Exp-9

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CSE-BD-N2

Server:

```c
#include <sys/types.h>

#include <sys/socket.h>

#include <stdio.h>

#include <stdlib.h>

#include <netdb.h>

#include <netinet/in.h>

#include <string.h>

#include <sys/stat.h>

#include <arpa/inet.h>

#include <unistd.h>

#define MAX 1000

int main()

{


    int serverDescriptor = socket(AF_INET, SOCK_DGRAM, 0);

    int size;

    char buffer[MAX], message[] = "Command Successfully executed !";

    struct sockaddr_in clientAddress, serverAddress;


    socklen_t clientLength = sizeof(clientAddress);
```

```c
    bzero(&serverAddress, sizeof(serverAddress));

    serverAddress.sin_family = AF_INET;

    serverAddress.sin_addr.s_addr = htonl(INADDR_ANY);

    serverAddress.sin_port = htons(9976);


    bind(serverDescriptor, (struct sockaddr *)&serverAddress, sizeof(serverAddress));

    while (1)

    {

        bzero(buffer, sizeof(buffer));

        recvfrom(serverDescriptor, buffer, sizeof(buffer), 0, (struct sockaddr
*)&clientAddress, &clientLength);

        system(buffer);

        printf("Command Executed ... %s ", buffer);

        sendto(serverDescriptor, message, sizeof(message), 0, (struct sockaddr
*)&clientAddress, clientLength);

    }

    close(serverDescriptor);

    return 0;

}
```

Client:

```c
#include <sys/types.h>

#include <sys/socket.h>

#include <stdio.h>

#include <unistd.h>

#include <netdb.h>

#include <netinet/in.h>

#include <string.h>
```

```c
#include <arpa/inet.h>

#define MAX 1000


int main()

{

    int serverDescriptor = socket(AF_INET, SOCK_DGRAM, 0);

    char buffer[MAX], message[MAX];

    struct sockaddr_in cliaddr, serverAddress;

    socklen_t serverLength = sizeof(serverAddress);


    bzero(&serverAddress, sizeof(serverAddress));

    serverAddress.sin_family = AF_INET;

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

    serverAddress.sin_port = htons(9976);


    bind(serverDescriptor, (struct sockaddr *)&serverAddress, sizeof(serverAddress));


    while (1)

    {

        printf("\nCOMMAND FOR EXECUTION ... ");

        fgets(buffer, sizeof(buffer), stdin);

        sendto(serverDescriptor, buffer, sizeof(buffer), 0, (struct sockaddr
*)&serverAddress, serverLength);

        printf("\nData Sent !");

        recvfrom(serverDescriptor, message, sizeof(message), 0, (struct sockaddr
*)&serverAddress, &serverLength);

        printf("UDP SERVER : %s", message);

    }

    return 0;
```

}

OUTPUT:-

Top screenshot (client terminal):

```
Ameenapriyadarshini:~/environment/RA1911027010078/exp9-remote_command $ ./client
COMMAND FOR EXECUTION ... pwd

Data Sent !UDP SERVER : Command Successfully executed !
COMMAND FOR EXECUTION ... ls

Data Sent !UDP SERVER : Command Successfully executed !
COMMAND FOR EXECUTION ...
```


Bottom screenshot (server terminal):

```
Ameenapriyadarshini:~/environment/RA1911027010078/exp9-remote_command $ ./server
/home/ubuntu/environment/RA1911027010078/exp9-remote_command
Command Executed ... pwd
client  client78.c  server  server78.c
 Command Executed ... ls
```