

Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa campus
Computer Networks
Second Semester 2015-2016
Lab 4
Simple HTTP Socket Programming

Implement HTTP Client.

Send a request to local HTTP server to fetch the HTML page from the server. From the reply message

- a) Print the content of the web page.
- b) Print the content inside the <body> </body> tag of the web page (ignore the other HTML Tags).

Note:

1. The client application should get the ip address and name of the file from user.

Local HTTP server hosted in CC lab

10.1.5.222

Fetch the index.html file from 10.1.5.222 using port # 80.

Hints:

1. Use header file “#include<netdb.h>” in order to use “struct hostent”.
2. Use the following steps to use the argument#1 (i.e ip address of the server), to fill up the fields of “struct hostent” (refer gethostbyname man page) and to subsequently copy the same address to sin_addr field of “struct sockaddr_in dest”:

```
struct sockaddr_in dest; // internet socket address structure
```

```
struct hostent *remoteHost; //remote host address structure
```

```
remoteHost = gethostbyname(argv[1]); //getting information (ip and other info) from user argument#1
```

```
bcopy((char*)remoteHost->h_addr, (char*)&dest.sin_addr, remoteHost->h_length); //filling up dest sockaddr_in
```

```
// bcopy moves the specified number of bytes from the source to the destination
```

```
// void bcopy(const void * src, void * dest, size_t nbytes );
```

3. Template for GET request:

```
char* template = "GET /%s HTTP/1.0/r/nHost: %s/r/nUser-Agent: HTMLGET 1.0/r/n/r/n";
```

4. Use strstr() for parsing the web page content.

5. Use sprintf() to store formatted data as a string.

Sample Input:

```
./a.out 10.1.5.222 index.html
```

Sample Output:

Without Parsing

HTTP/1.1 200 OK

Date: Mon, 08 Feb 2016 09:27:58 GMT

Server: Apache/2.4.7 (Ubuntu)

Last-Modified: Thu, 04 Feb 2016 09:40:58 GMT

ETag: "3a-52aee882b374c"

Accept-Ranges: bytes

Content-Length: 58

Connection: close

Content-Type: text/html

Last-Modified: Fri, 13 Feb 2015 11:37:02 GMT

<html>

<head>

</head>

<body>

Hello World!

</body>

</html>

With Parsing

<body>

Hello World!