**CLIENT TCP(SOCKET PGM)**

#include <stdio.h>

#include <arpa/inet.h>

#include <fcntl.h>

#include <unistd.h>

int main()

{

int soc, n;

char buffer[1024], fname[50];

struct sockaddr\_in addr;

/\* socket creates an endpoint for communication and returns a file descriptor \*/

soc = socket(PF\_INET, SOCK\_DGRAM, 0);

/\*

\* sockaddr\_in is used for ip manipulation

\* we define the port and IP for the connection.

\*/

addr.sin\_family = AF\_INET;

addr.sin\_port = htons(7891);

addr.sin\_addr.s\_addr = inet\_addr("127.0.0.1");

/\* keep trying to esatablish connection with server \*/

printf("\nClient is connected to Server");

printf("\nEnter file name: ");

scanf("%s", fname);

/\* send the filename to the server \*/

sendto(soc, fname, sizeof(fname), 0,(struct sockaddr\*)&addr, sizeof(addr));

printf("\nRecieved response\n");

/\* keep printing any data received from the server \*/

while ((n = recvfrom(soc, buffer, sizeof(buffer), 0,(struct sockaddr\*)&addr, sizeof(addr))) > 0)

printf("%s", buffer);

close(soc);

return 0;

}

**SERVER TCP**

#include <stdio.h>

#include <arpa/inet.h>

#include <fcntl.h>

#include <unistd.h>

int main()

{

int welcome, new\_soc, fd, n;

char buffer[1024], fname[50];

struct sockaddr\_in addr;

welcome = socket(PF\_INET, SOCK\_DGRAM, 0);

addr.sin\_family = AF\_INET;

addr.sin\_port = htons(7891);

addr.sin\_addr.s\_addr = inet\_addr("127.0.0.1");

bind(welcome, (struct sockaddr \*) &addr, sizeof(addr));

printf("\nServer is Online");

recvfrom(welcome, fname,50, 0,(struct sockaddr\*)&addr, sizeof(addr));

/\* receive the filename \*/

printf("\nRequesting for file: %s\n", fname);

/\* open the file and send its contents \*/

fd = open(fname, O\_RDONLY);

if (fd < 0)

// send

sendto(welcome, "\nFile not found\n", 15,0,(struct sockaddr\*)&addr, sizeof(addr));

else

while ((n = read(fd, buffer, sizeof(buffer))) > 0)

sendto(welcome,buffer, n,0,(struct sockaddr\*)&addr, sizeof(addr));

printf("\nRequest sent\n");

close(fd);

return 0;

}

**CLIENT UDP(SOCKET PGM)**

#include <stdio.h>

#include <arpa/inet.h>

#include <fcntl.h>

#include <unistd.h>

int main()

{

int soc, n;

char buffer[1024], msg[100];

struct sockaddr\_in addr;

/\* socket creates an endpoint for communication and returns a file descriptor \*/

soc = socket(PF\_INET, SOCK\_DGRAM, 0);

/\*

\* sockaddr\_in is used for ip manipulation

\* we define the port and IP for the connection.

\*/

addr.sin\_family = AF\_INET;

addr.sin\_port = htons(7891);

addr.sin\_addr.s\_addr = inet\_addr("127.0.0.1");

/\* keep trying to esatablish connection with server \*/

printf("\nClient is connected to Server");

printf("\nEnter message: ");

scanf("%s", msg);

/\* send the filename to the server \*/

sendto(soc, msg, sizeof(msg), 0,(struct sockaddr\*)&addr, sizeof(addr));

close(soc);

return 0;

}

**SERVER UDP**

#include <stdio.h>

#include <arpa/inet.h>

#include <fcntl.h>

#include <unistd.h>

int main()

{

int welcome, new\_soc, fd, n;

char buffer[1024], msg[100];

struct sockaddr\_in addr;

welcome = socket(PF\_INET, SOCK\_DGRAM, 0);

addr.sin\_family = AF\_INET;

addr.sin\_port = htons(7891);

addr.sin\_addr.s\_addr = inet\_addr("127.0.0.1");

bind(welcome, (struct sockaddr \*) &addr, sizeof(addr));

printf("\nServer is Online");

recvfrom(welcome, msg,100, 0,(struct sockaddr\*)&addr, sizeof(addr));

printf("Message: %s",msg);

// sendto(welcome,msg, sizeof(msg),0,(struct sockaddr\*)&addr, sizeof(addr));

close(welcome);

return 0;

}