

-----

Build a client-server system, which follows a protocol as follows:

- The server is first started on a known port 5000. The server "listens" for connections on this known port for connection by a client.
- The client program is then given the server IP (use 127.0.0.1 here) on the commandline, and the client program is started.

Runs of the client and server programs are shown below:

```
$ ./client
```

```
Connected to server
```

```
Please enter the message to the server: Hello
```

```
Server replied: Hello from server
```

```
Please enter the message to the server: 2 + 3
```

```
Server replied: 2 + 3 = 5
```

```
Please enter the message to the server: Bye
```

```
Server replied: Goodbye
```

```
$
```

```
$ ./server
```

```
Connected with client socket number 4 /*Server prints the client socket file  
descriptor number*/
```

```
Client socket 4 sent message: Hello
```

```
Replied to client 4
```

```
Client socket 4 sent message: 2 + 3
```

```
Replied to client 4
```

```
Client socket 4 sent message: Bye
```

```
Replied to client 4
```

```
Client said bye; finishing
```