**Ex No:6**

**Date:**

**HALF DUPLEX CHAT USING TCP/IP**

**GIVEN REQUIREMENTS:**

There are two hosts, Client and Server. Both the Client and the Server exchange message i.e. they send messages or receive message from the other. There is only a single way communication between them.

**TECHNICAL OBJECTIVE:**

To implement a half duplex application, where the Client establishes a connection with the Server. The Client can send and the server well receive messages at the same time.

**METHODOLOGY:**

**Server:**

* Include the necessary header files.
* Create a socket using socket function with family AF\_INET, type as SOCK\_STREAM.
* Initialize server address to 0 using the bzero function.
* Assign the sin\_family to AF\_INET, sin\_addr to INADDR\_ANY, sin\_port to dynamically assigned port number.
* Bind the local host address to socket using the bind function.
* Listen on the socket for connection request from the client.
* Accept connection request from the Client using accept function.
* Fork the process to receive message from the client and print it on the console.
* Read message from the console and send it to the client.

**Client:**

* Include the necessary header files.
* Create a socket using socket function with family AF\_INET, type as SOCK\_STREAM.
* Initialize server address to 0 using the bzero function.
* Assign the sin\_family to AF\_INET.
* Get the server IP address and the Port number from the console.
* Using gethostbyname function assign it to a hostent structure, and assign it to sin\_addr of the server address structure.
* Request a connection from the server using the connect function.
* Fork the process to receive message from the server and print it on the console.
* Read message from the console and send it to the server.