EXP-6   <u>TIME-SERVER</u>

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CSE-BD-N2

Server:

```c
#include<stdio.h>
#include<stdlib.h>
#include<sys/types.h>
#include<sys/socket.h>
#include<netinet/in.h>
#include<unistd.h>
#include<time.h>

//port value and the max size for buffer
#define PORT 9002 //the port users will be connecting to
#define BACKLOG 10 //how many pending connections queue will hold

int main(){
  //*****************Time Setup*********************
  time_t currentTime ;
  time(&currentTime);
  //**************************************************

  int countClient = 0;

  int socket_descriptor = 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(PORT);

//binding address
bind(socket_descriptor,(struct sockaddr*)&serverAddress,sizeof(serverAddress));

//listening to the queue
  listen(socket_descriptor,BACKLOG);

  printf("\nServer Started ...");

while(1){
  countClient++;
    printf("\n");

    int client_socket = accept(socket_descriptor, NULL, NULL);
    // char *string = asctime(timeinfo);

    printf("\nClient %d has requested for time at %s", countClient, ctime(&currentTime));

    //sending time to the client side
    // ctime(&time_from_pc)
    send(client_socket,ctime(&currentTime), 30, 0);

  }
  return 0;
}
```

Client:

```c
#include <sys/socket.h>
#include <netinet/in.h>
#include "string.h"
```

```c
#define PORT 9002 //the port users will be connecting to
#define MAXLINE 30 //for buffer size

int main(){

    int socket_descriptor = socket(AF_INET, SOCK_STREAM, 0);

    char serverResponse[MAXLINE];

    struct sockaddr_in serverAddress;

    serverAddress.sin_family = AF_INET;
    serverAddress.sin_addr.s_addr = INADDR_ANY;
    serverAddress.sin_port = htons(PORT);

connect(socket_descriptor, (struct sockaddr *)&serverAddress, sizeof(serverAddress));

recv(socket_descriptor,serverResponse,MAXLINE-1,0);

    printf("\nTIME FROM SERVER %s\n",serverResponse);

    return 0;
}
```

OUTPUT:-

```
RA1911027010068:~/environment/RA1911027010078/exp5-timeserver $ cc -o client client.c
cc: error: client.c: No such file or directory
cc: fatal error: no input files
compilation terminated.
RA1911027010068:~/environment/RA1911027010078/exp5-timeserver $ cc -o client client78.c
RA1911027010068:~/environment/RA1911027010078/exp5-timeserver $ ./client

TIME FROM SERVER Mon Sep 13 06:36:27 2021

RA1911027010068:~/environment/RA1911027010078/exp5-timeserver $ ./client

TIME FROM SERVER Mon Sep 13 06:36:27 2021

RA1911027010068:~/environment/RA1911027010078/exp5-timeserver $
```