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CSE-CC

I2

## Experiment 3

Simple TCP/IP Client Server Communication

### Aim:

To implement a simple TCP Client-Server application, where the Client on establishing a connection with the Server, sends a string to the Server. The Server reads the String and prints it.

### Server

#include<sys/types.h> #include<sys/socket.h> #include<netinet/in.h> #include<netdb.h> #include<arpa/inet.h> #include<string.h>

int main(int asrgc,char\*argv[])

{

int bd,sd,ad; char buff[1024];

struct sockaddr\_in cliaddr,servaddr; socklen\_t clilen; clilen=sizeof(cliaddr); bzero(&servaddr,sizeof(servaddr));

servaddr.sin\_family=AF\_INET; servaddr.sin\_addr.s\_addr=htonl(INADDR\_ANY); servaddr.sin\_port=htons(1999);

sd=socket(AF\_INET,SOCK\_STREAM,0); bd=bind(sd,(struct sockaddr\*)&servaddr,sizeof(servaddr)); listen(sd,5);

printf("Server is running….\n"); ad=accept(sd,(struct sockaddr\*)&cliaddr,&clilen); while(1)

{

bzero(&buff,sizeof(buff)); recv(ad,buff,sizeof(buff),0); printf("Message received is %s\n",buff);

}

}

### Client

#include<stdio.h> #include<string.h> #include<sys/socket.h> #include<sys/types.h> #include<unistd.h> #include<netinet/in.h> #include<netdb.h> #include<arpa/inet.h>

int main(int argc,char \* argv[])

{

int cd,sd,ad; char buff[1024];

struct sockaddr\_in cliaddr,servaddr; struct hostent \*h; h=gethostbyname(argv[1]);

bzero(&servaddr,sizeof(servaddr));

servaddr.sin\_family=AF\_INET;

memcpy((char \*)&servaddr.sin\_addr.s\_addr,h->h\_addr\_list[0],h-

>h\_length); servaddr.sin\_port = htons(1999);

while(1)

sd = socket(AF\_INET,SOCK\_STREAM,0);

cd=connect(sd,(struct sockaddr\*)&servaddr,sizeof(servaddr));

{

printf("Enter the message: \n"); fgets(buff,100,stdin);

send(sd,buff,sizeof(buff)+1,0); printf("\n Data Sent ");

//recv(sd,buff,strlen(buff)+1,0); printf("%s",buff);

}

}

## Output:

### Result:

A program performing simple communication between client and server using TCP/IP has been implemented.