OXIORD

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LAB ASSIGNMENT

Date. 1) Write a Server program and Client program for usp Server-C 1/ server program for udp connection. #include (stdio.h) #include (strings.h) #include (sys/types.h). #include (onpa/inet.h) #include (sys/socket.h) #include (netinet/inh) # define PORT 5000. # define. MAXLINE 1000 int main () 11 Driver code. char buffer[100]; chan message = "Hello Client"; int listenfd, len; Struct sockaddr_in servaddr, cliaddr; bzeno (& servadda, size of servadda); 11 create a UDP Sochet listenfed = 80 cket (AF-INET, SOCK-DERAM): gervadar. sin_addr. g_addr = htori (INADDR AND); servadda. sin_port = htons (PORT); servador. sin_ family = AF- INET;

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```
11 bind server address to socket descripton.
  bind (listenfo, (struct sockadon) & servadon, size of (servadon));
    11 receive the datagram.
     len = Size of (cliadan);
     int n= necrtron (listente, buffer, sizeof (buffer), o,
              ( struct sockaddre *) & cliaddr, &len); // neceive message.
        buffer [n] = 10';
         puts (buffer);
      I send the response.
         sendto (listenfd, message, MAXLINE, O,
                      (struct sockaddr*) & cliddor size of (cliaddr));
client.c
//udp client driver program.
#include (Stdia.h)
 #include (strings.h)
 #include (8ys/types.h)
#include (onpa/inet.h)
#include (sys/socket-h)
 #include (netinet/in.h)
#include (unistd.h)
 #include < stdlib.h>
  #define PORT
  # define MAXLINE 1000
```

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11 Driver code.	
int main ()	
chan buffer [100];	
char *message = "Hella Server" int sockfd, n;	'.)
Struct sockaddr_in Serva	ddn ;
11 clear Servodda	
bzero (& servadda, sizeof ((ser voddr));
servaddn. sin_addn.s_addn =	
Servaddr. sin-part = htons	/
servadda. Sin_family= AF_In	
·	
11 create datogram socket	
sockfd= socket (AF_ INET, SOCK_	DGRAM, O);
11 connect to server	
if (connect socked (struct sockad	dn * & servaddn, size of (servaddn
(0)	
\{ \tag{P} \ta	
Printf (" In Erwon! Connect Foiled In"	<i>'</i>);
exit(o);	
5.	

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I request to send datagram. I no need to specify server I cannect stones the peers IP sendto (sockfd, message, MAXLINE, O, (stouct)	& pont
// close the descriptor.	nuct sockaddn*) Nuu, Nuuj;

close (sockfd);

Output

Server.c

Hello Client.

Client.C

Hello Server.

2)	Write a server program & clie	ent program for UDP Connection.
	where the Server can se	nd a message to the client
	by taking input from the	ie keyboard.
	0	
	#include < stdio.h>	
	#include < strings.h>	
	#include (sys) types.h)	
	# include (arpa/inet.h)	
	# include (sys/socket.h)	
FORD	this of to postings lineby.	
	#define PORT 5000	
	# define MAXLINE 1000.	
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```
int main ()
        Chan buffer [100];
        Char *mersage;
        int listenfd, len;
        Struct Sockaddn_in servaddn, cliaddn;
         bzero (& servaddin, size of (servaddin));
   11 Create a UDP socket
   listenfol= Socket (AF_INET SOCK_DORAM, O);
    Servadon. sin_addn = htonl (INADDR_ANY);
    Servadda. sin_port = Hons (PORT);
    Servaddr. Sin_ Family = AF_INET;
   I bind server address to socket descriptor.
   bind (listenty (struct sockaddry) & servaddry size of (servaddry)
  I receive the datagram.
  len = size of (cliadda);
  int n = recufron (listented, buffer, size of (buffer),
              O, ( Struct Bockoddn ) & Cliadan, & len); / receive message
                                                    from client.
   buff en [n] = '10';
    puts (boffer);
  11 Take input from the keyboard.
    printf ("Enter the message to send to client: ");
     Sconf ("/.s", message);
```

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```
// send the response.
          send to (listenfol, message, MAXLINE, 0,
                         (struct sockaddon*) & cliaddon, sizeof (cliaddon);
        Il receive the output from client
         песи from ( listenfd, buffer, size of (buffer), 0, (struct suckaddin*)
                   & cliadda, & len);
          buffer [n] = '10';
            pats (buffer);
client.c
       #include < stdia.h>
      #include < strings.h>
      #include < sys/ Expes. h>
      # include < arpa / inet. h>
      # include < sys/socket.h>
      # include < netinet/in.h>
      # in clude (unistab)
      # include ( stallibin)
      # define PORT 5000.
      # define MAXLINE 1000
      int main ()
         chan buffor [100];
```

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dr ("127.0.0.1");
1, 0);
addr, size of (gervaddr)) Lo
the server: ");
80ckaddr*) NULL,
(Struct sockadding) MULL,
);

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Output

gerver.c Enter message to send to server! Hill Client Response: Hello!!

client.c Enter message to sent to server: Hello:

Server Response: Hill