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3CS10

ASSIGNMENT-2
NETWORK PROGRAMMING

SERVER SIDE

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

int main()
{
    char str[100];
    int listen_fd, comm_fd;
    struct sockaddr_in servaddr;

    listen_fd = socket(AF_INET, SOCK_STREAM, 0);

    bzero( &servaddr, sizeof(servaddr));

    servaddr.sin_family = AF_INET;
    servaddr.sin_addr.s_addr = htonl(INADDR_ANY);
    servaddr.sin_port = htons(22000);

    bind(listen_fd, (struct sockaddr *) &servaddr, sizeof(servaddr));
    listen(listen_fd, 10);

    while(1)
    {
        comm_fd = accept(listen_fd, (struct sockaddr*) NULL, NULL);
        bzero( str, 100);
        recv(comm_fd,str,100,0);
```

```

        printf("Echoing back - %s",str);

        send(comm_fd,str,strlen(str),0);

        close(comm_fd);

    }

}

```

CLIENT SIDE

```

#include <sys/types.h>

#include <sys/socket.h>

#include <netdb.h>

#include <stdio.h>

#include <string.h>

#include <unistd.h>

#include <fcntl.h>

#include <arpa/inet.h>

int main(int argc,char **argv)

{

    int sockfd,n;

    char sendline[100];

    char recvline[100];

    struct sockaddr_in servaddr;

    sockfd=socket(AF_INET,SOCK_STREAM,0);

    bzero(&servaddr,sizeof servaddr);

    servaddr.sin_family=AF_INET;

    servaddr.sin_port=htons(22000);

    servaddr.sin_addr.s_addr = inet_addr("127.0.0.1");

    //inet_pton(AF_INET,"127.0.0.1",&(servaddr.sin_addr));

    connect(sockfd,(struct sockaddr *)&servaddr,sizeof(servaddr));

    while(1)

    {

        bzero( sendline, 100);

        bzero( recvline, 100);

        fgets(sendline,100,stdin); /*stdin = 0 , for standard input */
    }
}

```

```
        send(sockfd,sendline,strlen(sendline),0);

        recv(sockfd,recvline,100,0);

        printf("%s",recvline);

    }

}
```

OUTPUT:

CLIENT:

```
pratyaksh@pratyaksh-VirtualBox:~/Desktop$ gcc client.c -o client
pratyaksh@pratyaksh-VirtualBox:~/Desktop$ ./client
Hello!
Hello!
```

SERVER:

```
pratyaksh@pratyaksh-VirtualBox:~/Desktop$ gcc server.c -o server
pratyaksh@pratyaksh-VirtualBox:~/Desktop$ ./server
Echoing back - Hello!
S
```