

## Server-side Program:EchoServer.c

/\*Required Headers\*/

```
#include <sys/types.h>
#include <sys/socket.h>
#include <netdb.h>
#include <stdio.h>
#include <string.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 Program: EchoClient.c

```
#include <sys/types.h>
#include <sys/socket.h>
#include <netdb.h>
#include <stdio.h>
#include <string.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);
    }
}
```