

```
//B20CS1130
//Experiment 5
//TCP server
```

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
#include<netinet/in.h>
#include<sys/socket.h>
#include<sys/types.h>
#include<unistd.h>
```

```
void main(){
    printf("Server side\n");
    char buffer[50];
    int sockfd,newsocket;
    struct sockaddr_in addr1,addr2;

    addr1.sin_family=AF_INET;
    addr1.sin_addr.s_addr=INADDR_ANY;
    addr1.sin_port=3008;
    int s=sizeof(struct sockaddr_in);
    sockfd=socket(AF_INET,SOCK_STREAM,0);

    bind(sockfd,(struct sockaddr*)&addr1,sizeof(addr1));

    listen(sockfd,5);

    newsocket=accept(sockfd,(struct sockaddr*)&addr2,(&s));

    do{
        printf("Connection established\n");
        printf("Receiving message from client\n");
        recv(newsocket,buffer,sizeof(buffer),0);
        printf("%s",buffer);
        printf("\nEnter message:");
        scanf("%s",buffer);
        send(newsocket,buffer,sizeof(buffer),0);
    }while(strcmp(buffer,"stop")!=0);
    close(newsocket);
    close(sockfd);
}

/*
```

OUTPUT

s6cs130@comp62:~\$ gcc 5.tcpserver.c

s6cs130@comp62:~\$./a.out

Server side

Connection established

Receiving message from client

hello

Enter message:hi

Connection established

Receiving message from client

stop

Enter message:stop

*/

//Experiment 5

//TCP client

```
#include<stdio.h>
```

```
#include<stdlib.h>
```

```
#include<string.h>
```

```
#include<netinet/in.h>
```

```
#include<sys/socket.h>
```

```
#include<sys/types.h>
```

```
#include<unistd.h>
```

```
void main(){
```

```
    printf("Client Side\n");
```

```
    char buffer[50];
```

```
    int sockfd;
```

```
    sockfd=socket(AF_INET,SOCK_STREAM,0);
```

```
    struct sockaddr_in addr1,addr2;
```

```
    addr2.sin_family=AF_INET;
```

```
    addr2.sin_addr.s_addr=INADDR_ANY;
```

```
    addr2.sin_port=3008;
```

```
    connect(sockfd,(struct sockaddr*)&addr2,sizeof(addr2));
```

```
    do{
```

```
        printf("Send message to server: ");
```

```
        scanf("%s",buffer);
```

```
        send(sockfd,buffer,sizeof(buffer),0);
```

```
        recv(sockfd,buffer,sizeof(buffer),0);
```

```
        printf("Received form server: %s\n",buffer);
    }while(strcmp(buffer,"stop")!=0);
    close(sockfd);
}
```

/*

OUTPUT

s6cs130@comp62:~\$ gcc 5.tcpclient.c

s6cs130@comp62:~\$./a.out

Client Side

Send message to server: hello

Received form server: hi

Send message to server: stop

Received form server: stop

*/