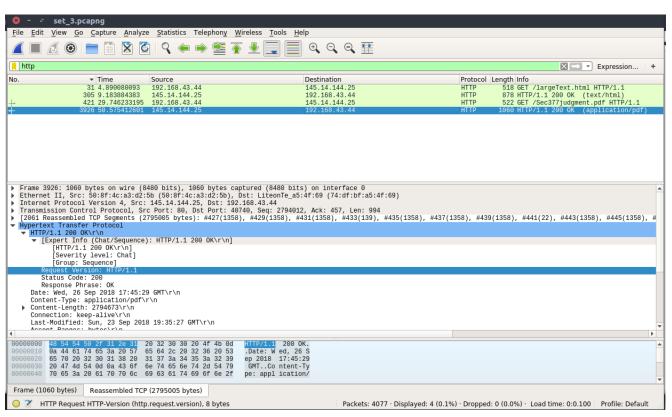
Question 2 Which packet number in the trace contains the status code and phrase associated with the response to the HTTP GET request?

Answer Packet number 305 for 'Large Text' (html file) and Packet number 3926 for 'pdf file'.



Question 3 What is the status code and phrase in the response? Answer Status Code 200 for both html file and pdf file.





Question 4 How many data-containing TCP segments were needed to carry the single HTTP response and the textof the file?

Answer 138 TCP segments for html file and 2061 TCP segments for pdf file. Snapshots in last questions.

SET 4 - HTML Documents with CGI Script

Question 1 What is the method used in your HTTP message? How many HTTP request messages did your browsersend? To which Internet addresses were these requests sent?

Answer POST method is used in HTTP message. 2 requests has been send by browser. To http://cncourse.000webhostapp.com/simple5.php.

