CS 558 Assignment 2

Application # 3 Base64 encoding system using Client-Server socket programming . Group13(Prosenjit Biswas-214101038, Rahul Chorotia-214101039, Riku Rownier-214101040).

1. Implemented this application in **C** programming language.

2. Using Structures to give the definition of message used for communication. <Message Type><Message> **#define MSG_LEN 256**

struct packet {
int msgType;

char msg [MSG_LEN];

};

3. Server IP Address and Server Port Number are passed from command line arguments to the respective server and client programs.

Server's Execution ->**. /server 8080**
client's Execution ->**. /client 127.0.0.1 8080**

4. using the **SOCK_STREAM** which is reliable, 2-way, connection-based service using TCP sockets. **socket(AF_INET, SOCK_STREAM, 0)**

5. When Server establishes the TCP connection with client

6. When client send the message to server with message id = 1

7.When server gets the encoded message and decode it as

8. Once the message is transmitted successfully, Client receives the acknowledgement with id =2.

9. When client sends message with id =3, Server will close the connection with that client.

```
Please enter the message :
3
(base) rahul@rahul-Lenovo-ideapad-330-15IKB:~/Desktop/final code$
```

```
 Host disconnected , ip 127.0.0.1 , port 0
```

10. Concurrent Server can accept connections from multiple clients.

```
New connection , socket fd is 4 , ip is : 127.0.0.1 , port : 56528
Adding to list of sockets as 0
New connection , socket fd is 5 , ip is : 127.0.0.1 , port : 56546
Adding to list of sockets as 1
```