Assignment 4 – Sockets & Signals - Yash Hitendra Rathod

Instructions on Running the RPC set of programs:

Install the RPC Package, use : **sudo apt-get install rpcbind**

then, to compile all the c programs, we run the makeFile as a whole.

For this we run the command as shown below:

```
yash@yash-VirtualBox:~/Documents/Assignment 4/Final_Assignment 4$ make -f Makefile.remoteprocedurecall
cc -g    -c -o remoteprocedurecall_clnt.o remoteprocedurecall_clnt.c
cc -g    -c -o remoteprocedurecall_client.o remoteprocedurecall_client.c
cc -g     -o remoteprocedurecall_client  remoteprocedurecall_clnt.o remoteprocedurecall_client.o -lnsl
cc -g    -c -o remoteprocedurecall_svc.o remoteprocedurecall_svc.c
cc -g    -c -o remoteprocedurecall_server.o remoteprocedurecall_server.c
cc -g     -o remoteprocedurecall_server  remoteprocedurecall_svc.o remoteprocedurecall_server.o -lnsl
yash@yash-VirtualBox:~/Documents/Assignment 4/Final_Assignment 4$
```

Here we see, all the client and server files are generated successfully.

Running the client and server program:

First, we run the server program, which starts the server and waits for a RPC from the client.

When the client program is run, it establishes a connection to the server sub using the RPC protocol.

-Running Client program and entering the input with secret code:

```
yash@yash-VirtualBox:~/Documents/Assignment 4/Final_Assignment 4$ ./remoteprocedurecall_client localhost
To disconnect type 'EXIT'
 Please enter your line of text with Secret Code: C00L is the 1st secret text
To disconnect type 'EXIT'
 Please enter your line of text with Secret Code:
```

-The server terminal receives the string as shown. When it receives the input, it counts the number of digits and stores in the secrets.out file it has created.

```
yash@yash-VirtualBox:~/Documents/Assignment 4/Final_Assignment 4$ ./remoteprocedurecall_server

Line from User: C00L is the 1st secret text

Number of Digits: 3
```

-When Ctrl+C is pressed on the server terminal, it shows the number of messages and total digits count.

```
yash@yash-VirtualBox:~/Documents/Assignment 4/Final_Assignment 4$ ./remoteprocedurecall_server

Line from User: C00L is the 1st secret text

Number of Digits: 3
^C
Total Number of Lines Recieved from client: 1

Total Number of Digits Recieved from client: 3
```

-Secrets.out file

```
secrets.out

Line from User: This is the C00L Secret 1st Code.

Number of Digits: 3
```