

LAB-3
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1. Write a client server program where the client sends and the server accepts it and prints it till exit is not sent.

```
#include <arpa/inet.h>
#include <netinet/in.h>
#include <stdio.h>
#include <string.h>
#include <sys/socket.h>
#include <sys/stat.h>
#include <unistd.h>
#include <sys/types.h>
int main()
{
    struct sockaddr_in client, server;
    int s, n, sock, flag_555=0;
    char b1_555[20];
    s = socket(AF_INET, SOCK_STREAM, 0);
    server.sin_family = AF_INET;
    server.sin_port = 2000;
    server.sin_addr.s_addr = inet_addr("127.0.0.1");
    bind(s, (struct sockaddr*)&server, sizeof server);
    listen(s, 1);
    n = sizeof client;
    sock = accept(s, (struct sockaddr*)&client, &n);
    while(flag_555==0)
    {
        recv(sock, b1_555, sizeof(b1_555), 0);
        if(strcmp(b1_555,"exit")==0)
            flag_555=1;
        printf("\nThe string received is:%s\n", b1_555);
    }
}
```

```

        close(sock);
        close(s);
    }

#include <arpa/inet.h>
#include <netinet/in.h>
#include <stdio.h>
#include <string.h>
#include <sys/socket.h>
#include <unistd.h>
#include <sys/stat.h>
#include <sys/types.h>
int main()
{
    struct sockaddr_in client;
    int s, flag_555;
    char buffer_555[20];
    s = socket(AF_INET, SOCK_STREAM, 0);
    client.sin_family = AF_INET;
    client.sin_port = 2000;
    client.sin_addr.s_addr = inet_addr("127.0.0.1");
    connect(s, (struct sockaddr*)&client, sizeof client);
    for (;;) {
        printf("\nEnter a string: ");
        scanf("%s", buffer_555);
        send(s, buffer_555, sizeof(buffer_555), 0);
        if(strcmp(buffer_555,"exit")==0)
            break;
    }
    close(s);
}

```

```
gourav@gourav-VirtualBox:~/CN_LAB$ ./server  
  
The string received is:hi  
  
The string received is:hello  
  
The string received is:bye  
  
The string received is:exit  
gourav@gourav-VirtualBox:~/CN_LAB$
```

```
gourav@gourav-VirtualBox:~/CN_LAB$ ./client  
  
Enter a string: hi  
  
Enter a string: hello  
  
Enter a string: bye  
  
Enter a string: exit  
gourav@gourav-VirtualBox:~/CN_LAB$
```

2. Write a client server program to reverse a number which client sends to the server

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

```

int main()
{
    struct sockaddr_in client, server;
    int s, n, sock;
    char a_555[100], *b;
    s = socket(AF_INET, SOCK_STREAM, 0);
    server.sin_family = AF_INET;
    server.sin_port = 2000;
    server.sin_addr.s_addr = inet_addr("127.0.0.1");
    bind(s, (struct sockaddr*)&server, sizeof server);
    listen(s, 1);
    n = sizeof client;
    sock = accept(s, (struct sockaddr*)&client, &n);
        recv(s, a_555, sizeof(a_555), 0);
        send(s, a_555, sizeof(a_555), 0);
    close(sock);
    close(s);
}

```

```

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

```

```

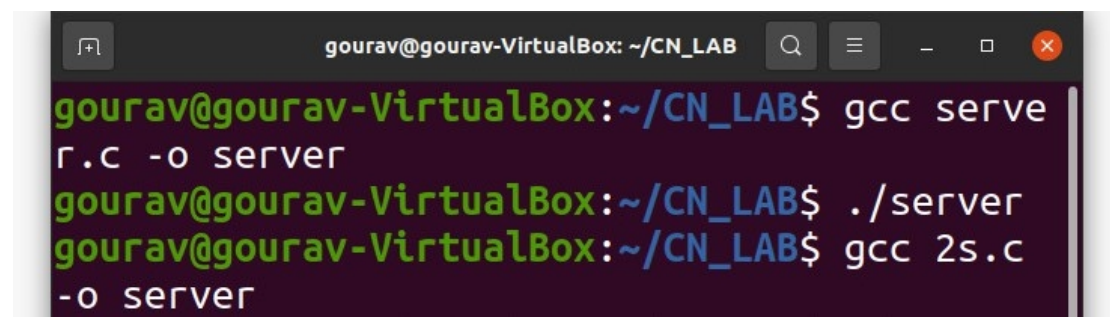
int main()
{
    struct sockaddr_in client;
    int l_555, s_555, flag_555;
    char buffer_555[20];
    s_555 = socket(AF_INET, SOCK_STREAM, 0);
    client.sin_family = AF_INET;

```

```

    client.sin_port = 2000;
    client.sin_addr.s_addr = inet_addr("127.0.0.1");
    connect(s_555, (struct sockaddr*)&client, sizeof client);
    scanf("%s_555",buffer_555);
    send(s_555,buffer_555,sizeof(buffer_555),0);
    recv(s_555,buffer_555,sizeof(buffer_555),0);
    l_555=strlen(buffer_555);
    for(int i=l_555-1;i>=0;i--)
        printf("%c",buffer_555[i]);
    close(s_555);
}

```

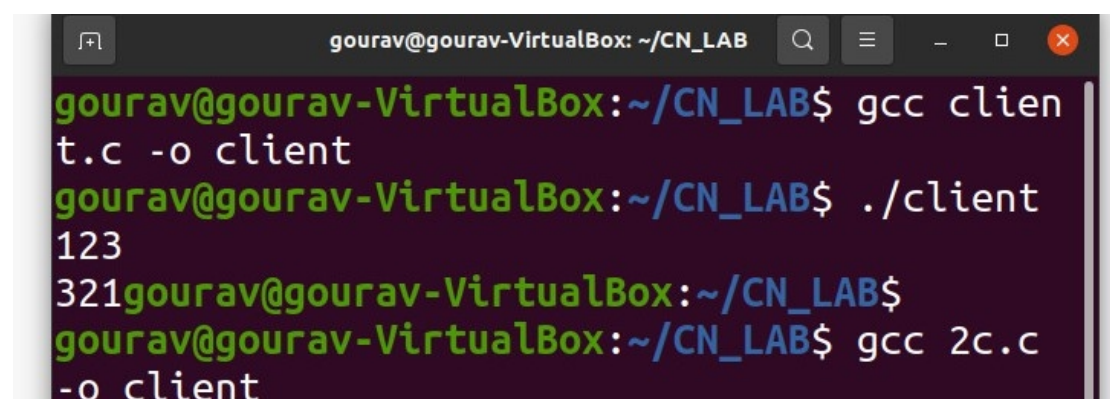


A terminal window titled 'gourav@gourav-VirtualBox: ~/CN_LAB' showing the following commands and output:

```

gourav@gourav-VirtualBox:~/CN_LAB$ gcc server.c -o server
gourav@gourav-VirtualBox:~/CN_LAB$ ./server
gourav@gourav-VirtualBox:~/CN_LAB$ gcc 2s.c -o server

```



A terminal window titled 'gourav@gourav-VirtualBox: ~/CN_LAB' showing the following commands and output:

```

gourav@gourav-VirtualBox:~/CN_LAB$ gcc client.c -o client
gourav@gourav-VirtualBox:~/CN_LAB$ ./client
123
321gourav@gourav-VirtualBox:~/CN_LAB$
gourav@gourav-VirtualBox:~/CN_LAB$ gcc 2c.c -o client

```