# CN Assignment 6

```
*****************************************
```

## Name: Yash Oswal
## Div: B        Roll no: 38
## SRN: 201901226

```
*****************************************
```

## CODE:
## A. SERVER.C :

```c
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <arpa/inet.h>
#define SIZE 1024

void write_file(int sockfd)
{
    int n;
    FILE *fp;
    char *filename = "recv.txt";
    char buffer[SIZE];

    fp = fopen(filename, "w");
    while (1)
    {
        n = recv(sockfd, buffer, SIZE, 0);
        if (n <= 0)
        {
            break;
            return;
        }
        fprintf(fp, "%s", buffer);
        bzero(buffer, SIZE);
    }
    return;
}

int main()
{
    char *ip = "127.0.0.1";
    int port = 7896;
    int e;

    int sockfd, new_sock;
    struct sockaddr_in server_addr, new_addr;
    socklen_t addr_size;
    char buffer[SIZE];

    sockfd = socket(AF_INET, SOCK_STREAM, 0);
    if (sockfd < 0)
    {
        perror("[-]Error in socket");
        exit(1);
    }
    printf("[+]Server socket created successfully.\n");
```

```c
    server_addr.sin_family = AF_INET;
    server_addr.sin_port = port;
    server_addr.sin_addr.s_addr = inet_addr(ip);

    e = bind(sockfd, (struct sockaddr *)&server_addr, sizeof(server_addr));
    if (e < 0)
    {
        perror("[-]Error in bind");
        exit(1);
    }
    printf("[+]Binding successfull.\n");

    if (listen(sockfd, 10) == 0)
    {
        printf("[+]Listening....\n");
    }
    else
    {
        perror("[-]Error in listening");
        exit(1);
    }

    addr_size = sizeof(new_addr);
    new_sock = accept(sockfd, (struct sockaddr *)&new_addr, &addr_size);
    write_file(new_sock);
    printf("[+]Data written in the file successfully.\n");

    return 0;
}
```

## B. CLIENT.C :

```c
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <string.h>
#include <arpa/inet.h>
#define SIZE 1024

void send_file(FILE *fp, int sockfd)
{
    int n;
    char data[SIZE] = {0};

    while (fgets(data, SIZE, fp) != NULL)
    {
        if (send(sockfd, data, sizeof(data), 0) == -1)
        {
            perror("[-]Error in sending file.");
            exit(1);
        }
        bzero(data, SIZE);
    }
}
```

```c
int main()
{
    char *ip = "127.0.0.1";
    int port = 7896;
    int e;

    int sockfd;
    struct sockaddr_in server_addr;
    FILE *fp;
    char *filename = "send.txt";

    sockfd = socket(AF_INET, SOCK_STREAM, 0);
    if (sockfd < 0)
    {
        perror("[-]Error in socket");
        exit(1);
    }
    printf("[+]Server socket created successfully.\n");

    server_addr.sin_family = AF_INET;
    server_addr.sin_port = port;
    server_addr.sin_addr.s_addr = inet_addr(ip);

    e = connect(sockfd, (struct sockaddr *)&server_addr, sizeof(server_addr));
    if (e == -1)
    {
        perror("[-]Error in socket");
        exit(1);
    }
    printf("[+]Connected to Server.\n");

    fp = fopen(filename, "r");
    if (fp == NULL)
    {
        perror("[-]Error in reading file.");
        exit(1);
    }

    send_file(fp, sockfd);
    printf("[+]File data sent successfully.\n");

    printf("[+]Closing the connection.\n");
    close(sockfd);

    return 0;
}
```

OUTPUT:

P.T.O

```
yashoswal@blackdex:~/Documents/TY-Assignments/CN$ ./a6-server
[+]Server socket created successfully.
[+]Binding successfull.
[+]Listening....
[+]Data written in the file successfully.
yashoswal@blackdex:~/Documents/TY-Assignments/CN$ []
```

```
yashoswal@blackdex:~/Documents/TY-Assignments/CN$ ./a6-client
[+]Server socket created successfully.
[+]Connected to Server.
[+]File data sent successfully.
[+]Closing the connection.
yashoswal@blackdex:~/Documents/TY-Assignments/CN$ 
```