

```

1  // server program for udp connection
2  #include <stdio.h>
3  #include <strings.h>
4  #include <sys/types.h>
5  #include <arpa/inet.h>
6  #include <sys/socket.h>
7  #include <netinet/in.h>
8  #define PORT 5000
9  #define MAXLINE 1000
10
11 // Driver code
12 int main()
13 {
14     char buffer[100];
15     char *message = "Hello Client";
16     int listenfd, len;
17     struct sockaddr_in servaddr, cliaddr;
18     bzero(&servaddr, sizeof(servaddr));
19
20     // Create a UDP Socket
21     listenfd = socket(AF_INET, SOCK_DGRAM, 0);
22     servaddr.sin_addr.s_addr = htonl(INADDR_ANY);
23     servaddr.sin_port = htons(PORT);
24     servaddr.sin_family = AF_INET;
25
26     // bind server address to socket descriptor
27     bind(listenfd, (struct sockaddr*)&servaddr, sizeof(servaddr));
28

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18     bzero(&servaddr, sizeof(servaddr));
19
20     // Create a UDP Socket
21     listenfd = socket(AF_INET, SOCK_DGRAM, 0);
22     servaddr.sin_addr.s_addr = htonl(INADDR_ANY);
23     servaddr.sin_port = htons(PORT);
24     servaddr.sin_family = AF_INET;
25
26     // bind server address to socket descriptor
27     bind(listenfd, (struct sockaddr*)&servaddr, sizeof(servaddr));
28
29     //receive the datagram
30     len = sizeof(cliaddr);
31     int n = recvfrom(listenfd, buffer, sizeof(buffer),
32                     0, (struct sockaddr*)&cliaddr, &len); //receive message from server
33     buffer[n] = '\0';
34     puts(buffer);
35     int i;
36     for(i=0; i<n; i++){
37         if(buffer[i]>=65 && buffer[i]<=90)
38             buffer[i]=buffer[i]+32;
39     }
40     puts(buffer);
41
42     // send the response
43     sendto(listenfd, buffer, MAXLINE, 0,
44           (struct sockaddr*)&cliaddr, sizeof(cliaddr));
45 }

```



```

1  // udp client driver program
2  #include <stdio.h>
3  #include <strings.h>
4  #include <sys/types.h>
5  #include <arpa/inet.h>
6  #include <sys/socket.h>
7  #include<netinet/in.h>
8  #include<unistd.h>
9  #include<stdlib.h>
10
11  #define PORT 5000
12  #define MAXLINE 1000
13
14  // Driver code
15  int main()
16  {
17      char buffer[100];
18      char *message = "HELLO SERVER";
19      int sockfd, n;
20      struct sockaddr_in servaddr;
21      //printf("Hello World");
22      // clear servaddr
23      bzero(&servaddr, sizeof(servaddr));
24      servaddr.sin_addr.s_addr = inet_addr("127.0.0.1");
25      servaddr.sin_port = htons(PORT);
26      servaddr.sin_family = AF_INET;
27
28      // create datagram socket

```

```

21 //printf("Hello World");
22 // clear servaddr
23 bzero(&servaddr, sizeof(servaddr));
24 servaddr.sin_addr.s_addr = inet_addr("127.0.0.1");
25 servaddr.sin_port = htons(PORT);
26 servaddr.sin_family = AF_INET;
27
28 // create datagram socket
29 sockfd = socket(AF_INET, SOCK_DGRAM, 0);
30
31 // connect to server
32 if(connect(sockfd, (struct sockaddr *)&servaddr, sizeof(servaddr)) < 0)
33 {
34     printf("\n Error : Connect Failed \n");
35     exit(0);
36 }
37
38 // request to send datagram
39 // no need to specify server address in sendto
40 // connect stores the peers IP and port
41 sendto(sockfd, message, MAXLINE, 0, (struct sockaddr*)NULL, sizeof(servaddr));
42
43 // waiting for response
44 recvfrom(sockfd, buffer, sizeof(buffer), 0, (struct sockaddr*)NULL, NULL);
45 puts(buffer);
46
47 // close the descriptor
48 close(sockfd);

```



```
Terminal
student@C04L0847: ~
student@C04L0847:~$ nano chatS.c
student@C04L0847:~$ gcc chatS.c
chatS.c: In function 'main':
chatS.c:61:4: warning: implicit declaration of function 'gets' [-Wimplicit-function-declaration]
    gets(sendBytes);
    ^
/tmp/cc8f79wK.o: In function 'main':
chatS.c:(.text+0x258): warning: the 'gets' function is dangerous and should not be used.
student@C04L0847:~$ ./a.out
Server waiting for client...I received a connection from 127.0.0.1 on port 35360
Client: Hi
Server: Hello

Client: Good morning
Server: morning

```

```
student@C04L0847: ~
student@C04L0847:~$ nano chatc.c
student@C04L0847:~$ gcc chatc.c
chatc.c: In function 'main':
chatc.c:35:3: warning: implicit declaration of function 'gets' [-Wimplicit-function-declaration]
    gets(sendBytes);
    ^
/tmp/cc03uxsS.o: In function 'main':
chatc.c:(.text+0xe1): warning: the 'gets' function is dangerous and should not be used.
student@C04L0847:~$ ./a.out
Unable to bind: Address already in use
student@C04L0847:~$ ./a.out
Unable to bind: Address already in use
student@C04L0847:~$ gcc chatc.c
chatc.c: In function 'main':
chatc.c:35:3: warning: implicit declaration of function 'gets' [-Wimplicit-function-declaration]
    gets(sendBytes);
    ^
/tmp/ccR2Gy90.o: In function 'main':
chatc.c:(.text+0xe1): warning: the 'gets' function is dangerous and should not be used.
student@C04L0847:~$ ./a.out

Client: Hi

Server: Hello
Client: Good morning

Server: morning
Client: 
```