Project 3 Report

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- The programs work well. If you want to see the screenshots, they are on the next two pages

- To communicate with our server

    1. Type java ServerTCP 10015 (10010 + group number 5)
    2. Type java ClientTCP tux___ 10015
    3. Type user inputs for x, a3, a2, a1, and a0 to send a request
    4. Type any character(s) after receiving a response message to send another request
    5. Otherwise, type q to quit the client program
    6. To end the server program, press control + c

- To communicate with another server

    1. Wait for another server to run their server
    2. Type java ClientTCP tux___ 10011 (10010 + group number 1)
    3. Type user inputs for x, a3, a2, a1, and a0 to send a request
    4. Type any character(s) after receiving a response message to send another request
    5. Otherwise, type q to quit the client program

- To communicate with another client

    1. Type java ServerTCP 10015 (10010 + group number 5)
    2. Wait for another client to send their request
    3. Our server will send the response message
    4. To end the server program, press control + c

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jzl0213@tux056:~/Project3$ java ServerTCP 10015
Received Binary-Encoded Request:

Total Message Length = 0x09
reqID = 0x00 0x01
x  = 0x0C
a3 = 0x08
a2 = 0x05
a1 = 0x03
a0 = 0x09
Checksum = 0x0D

Client will print this message:

Total Message Length = 0x09
reqest ID = 0x00 0x01
error code = 0x00
result = 0x00 0x00 0x38 0xFD
checksum = 0x0D

Original polynomial P(x) is 8x^3 + 5x^2 + 3x + 9
Original x is 12
Therefore, P(x) = a3x^3 + a2x^2 + a1x + a1 = 14589
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jzl0213@tux059:~/Project3$ java ClientTCP tux056 10015

User Prompt:

Enter x for P(x) = a3x^3 + a2x^2+ + a1x + a0: 12
Enter the coefficient a3: 8
Enter the coefficient a2: 5
Enter the coefficient a1: 3
Enter the coefficient a0: 9

Received Response message:

Total Message Length = 0x09
reqest ID = 0x00 0x01
error code = 0x00
result = 0x00 0x00 0x38 0xFD
checksum = 0x0D

Original polynomial P(x) is 8x^3 + 5x^2 + 3x + 9
Original x is 12
Therefore, P(x) = a3x^3 + a2x^2 + a1x + a1 = 14589

Time expressed (Round Trip): 23.0 ms

Enter q if you want to quit this program.
Otherwhise, type any other character(s):
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First request

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Received Binary-Encoded Request:

Total Message Length = 0x09
reqID = 0x00 0x02
x  = 0x05
a3 = 0x02
a2 = 0x07
a1 = 0x40
a0 = 0x11
Checksum = 0x04

Client will print this message:

Total Message Length = 0x09
reqest ID = 0x00 0x02
error code = 0x00
result = 0x00 0x00 0x02 0xFA
checksum = 0x04

Original polynomial P(x) is 2x^3 + 7x^2 + 64x + 17
Original x is 5
Therefore, P(x) = a3x^3 + a2x^2 + a1x + a1 = 762

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Otherwhise, type any other character(s): g

User Prompt:

Enter x for P(x) = a3x^3 + a2x^2+ + a1x + a0: 5
Enter the coefficient a3: 2
Enter the coefficient a2: 7
Enter the coefficient a1: 64
Enter the coefficient a0: 17

Received Response message:

Total Message Length = 0x09
reqest ID = 0x00 0x02
error code = 0x00
result = 0x00 0x00 0x02 0xFA
checksum = 0x04

Original polynomial P(x) is 2x^3 + 7x^2 + 64x + 17
Original x is 5
Therefore, P(x) = a3x^3 + a2x^2 + a1x + a1 = 762

Time expressed (Round Trip): 3.0 ms

Enter q if you want to quit this program.
Otherwhise, type any other character(s):
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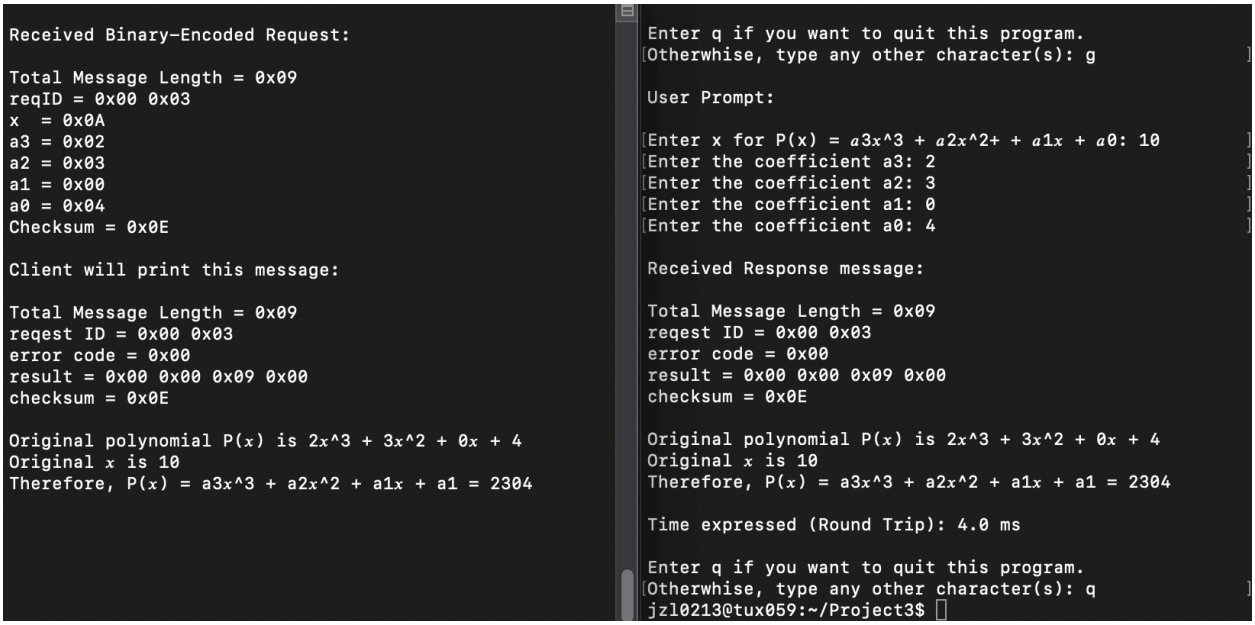
Second request



Third request and quit