**LAB 2: Day time server-client example:**

**Server side code:**

#include <stdio.h>

#include <stdlib.h>

#include <sys/types.h>

#include <sys/socket.h>

#include <netinet/in.h>

#include <unistd.h>

#include <time.h>

#define BACKLOG 10

int main(int argc, char \*\*argv){

int n\_client = 0;

int sockfd = socket(AF\_INET, SOCK\_STREAM, 0);

struct sockaddr\_in serverAddress;

serverAddress.sin\_family = AF\_INET;

serverAddress.sin\_addr.s\_addr = INADDR\_ANY;

serverAddress.sin\_port = htons(4444);

int bindfd = bind(sockfd, (struct sockaddr\*)&serverAddress, sizeof(serverAddress));

if(bindfd == 0)

printf("Bind\n");

listen(sockfd, BACKLOG);

printf("Listening for the client\n");

int i = 1;

while(i){

int client\_socket = accept(sockfd, NULL, NULL);

n\_client++;

time\_t currentTime;

time(&currentTime);

printf("Client %d requested for time at %s", n\_client, ctime(&currentTime));

// ctime(time\_ptr),This function returns a string that contains the date and time which is in human readable form.

send(client\_socket, ctime(&currentTime), 30, 0);

break;

}

close(sockfd);

return 0;

}

**Client Side code:**

#include <stdio.h>

#include <stdlib.h>

#include <sys/types.h>

#include <sys/socket.h>

#include <netinet/in.h>

#include <unistd.h>

#include <time.h>

int main(int argc, char \*\*argv){

int sockfd = socket(AF\_INET, SOCK\_STREAM, 0);

char response[30];

struct sockaddr\_in serverAddress;

serverAddress.sin\_family = AF\_INET;

serverAddress.sin\_addr.s\_addr = INADDR\_ANY;

serverAddress.sin\_port = htons(4444);

connect(sockfd, (struct sockaddr\*)&serverAddress, sizeof(serverAddress));

printf("Connected to the server\n");

recv(sockfd, response, 29, 0);

printf("Time from server: %s", response);

close(sockfd);

return 0;

}