18CSC302J (Computer Networks Lab)
Lab session 3 - UDP ECHO CLIENT SERVER COMMUNICATION

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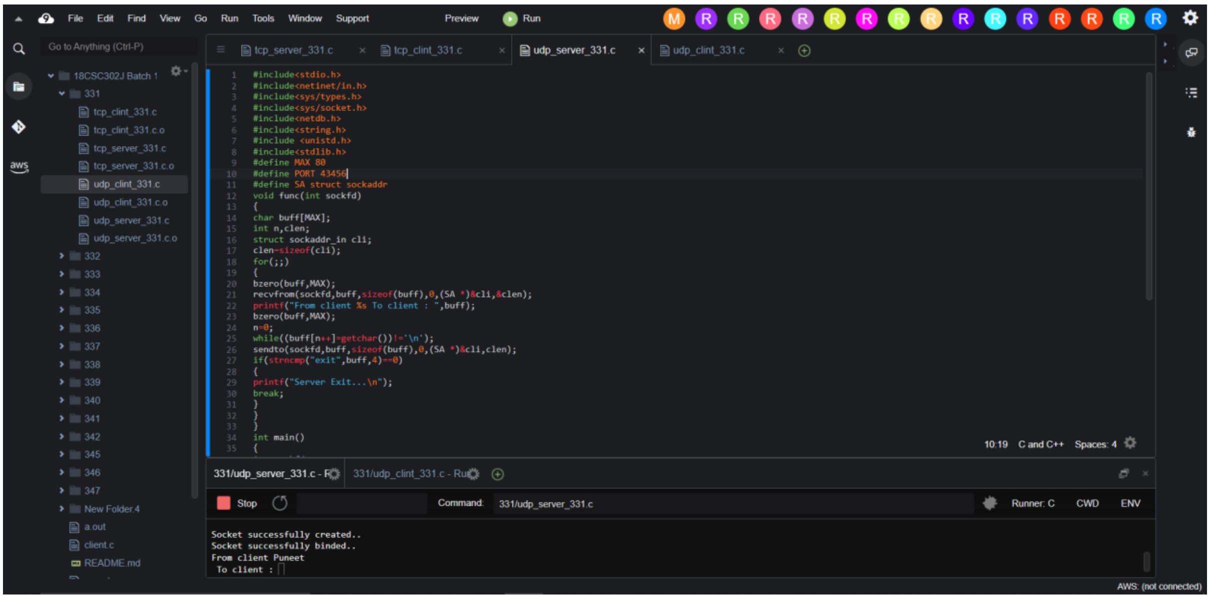
Class :-CSE F1

UDP SERVER:
SERVER CODE:

```
#include<stdio.h>
#include<netinet/in.h>
#include<sys/types.h>
#include<sys/socket.h>
#include<netdb.h>
#include<string.h>
#include <unistd.h>
#include<stdlib.h>
#define MAX 80
#define PORT 43456
#define SA struct sockaddr
void func(int sockfd)
{
char buff[MAX];
int n,clen;
struct sockaddr_in cli;
clen=sizeof(cli);
for(;;)
{
bzero(buff,MAX);
recvfrom(sockfd,buff,sizeof(buff),0,(SA *)&cli,&clen);
printf("From client %s To client : ",buff);
bzero(buff,MAX);
n=0;
while((buff[n++]=getchar())!='\n');
sendto(sockfd,buff,sizeof(buff),0,(SA *)&cli,clen);
if(strncmp("exit",buff,4)==0)
{
printf("Server Exit...\n");
break;
}
}
}
int main()
{
int sockfd;
struct sockaddr_in servaddr;
sockfd=socket(AF_INET,SOCK_DGRAM,0);
if(sockfd==-1)
{
printf("socket creation failed...\n");
exit(0);
}
else
printf("Socket successfully created..\n");
bzero(&servaddr,sizeof(servaddr));
servaddr.sin_family=AF_INET;
servaddr.sin_addr.s_addr=htonl(INADDR_ANY);
servaddr.sin_port=htons(PORT);
if((bind(sockfd,(SA *)&servaddr,sizeof(servaddr)))!=0)
{
printf("socket bind failed...\n");
exit(0);
}
else
printf("Socket successfully binded..\n");
func(sockfd);
close(sockfd);
}
```



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printf("From client %s To client : ",buff);
bzero(buff,MAX);
n=0;
while((buff[n++]=getchar())!='\n');
sendto(sockfd,buff,sizeof(buff),0,(SA *)&cli,clen);
if(strncmp("exit",buff,4)==0)
{
printf("Server Exit...\n");
break;
}
}
}
int main()
{
```

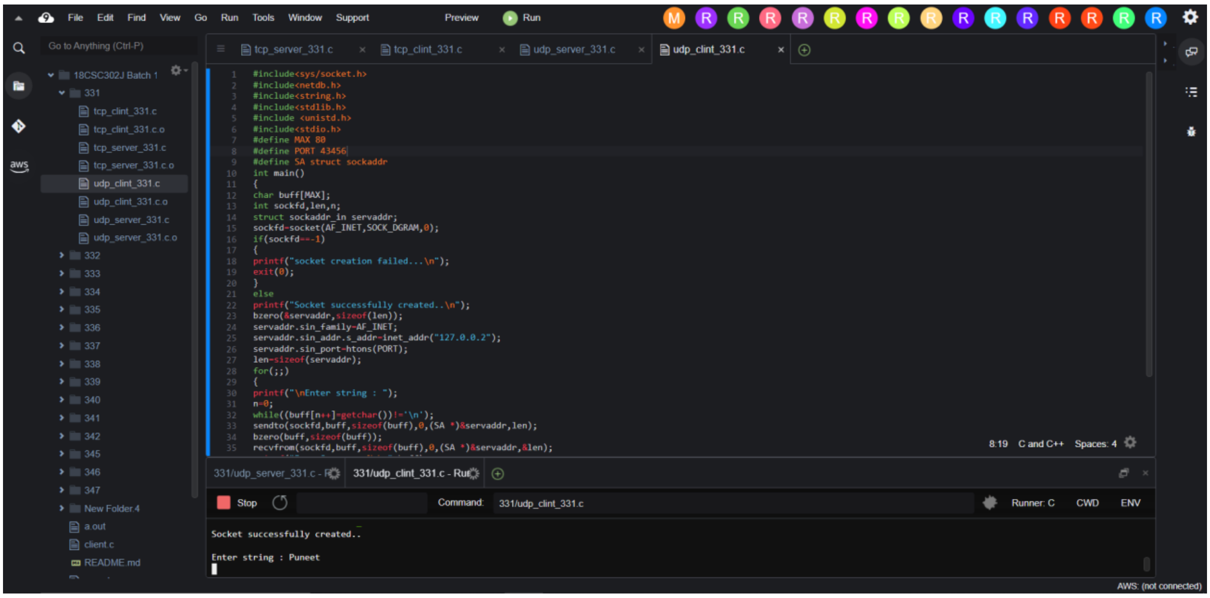
Command: 331/udp_server_331.c

```
Socket successfully created..
Socket successfully binded..
From client Puneet
 To client : 
```

UDP CLIENT:

CLIENT CODE

```
#include<sys/socket.h>
#include<netdb.h>
#include<string.h>
#include<stdlib.h>
#include <unistd.h>
#include<stdio.h>
#define MAX 80
#define PORT 43456
#define SA struct sockaddr
int main()
{
char buff[MAX];
int sockfd,len,n;
struct sockaddr_in servaddr;
sockfd=socket(AF_INET,SOCK_DGRAM,0);
if(sockfd==-1)
{
printf("socket creation failed...\n");
exit(0);
}
else
printf("Socket successfully created..\n");
bzero(&servaddr,sizeof(len));
servaddr.sin_family=AF_INET;
servaddr.sin_addr.s_addr=inet_addr("127.0.0.2");
servaddr.sin_port=htons(PORT);
len=sizeof(servaddr);
for(;;)
{
printf("\nEnter string : ");
n=0;
while((buff[n++]=getchar())!='\n');
sendto(sockfd,buff,sizeof(buff),0,(SA *)&servaddr,len);
bzero(buff,sizeof(buff));
recvfrom(sockfd,buff,sizeof(buff),0,(SA *)&servaddr,&len);
printf("From Server : %s\n",buff);
if(strncmp("exit",buff,4)==0)
{
printf("Client Exit...\n");
break;
}
}
close(sockfd);
}
```



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#include<netdb.h>
#include<string.h>
#include<stdlib.h>
#include <unistd.h>
#include<stdio.h>
#define MAX 80
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int main()
{
char buff[MAX];
int sockfd,len,n;
struct sockaddr_in servaddr;
sockfd=socket(AF_INET,SOCK_DGRAM,0);
if(sockfd==-1)
{
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}
else
printf("Socket successfully created..\n");
bzero(&servaddr,sizeof(len));
servaddr.sin_family=AF_INET;
servaddr.sin_addr.s_addr=inet_addr("127.0.0.2");
servaddr.sin_port=htons(PORT);
len=sizeof(servaddr);
for(;;)
{
printf("\nEnter string : ");
n=0;
while((buff[n++]=getchar())!='\n');
sendto(sockfd,buff,sizeof(buff),0,(SA *)&servaddr,len);
bzero(buff,sizeof(buff));
recvfrom(sockfd,buff,sizeof(buff),0,(SA *)&servaddr,&len);
```

Command: 331/udp_clint_331.c

```
Socket successfully created..

Enter string : Puneet
```