CN_LAB

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1. WAP UDP socket to:
    1. Print the directory contents given by the client
    2. Print the file contents given by the client

(Both parts in single program)

```c
/*
** A datagram sockets "server" demo
*/
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <string.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include<dirent.h>
```

```
#define MYPORT 4952 // the port users will be
connecting to
#define MAXBUFLEN 200
int main()
{
int sockfd;
struct sockaddr_in my_addr; // my address
information
struct sockaddr_in their_addr; // connector's
address information
socklen_t addr_len;
DIR *d;
struct dirent *dir;
int numbytes;
char buf[MAXBUFLEN],buf1[MAXBUFLEN];
if ((sockfd = socket(AF_INET, SOCK_DGRAM, 0))
== -1) {
perror("socket");
exit(1);
}
my_addr.sin_family = AF_INET; // host byte
order
```

```
my_addr.sin_port = htons(MYPORT); // short,
network byte order
my_addr.sin_addr.s_addr = INADDR_ANY; //
automatically fill with my IP
//memset(my_addr.sin_zero, '\0', sizeof
my_addr.sin_zero);
if (bind(sockfd, (struct sockaddr *)&my_addr,
sizeof my_addr) == -1) {
perror("bind");
exit(1);
}
addr_len = sizeof their_addr;
if ((numbytes = recvfrom(sockfd, buf,
MAXBUFLEN-1 , 0,
(struct sockaddr *)&their_addr, &addr_len))
== -1) {
perror("recvfrom");
exit(1);
}
char abc[10000];
strcpy(abc,"/home/gourav/CN_LAB/");
strcat(abc,buf);
```

```
char mn[10];
strcpy(mn,"exit");
d= opendir(abc);
if(d)
{
while((dir=readdir(d))!=NULL)
printf("%s\n",dir->d_name);
closedir(d);
}
/*printf("got packet
from %s\n",inet_ntoa(their_addr.sin_addr));
printf("packet is %d bytes long\n",numbytes);
buf[numbytes] = '\0';
printf("packet contains \"%s\"\n",buf);*/
recvfrom(sockfd, buf1, MAXBUFLEN-1 , 0,
(struct sockaddr *)&their_addr, &addr_len);
FILE *fp;
char ch;
fp=fopen(buf1,"r");
while(1)
{
ch=fgetc(fp);
```

```
if(ch==EOF)
break;
printf("%c",ch);
}
fclose(fp);
close(sockfd);
return 0;
}
```

```
/*
** A datagram "client" demo
*/
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <string.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include <netdb.h>
```

```
#define SERVERPORT 4952 // the port users will
be connecting to
int main()
{
int sockfd;
struct sockaddr_in their_addr; // connector's
address information
//struct hostent *he;
int numbytes;
char arg[30];
if ((sockfd = socket(AF_INET, SOCK_DGRAM, 0))
== -1) {
perror("socket");
exit(1);
}
their_addr.sin_family = AF_INET; // host byte
order
their_addr.sin_port = htons(SERVERPORT); //
short, network byte order
their_addr.sin_addr.s_addr =
inet_addr("127.0.0.1");
```

```
//memset(their_addr.sin_zero, '\0', sizeof
their_addr.sin_zero);
//addr_len = sizeof their_addr;
printf("Enter the folder name\n");
scanf("%s",arg);
if ((numbytes = sendto(sockfd, arg,
strlen(arg), 0,
(struct sockaddr *)&their_addr, sizeof
their_addr)) == -1) {
perror("sendto");
exit(1);
}
/*while(1)
{
recvfrom(sockfd, buf, MAXBUFLEN-1 , 0,
(struct sockaddr *)&their_addr, &addr_len);
if(strcmp(buf,"exit")==0)
break;
else
printf("%s\n",buf);
}*/
```

```
//printf("sent %d bytes to %s\n", numbytes,
inet_ntoa(their_addr.sin_addr));
printf("\nEnter the file name with
extension\n");
scanf("%s",arg);
sendto(sockfd, arg, strlen(arg), 0,
(struct sockaddr *)&their_addr, sizeof
their_addr);
close(sockfd);
return 0;
}
```