

### Running and Compiling the Code:

1. To compile the code, run the following command in your terminal:  
`javac Client.java ServerNode.java`
2. To run the compiled code, execute the following command (make sure that the port for the client is NOT in the range [node0 port, node0 port + 256):  
`java Client <port number for client> <config filename>`

### Performance Data:

Trials F = 128	Average message per join	Average messages per find
P = 4, N = 5	12.15	2.536
P = 8, N = 5	16.65	3.136
P = 10, N = 5	16.48	3.294
P = 20, N = 5	25.99	3.903
P = 30, N = 5	33.06	4.227

### Observations:

It seems as though the number of messages required for a join on average is approximately linearly proportional to the number of nodes in the system. The number of messages per find on average can be observed to be logarithmically proportional to the number of nodes in the system, which is pretty cool.