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Assignment 1

CMSC 414
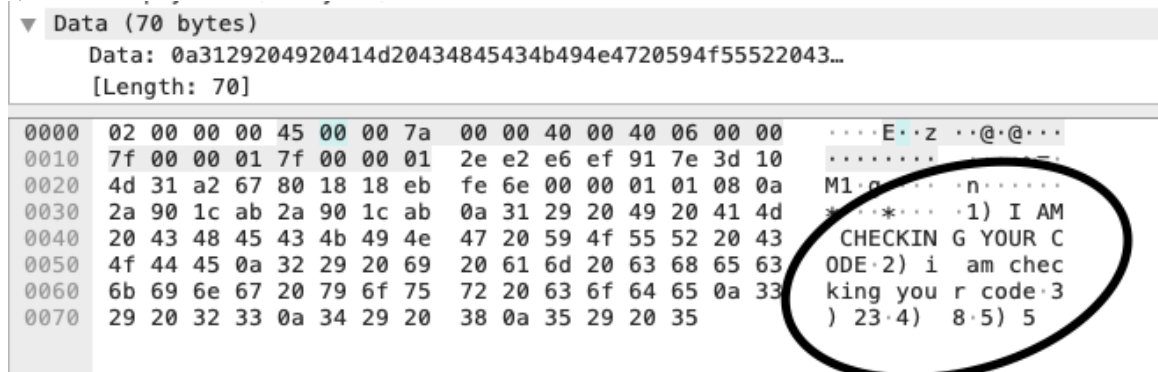
Task 1: Client/Server program
First the socket is created. The socket is created with the server port and server address.

The server address is localhost and server port are the same between server and client. The server requests until a client connection is setup. Once it's set the server will wait till the client is run. Once client is run, server accepts the connection and waits for the sentence and options chosen. The sentence then first waits for the sentence, then it asks for the options. Stores the sentence and options in two different variables. The message is taken in first and what to do with the message is taken second. After this information is taken in then and only then will the results be processed and sent back to the client to be displayed. The client will display the results. TCP packets were exchanged with the user-input payload.

Task 2: Analysis of the packets captured by Wireshark

1) There 38 packets captured. There were 22 TCP packets captured. Average packet size is between 60-70 in length. 5-10 packets per second.
2) There were no html or hypertext transfer protocol capturered.
3) The only IP Address communicated was 127.0.0.1
4) a) Source Port: 59119
      Destination Port: 12002
   b) Source IP: 127.0.0.1
      Destination IP: 127.0.0.1
   c) IP header length: 44 bytes
   d) Mac address was not found but because we are using localhost it would be right to assume the IP address is the same 127.0.0.1.
   e) total length is consistently 52 but it changes between 52-122 throughout the packets
   f)


```
▼ Data (70 bytes)
      Data: 0a3129204920414d20434845434b494e4720594f55522043…
      [Length: 70]

0000   02 00 00 00 45 00 00 7a   00 00 40 00 40 06 00 00    ····E··z ··@·@···
0010   7f 00 00 01 7f 00 00 01   2e e2 e6 ef 91 7e 3d 10    ········ ·····~=·
0020   4d 31 a2 67 80 18 18 eb   fe 6e 00 00 01 01 08 0a    M1·g···· ·n······
0030   2a 90 1c ab 2a 90 1c ab   0a 31 29 20 49 20 41 4d    *···*··· ·1) I AM
0040   20 43 48 45 43 4b 49 4e   47 20 59 4f 55 52 20 43     CHECKIN G YOUR C
0050   4f 44 45 0a 32 29 20 69   20 61 6d 20 63 68 65 63    ODE·2) i  am chec
0060   6b 69 6e 67 20 79 6f 75   72 20 63 6f 64 65 0a 33    king you r code·3
0070   29 20 32 33 0a 34 29 20   38 0a 35 29 20 35          ) 23·4)  8·5) 5
```

5) This is the tcp stream that was given.

```
I am checking your code12345
1) I AM CHECKING YOUR CODE
2) i am checking your code
3) 23
4) 8
5) 5
```