

21BPS1191
SPRIHA ANVI

CN LAB ASSIGNMENT

Q1.

SERVER SIDE:

```
#include <sys/types.h>
#include <sys/socket.h>
#include <arpa/inet.h>
#include <netinet/in.h>
#define PORT 8080
#define MAXLINE 1024

int main() {
    int sockfd;
    char buffer[MAXLINE];
    char *hello = "Hello Spriha 21bps1191 from server";
    struct sockaddr_in servaddr, cliaddr;

    if ( (sockfd = socket(AF_INET, SOCK_DGRAM, 0)) < 0 ) {
        perror("socket creation failed");
        exit(EXIT_FAILURE);
    }

    memset(&servaddr, 0, sizeof(servaddr));
    memset(&cliaddr, 0, sizeof(cliaddr));

    servaddr.sin_family = AF_INET; // IPv4
    servaddr.sin_addr.s_addr = INADDR_ANY;
    servaddr.sin_port = htons(PORT);

    if ( bind(sockfd, (const struct sockaddr *)&servaddr,
              sizeof(servaddr)) < 0 )
    {
        perror("bind failed");
        exit(EXIT_FAILURE);
    }

    int len, n;

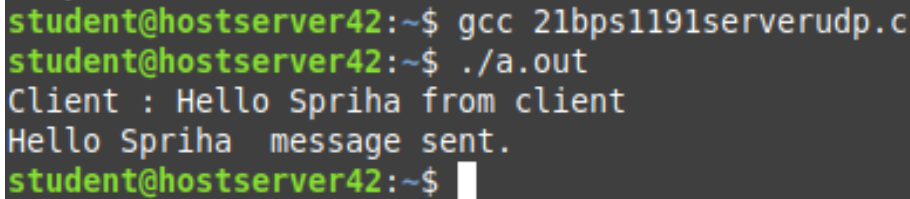
    len = sizeof(cliaddr);
    n = recvfrom(sockfd, (char *)buffer, MAXLINE,
                 MSG_WAITALL, ( struct sockaddr *) &cliaddr,
                 &len);
    buffer[n] = '\0';
    printf("Client : %s\n", buffer);
}
```

```

sendto(sockfd, (const char *)hello, strlen(hello),
        MSG_CONFIRM, (const struct sockaddr *) &cliaddr,
        len);
printf("Hello Spriha message sent.\n");

return 0;
}

```



```

student@hostserver42:~$ gcc 21bps1191serverudp.c
student@hostserver42:~$ ./a.out
Client : Hello Spriha from client
Hello Spriha message sent.
student@hostserver42:~$ █

```

CLIENT SIDE:

```

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

#define PORT 8080
#define MAXLINE 1024

int main() {
    int sockfd;
    char buffer[MAXLINE];
    char *hello = "Hello Spriha from client";
    struct sockaddr_in servaddr;

    if ( (sockfd = socket(AF_INET, SOCK_DGRAM, 0)) < 0 ) {
        perror("socket creation failed");
        exit(EXIT_FAILURE);
    }

    memset(&servaddr, 0, sizeof(servaddr));

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

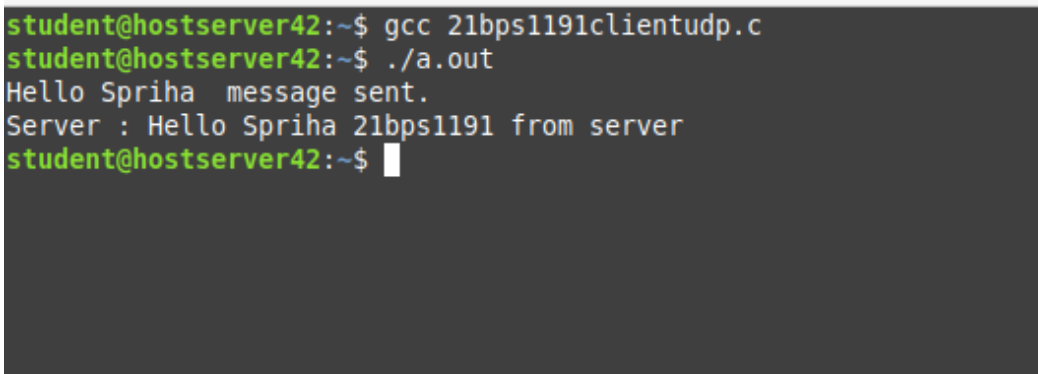
```

```
int n, len;

sendto(sockfd, (const char *)hello, strlen(hello),
        MSG_CONFIRM, (const struct sockaddr *) &servaddr,
        sizeof(servaddr));
printf("Hello Spriha message sent.\n");

n = recvfrom(sockfd, (char *)buffer, MAXLINE,
              MSG_WAITALL, (struct sockaddr *) &servaddr,
              &len);
buffer[n] = '\0';
printf("Server : %s\n", buffer);

close(sockfd);
return 0;
}
```



```
student@hostserver42:~$ gcc 21bps1191clientudp.c
student@hostserver42:~$ ./a.out
Hello Spriha message sent.
Server : Hello Spriha 21bps1191 from server
student@hostserver42:~$
```