

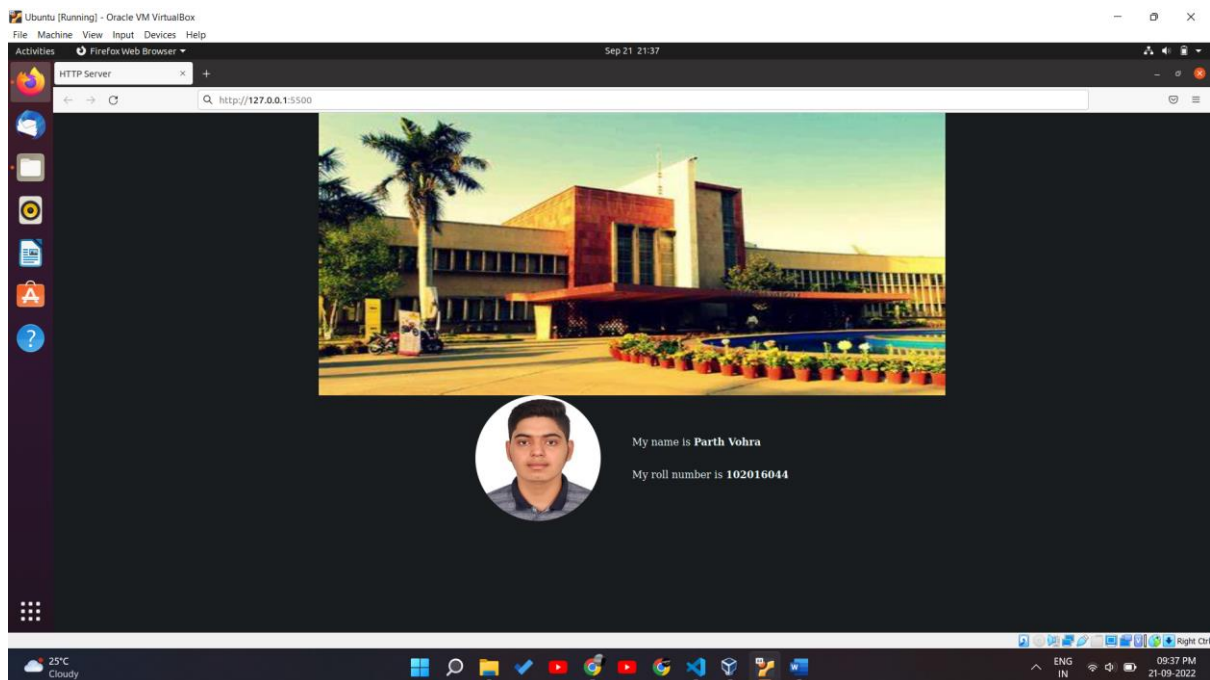
# Sessional Assignment – 1

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3CS10

Output:



Code:

```
#include <stdio.h>
#include <sys/socket.h>
#include <unistd.h>
#include <stdlib.h>
#include <netinet/in.h>
#include <string.h>
#include <arpa/inet.h>

#define PORT 5500

int port = 0;
char *path;
void loadConfig(){
    // file contains format like this:
    /*
        PORT=80
        PATH=/var/www/html/index.html
    */
}
```

```

FILE *fp;
char *line = NULL;
size_t len = 0;
ssize_t read;
fp = fopen("config.txt", "r");
if (fp == NULL)
    exit(EXIT_FAILURE);
while ((read = getline(&line, &len, fp)) != -1) {
    if(strstr(line, "PORT=") != NULL){
        port = atoi(line + 5);
    }
    if(strstr(line, "PATH=") != NULL){
        path = line + 5;
    }
}
fclose(fp);
printf("File is loaded!! :)\n");
printf("Port: %d\n", port);
printf("Path: %s\n", path);
}

void setUpServer(char httpHeader[]){
    // file is path + index.html
    FILE *fp;
    fp = fopen(strcat(path, "index.html"), "r");
    if (fp == NULL)
        exit(EXIT_FAILURE);
    char *line = NULL;
    size_t len = 0;
    ssize_t read;
    while ((read = getline(&line, &len, fp)) != -1) {
        strcat(httpHeader, line);
    }
    fclose(fp);
}

int main(int argc, char const *argv[]){
    int server_fd, new_socket; long valread;
    struct sockaddr_in address;
    int addrlen = sizeof(address);

    // Only this line has been changed. Everything is same.
    // give size
    char httpHeader[100000] = "HTTP/1.1 200 OK\r\n\r\n";
    loadConfig();
    setUpServer(httpHeader);
    printf("Header: %s\n", httpHeader);

    // Creating socket file descriptor

```

```

if ((server_fd = socket(AF_INET, SOCK_STREAM, 0)) == 0)
{
    perror("In socket");
    exit(EXIT_FAILURE);
}

address.sin_family = AF_INET;
address.sin_addr.s_addr = INADDR_ANY;
address.sin_port = htons(port);

memset(address.sin_zero, '\0', sizeof address.sin_zero);

if (bind(server_fd, (struct sockaddr *)&address, sizeof(address))<0)
{
    perror("In bind");
    exit(EXIT_FAILURE);
}
if (listen(server_fd, 10) < 0)
{
    perror("In listen");
    exit(EXIT_FAILURE);
}
while(1)
{
    printf("\n+++++++ Waiting for new connection ++++++\n\n");
    if ((new_socket = accept(server_fd, (struct sockaddr *)&address,
(socklen_t*)&addrlen))<0)
    {
        perror("In accept");
        exit(EXIT_FAILURE);
    }

    char buffer[30000] = {0};
    valread = read( new_socket , buffer, 30000);
    printf("%s\n",buffer );
    write(new_socket , httpHeader , strlen(httpHeader));
    printf("-----Hello message sent-----");
    close(new_socket);
}
return 0;
}

```

## Website(HTML) Code:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>HTTP Server</title>
    <link rel="stylesheet" href="index.css" />
  </head>
  <body
    style="
      display: flex;
      align-items: center;
      justify-content: center;
      flex-direction: column;
      margin: 0 0 50px;
      background-color: #181c1e;
      color: azure;
    "
  >
    <style>
      .container {
        display: flex;
        flex-direction: row;
        justify-content: center;
        align-items: center;
      }
      .pfp {
        width: 200px;
        height: 200px;
        border-radius: 100%;
      }
      .container .info {
        display: flex;
        flex-direction: column;
        justify-content: center;
        align-items: flex-start;
        margin-left: 50px;
      }
    </style>
    
```

```
<div class="container">
  
  <div class="info">
    <p>My name is <strong>Parth Vohra</strong></p>
    <p>My roll number is <strong>102016044</strong></p>
  </div>
</div>
</body>
</html>
```