1.a) A user requests a Web page that consists of some text and two images. For this page, the client will send one request message and receive three response messages.

○ Sann
◉ Usann

Spørsmål 2

1.b) Two distinct Web pages (for example, www.mit.edu/research.html and www.mit.edu/students.html) can be sent over the same persistent connection.

- ◉ Sann
- ○ Usann

Spørsmål 3

1.c) With non-persistent connections between browser and origin server, it is possible for a single TCP segment to carry two distinct HTTP request messages.

○ Sann

◉ Usann

Spørsmål 4

1.d) The Date: header in the HTTP response message indicates when the object in the response was last modified

- ○ Sann
- ◉ Usann

Consider the following string of ASCII characters that were captured by Ethereal when the browser sent an HTTP GET message (i.e., this is the actual content of an HTTP GET). The characters <cr> <lf> are carriage return and line-feed characters (that is, the italized character string <cr>in the text below represents the single carriage-return character that was contained at that point in the HTTP header). Answer the following questions, indicating where in the HTTP GET message below you find the answer. (Problem P4, Chapter 2, page 171.)

GET /cs453/index.html HTTP/1.1<cr><lf> Host: gaia.cs.umass.edu<cr><lf>User-Agent: Mozilla/5.0(Windows;U; Windows NT 5.1; en-US; rv:1.7.2) Gecko/20040804 Netscape/7.2 (ax) <cr><lf>Accept: ext/xml, application/xml, application/xhtml+xml, text/html; q=0.9, text/plain; q=0.8, image/png, */*; q=0.5 <cr><lf>Accept-Language: en-us, en; q=0.5<cr><lf>Accept-Encoding: zip, deflate<cr><lf>Accept-Charset: ISO-8859-1, utf-8; q=0.7, *; q=0.7<cr><lf>Keep-Alive: 300<cr><lf>Connection: keep-alive<cr><lf><cr><lf>.

2a) What is the URL of the document requested by the browser?

◉ http://gaia.cs.umass.edu/cs453/index.html

○ http://gaia.cs.umass.edu/

○ http://gaia.cs.umass.edu/cs453/

○ http://cs.ntnu.no/

Consider the following string of ASCII characters that were captured by Ethereal when the browser sent an HTTP GET message (i.e., this is the actual content of an HTTP GET). The characters <cr> <lf> are carriage return and line-feed characters (that is, the italized character string <cr>in the text below represents the single carriage-return character that was contained at that point in the HTTP header). Answer the following questions, indicating where in the HTTP GET message below you find the answer. (Problem P4, Chapter 2, page 171.)

GET /cs453/index.html HTTP/1.1<cr><lf> Host: gaia.cs.umass.edu<cr><lf>User-Agent: Mozilla/5.0(Windows;U; Windows NT 5.1; en-US; rv:1.7.2) Gecko/20040804 Netscape/7.2 (ax) <cr><lf>Accept: ext/xml, application/xml, application/xhtml+xml, text/html; q=0.9, text/plain; q=0.8, image/png, */*; q=0.5 <cr><lf>Accept-Language: en-us, en; q=0.5<cr><lf>Accept-Encoding: zip, deflate<cr><lf>Accept-Charset: ISO-8859-1, utf-8; q=0.7, *; q=0.7<cr><lf>Keep-Alive: 300<cr><lf>Connection: keep-alive<cr><lf><cr><lf>

What version of HTTP is the browser running?

- ○ 1.0
- ◉ 1.1
- ○ 5.0
- ○ 5.2

Consider the following string of ASCII characters that were captured by Ethereal when the browser sent an HTTP GET message (i.e., this is the actual content of an HTTP GET). The characters <cr> <lf> are carriage return and line-feed characters (that is, the italized character string <cr>in the text below represents the single carriage-return character that was contained at that point in the HTTP header). Answer the following questions, indicating where in the HTTP GET message below you find the answer. (Problem P4, Chapter 2, page 171.)

GET /cs453/index.html HTTP/1.1<cr><lf> Host: gaia.cs.umass.edu<cr><lf>User-Agent: Mozilla/5.0(Windows;U; Windows NT 5.1; en-US; rv:1.7.2) Gecko/20040804 Netscape/7.2 (ax) <cr><lf>Accept: ext/xml, application/xml, application/xhtml+xml, text/html; q=0.9, text/plain; q=0.8, image/png, */*; q=0.5 <cr><lf>Accept-Language: en-us, en; q=0.5<cr><lf>Accept-Encoding: zip, deflate<cr><lf>Accept-Charset: ISO-8859-1, utf-8; q=0.7, *; q=0.7<cr><lf>Keep-Alive: 300<cr><lf>Connection: keep-alive<cr><lf><cr><lf>.

Does the browser request a non-persistent or a persistent connection?

- ◉ persistent

- ○ non-persistent

Spørsmål 8

Consider the following string of ASCII characters that were captured by Ethereal when the browser sent an HTTP GET message (i.e., this is the actual content of an HTTP GET). The characters <cr> <lf> are carriage return and line-feed characters (that is, the italized character string <cr>in the text below represents the single carriage-return character that was contained at that point in the HTTP header). Answer the following questions, indicating where in the HTTP GET message below you find the answer. (Problem P4, Chapter 2, page 171.)

GET /cs453/index.html HTTP/1.1<cr><lf> Host: gaia.cs.umass.edu<cr><lf>User-Agent: Mozilla/5.0(Windows;U; Windows NT 5.1; en-US; rv:1.7.2) Gecko/20040804 Netscape/7.2 (ax) <cr><lf>Accept: ext/xml, application/xml, application/xhtml+xml, text/html; q=0.9, text/plain; q=0.8, image/png, */*; q=0.5 <cr><lf>Accept-Language: en-us, en; q=0.5<cr><lf>Accept-Encoding: zip, deflate<cr><lf>Accept-Charset: ISO-8859-1, utf-8; q=0.7, *; q=0.7<cr><lf>Keep-Alive: 300<cr><lf>Connection: keep-alive<cr><lf><cr><lf>.

What is the IP address of the host on which the browser is running?

○ gaia.cs.umass.edu

○ cs.umass.edu

○ cs.ntnu.edu

◉ It cannot be seen from the given information.

Spørsmål 9

The text below shows the reply sent from a server in response to the HTTP GET message in the question 2. Answer the following questions, indicating whether in the message below you find the answer. (Problem P5, Chapter 2, page 171.)

HTTP/1.1 200 OK<cr><lf>Date: Tue, 07 Mar 2006 12:39:45GMT<cr><lf>Server: Apache/2.0.52 (Fedora) <cr><lf>Last-Modified: Sat, 10 Dec2005 18:27:46 GMT<cr><lf>ETag:"526c3-f22-a88a4c80"<cr><lf>Accept-Ranges: bytes<cr><lf>Content-Length: 3874<cr><lf>Keep-Alive: timeout=max=100<cr><lf>Connection: Keep-Alive<cr><lf>Content-Type: text/html; charset=ISO-8859-1<cr><lf><cr><lf><!doctype html public " -//w3c//dtd html 4.0 transitional//en"><lf><html><lf><head><lf> <meta http-equiv="Content-Type"Content="text/html; charset=iso-8859-1"><lf> <meta name="GENERATOR"Content = "Mozilla/4.97 [en] (Windows NT 5.0; U) Netscape]"><lf> <title>CMPSCI 453 / 591 / NTU-ST550A Spring 2005 homepage</title><lf></head><lf><much more document text following here (not shown)>.

Was the server able to successfully find the document or not? What time was the document reply provided?

○ It was not successful.

○ It was successful and the time was on Sat, 10 Dec 2005 18:27:46 GMT.

● It was successful and the time was on Tue, 07 Mar 2006 12:39:45 GMT.

○ It was successful and the time was on Tue, 07 Mar 2006 12:39:45 CET (Central European Time).

The text below shows the reply sent from a server in response to the HTTP GET message in the question 2. Answer the following questions, indicating whether in the message below you find the answer. (Problem P5, Chapter 2, page 171.)

HTTP/1.1 200 OK<cr><lf>Date: Tue, 07 Mar 2006 12:39:45GMT<cr><lf>Server: Apache/2.0.52 (Fedora) <cr><lf>Last-Modified: Sat, 10 Dec2005 18:27:46 GMT<cr><lf>ETag:"526c3-f22-a88a4c80"<cr><lf>Accept-Ranges: bytes<cr><lf>Content-Length: 3874<cr><lf>Keep-Alive: timeout=max=100<cr><lf>Connection: Keep-Alive<cr><lf>Content-Type: text/html; charset=ISO-8859-1<cr><lf><cr><lf><!doctype html public " -//w3c//dtd html 4.0 transitional//en"><lf><html><lf><head><lf> <meta http-equiv="Content-Type"Content="text/html; charset=iso-8859-1"><lf> <meta name="GENERATOR"Content = "Mozilla/4.97 [en] (Windows NT 5.0; U) Netscape]"><lf> <title>CMPSCI 453 / 591 / NTU-ST550A Spring 2005 homepage</title><lf></head><lf><much more document text following here (not shown)>.

When was the document last modified?

○ Cannot be decided from the given information.

○ The document was not modified.

○ The document was modified on Sat,10 Dec 2005 18:27:46 CET.

◉ The document was modified on Sat,10 Dec 2005 18:27:46 GMT

Spørsmål 11

The text below shows the reply sent from a server in response to the HTTP GET message in the question 2. Answer the following questions, indicating whether in the message below you find the answer. (Problem P5, Chapter 2, page 171.)

HTTP/1.1 200 OK<cr><lf>Date: Tue, 07 Mar 2006 12:39:45GMT<cr><lf>Server: Apache/2.0.52 (Fedora) <cr><lf>Last-Modified: Sat, 10 Dec2005 18:27:46 GMT<cr><lf>ETag:"526c3-f22-a88a4c80"<cr><lf>Accept-Ranges: bytes<cr><lf>Content-Length: 3874<cr><lf>Keep-Alive: timeout=max=100<cr><lf>Connection: Keep-Alive<cr><lf>Content-Type: text/html; charset=ISO-8859-1<cr><lf><cr><lf><!doctype html public " -//w3c//dtd html 4.0 transitional//en"><lf><html><lf><head><lf> <meta http-equiv="Content-Type"Content="text/html; charset=iso-8859-1"><lf> <meta name="GENERATOR"Content = "Mozilla/4.97 [en] (Windows NT 5.0; U) Netscape]"><lf> <title>CMPSCI 453 / 591 / NTU-ST550A Spring 2005 homepage</title><lf></head><lf><much more document text following here (not shown)>.

How many bytes are there in the document being returned?

- ○ Cannot be decided from the given information.

- ⦿ 3874

- ○ 200

- ○ 8859

The text below shows the reply sent from a server in response to the HTTP GET message in the question 2. Answer the following questions, indicating whether in the message below you find the answer. (Problem P5, Chapter 2, page 171.)

HTTP/1.1 200 OK<cr><lf>Date: Tue, 07 Mar 2006 12:39:45GMT<cr><lf>Server: Apache/2.0.52 (Fedora) <cr><lf>Last-Modified: Sat, 10 Dec2005 18:27:46 GMT<cr><lf>ETag:"526c3-f22-a88a4c80"<cr><lf>Accept-Ranges: bytes<cr><lf>Content-Length: 3874<cr><lf>Keep-Alive: timeout=max=100<cr><lf>Connection: Keep-Alive<cr><lf>Content-Type: text/html; charset=ISO-8859-1<cr><lf><cr><lf><!doctype html public " -//w3c//dtd html 4.0 transitional//en"><lf><html><lf><head><lf> <meta http-equiv="Content-Type"Content="text/html; charset=iso-8859-1"><lf> <meta name="GENERATOR"Content = "Mozilla/4.97 [en] (Windows NT 5.0; U) Netscape]"><lf> <title>CMPSCI 453 / 591 / NTU-ST550A Spring 2005 homepage</title><lf></head><lf><much more document text following here (not shown)>.

What are the first 5 bytes of the document being returned? Did the server agree to a persistent connection?

○ The first five bytes of the returned document are: 526c3. The server did not agree to a persistent connection.

○ The first five bytes of the returned document are: 526c3. The server agreed to a persistent connection.cs.umass.edu

◉ The first five bytes of the returned document are: <!doc. The server agreed to a persistent connection.

○ The answer cannot be decided from the given information.

Spørsmål 13

Suppose within your Web browser you click on a link to obtain a Web page. The IP address for the associated URL is not cached in your local host, so a DNS lookup is necessary to obtain the IP address. Suppose that n DNS servers are visited before your host receives the IP address from DNS; the successive visits incur an RTT or RTT1, ... ,RTTn. Further suppose that the Web page associated with the link contains exactly one object, consisting of a small amount of HTML text. Let RTT0 denote the RTT between the local host and the server containing the object. Assuming zero transmission time of the object, how much time elapses from when the client clicks on link until the client receives the object? (Problem P7, Chapter 2, textbook, page 173.)

○ RTT_0

○ $RTT_1 + RTT_2 + ... + RTT_n$

○ $RTT_0 + RTT_1 + RTT_2 + ... + RTT_n$

● $2RTT_0 + RTT_1 + RTT_2 + ... + RTT_n$

Emne	TTM4100 Kommunikasjon - Tjenester og nett (2019 VÅR)
Prøve	Theory Assignment 1
Startet	21.01.19 10:31
Sendt	21.01.19 10:33
Innleveringsfrist	03.02.19 23:59
Status	Fullført
Forsøkspoengsum	130 av 130 poeng
Brukt tid	2 minutter