Programming Assignment 2
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COMP 4320
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1. **Does my program work?**

   Yes, my program does work.

2. **How to execute my program:**

   To execute my program, please follow the following steps:
   1. Download the files Decoder.java, DecoderBin.java, Encoder.java, EncoderBin.java, SendTCP.java, RecvTCP.java
   2. Compile the programs in the order that is listed in Step 1 on a signed in tux machine
   3. Run the command "java RecvUDP 10058" on a signed in AU tux machine, the Server should now be running
      a. Please take note of the tux machine you are signed in on
   4. On a separate AU tux machine, run the command "java SendUDP **tux#** 10058"
      a. Please note that **tux#** will be replaced with the name of the tux machine you are signed in on for step 3/for the server.
   5. When prompted on the client, enter a value that fits in the parameters given by the program.
   6. After the program executes the first time, you will be prompted with "Would you like to enter another number? [y/n]: ". Please type "y" to continue or "n" to have the Client stop running. Please do not enter any other values.
      a. If you type "y", just repeat from **step 5**
   7. In order to quit the server and run it again, end the Java program with the command: CTRL+C, then start up the server again as mentioned in step 3

Minimum: 34.850499 (ms)
Maximum: 191.49848 (ms)
Average: 73.145257 (ms)

CLIENT SCREENSHOTS

```
jpm0092@tux053:~/Desktop/COMP4320/ProgrammingAssignment2$ java SendTCP tux05
0 10058
Please enter an integer to encode between -32768 and 32767: 16735
Display number before encoding:
16735
Encoded number to send:
41
5F
Sending number...

Receiving Response...
The received echo from the server in UTF-16 hexadecimal:
FE
FF
00
31
00
36
00
37
00
33
00
35
To send and receive a message it took: 191.49848ms.

Would you like to enter another number? [y/n]: y
```

```
Would you like to enter another number? [y/n]: y
Please enter an integer to encode between -32768 and 32767: 12000
Display number before encoding:
12000
Encoded number to send:
2E
E0
Sending number...

Receiving Response...
The received echo from the server in UTF-16 hexadecimal:
FE
FF
00
31
00
32
00
30
00
30
00
30
To send and receive a message it took: 57.205659ms.
```

SERVER SCREENSHOT

```
jpm0092@tux050:~/Desktop/COMP4320/ProgrammingAssignment2$ java RecvTCP 10058


Handling client at 131.204.14.53 on port 52064
The decoded hexadecimal short received is:
41
5F
Received Binary-Encoded Short:
16735
Hexadecimal UTF-16 Encoding of Response String:
FE
FF
00
31
00
36
00
37
00
33
00
35
Sending back response...
Sent!
```

```
Handling client at 131.204.14.53 on port 52066
The decoded hexadecimal short received is:
2E
E0
Received Binary-Encoded Short:
12000
Hexadecimal UTF-16 Encoding of Response String:
FE
FF
00
31
00
32
00
30
00
30
00
30
Sending back response...
Sent!
```