

Requesting Data Points

- One data point
 - One data point was requested using the default channel "chan."
 - If the value of time t is greater than zero, only one data point is requested from the server and displayed.
 - Done by creating a datamsg that was written into the channel by cwrite() and received from the server using cread().
 - The time is in milliseconds.

```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -p 1 -t 59.00 -e 1
For person 1, at time 59, the value of ecg 1 is -0.44
one data request duration was: 4736332
```

- 1000 data points
 - The file used for this exercise is "1.csv" and stored in "x1.csv."

```
PROBLEMS  OUTPUT  TERMINAL  COMMENTS  DEBUG CONSOLE
For person 1, at time 3.976, the value of ecg 1 is -0.355
For person 1, at time 3.98, the value of ecg 2 is 0.02
For person 1, at time 3.98, the value of ecg 1 is -0.365
For person 1, at time 3.984, the value of ecg 2 is 0
For person 1, at time 3.984, the value of ecg 1 is -0.355
For person 1, at time 3.988, the value of ecg 2 is 0.005
For person 1, at time 3.988, the value of ecg 1 is -0.37
For person 1, at time 3.992, the value of ecg 2 is 0
For person 1, at time 3.992, the value of ecg 1 is -0.42
For person 1, at time 3.996, the value of ecg 2 is 0
For person 1, at time 3.996, the value of ecg 1 is -0.4
For person 1, at time 4, the value of ecg 2 is 0.015
For person 1, at time 4, the value of ecg 1 is -0.4
many data requests duration was: 8034660137
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa1-client-server-ipc-using-named-pipes-mahirahsamah$
```

Requesting Files

- requesting a file:
 - files were divided into chunks of 256 bytes and the request was sent every 256 bytes.
The server sent us the file in chunks of 256 bytes as well.

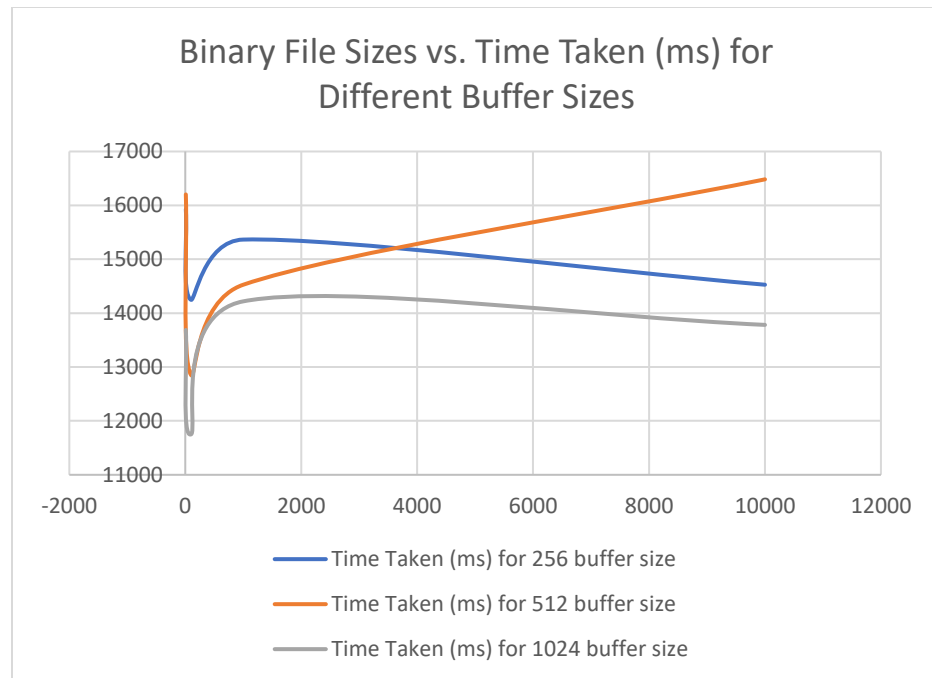
```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -f 1.csv  
duration was: 76588707
```

- Checking received/1.csv to BIMDC/1.csv

```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ diff BIMDC/1.csv recei  
ved/1.csv  
15000a15001  
> !0U
```

- file transfers (bin):

```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -f BIMDC/empt  
y100.bin  
duration was: 14247  
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ truncate -s 1000MB emp  
ty1000.bin  
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -f BIMDC/empt  
y1000.bin  
duration was: 15365  
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ truncate -s 10000MB em  
pty10000.bin  
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa  
1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -f BIMDC/empt  
y10000.bin  
duration was: 14527
```



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- Above is the chart of a combination of parts 1 (transfer binary files) and 3 (bottlenecks) of task 2.

Requesting a New Channel

- Creating a new channel called “my_new_chan”

```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa
1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -c my_new_cha
n
creating new channel...
new channel created!
```

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- Requesting 3 data points from my_new_chan

```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pa
1-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -c my_new_cha
n
creating new channel...
new channel created!
For person 1, at time 59, the value of ecg 1 is -0.44
For person 3, at time 59, the value of ecg 1 is -0.395
For person 9, at time 59, the value of ecg 1 is -0.5
```

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Run the Server as a Child Process

```
mahriahs@mahriah-virtualbox:~/github-classroom/CSCE-313-Tyagi-Fall-2021/pal-client-server-ipc-using-named-pipes-mahirahsamah$ ./client -c my_new_chan
* Tesing fork() using a new channel *
creating new channel...
new channel created!
For person 1, at time 59, the value of ecg 1 is -0.44
For person 3, at time 59, the value of ecg 1 is -0.395
For person 9, at time 59, the value of ecg 1 is -0.5
Client-side is done and exited
```

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Closing Channels

```
// closing the channel
MESSAGE_TYPE m = QUIT_MSG;
chan.cwrite (&m, sizeof (MESSAGE_TYPE)); // was chan
```

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