Answer all the questions

1- There are five steps when a URL is issued from web browser to get a web resource from web server using HTTP, give an explanation for all these steps.

2- Assume you have a general form of URL as :
protocol://username:password@hostname:port/path/filename?query#fragment
describe the components of the form with giving an example for each component.

3- How you can represent a URL if you need to ask the www.amazon.com server to retrieve the resource file specified with a certain information (product =laptop, RAM =8GB and SSD =512 GB).

5- Write HTTP request message when the browser translate the URL http://www.amazon.com/doc/index.html to obtain a document index.html in text or image with English language using keep-alive connection.

6- How you can represent a response message if the server receive the request message as a result of question number 5 and successfully returned the requested document index.html with keep-alive connection for 10 second with maximum 5 requests and the content of the document in html is
"**<html><body><h1>It works!</h1></body></html>**"
with length 45 byte>

7- Complete sentences in the following spaces that related to the function when client can use one of the following request methods to send a request message to an HTTP server
GET: --
POST---
PUT---
DELETE --
TRACE---
OPTION --

8- Describe how to establish the TCP connection with host name of IP server using a specified port, and complete the following program written in java to establish the TCP connection with the server when the IP address of the local host is 127.0.0.6 using port number 9080, assuming the input / output stream is created for the network socket.

```
// Send request to the HTTP server to obtain the resource name index.html.
out.println("----------------");
// blank line separating header & body
out.println();
out.-------;
// Read the response and display on console.
String  line;
// readLine() returns null if server close the network socket.
while((line = in.----------) != null) {
System.out.println(-------);
}
// Close the I/O streams.
in.close();
out.close();
}
}
```

9- Using a client, write a program in java to send the http request message as a result from question number #5 using Http Url Connection class.

10- Using a server, write a program in java to send the http response message after receiving the request message as a result from question number #6 using sever socket class.

11- Write a program in java to illustrate how you can read the received message using input stream with assuming the instance "conn" of class connection was created.

12- The server sends status code according to the request message; give a meaning expression for the following status code of the response massage

200 ok
401 bad request
403 not modified

404 not found
405 method not allowed
501 method not Implemented

13- Using a program in java, Describe how to use the POST method in HTTP request message for submitting a form data if the form require to submit your username and password.

> I HOPE YOU ANSWER ALL THE QUESTIONS WITH SUCCESSFUL