

A Project on

“Distributed Data management and Recovery System”

Guided By

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Overview

Distributed databases

Client Server Architecture

Data Distribution and recovery

Web Server Component of the project

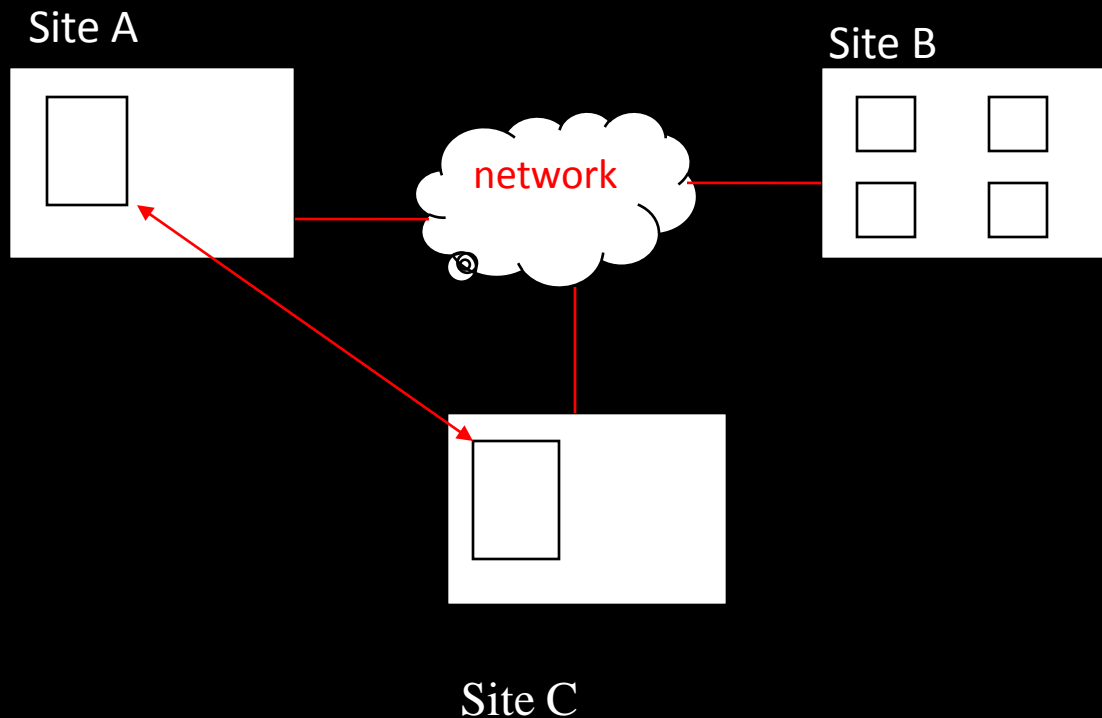
FTP Server Component of the project

Enhancement

References

Distributed System

Distributed database (DDB) is a collection of multiple, logically interrelated databases distributed over a computer network.



Distribution can be done by following ways

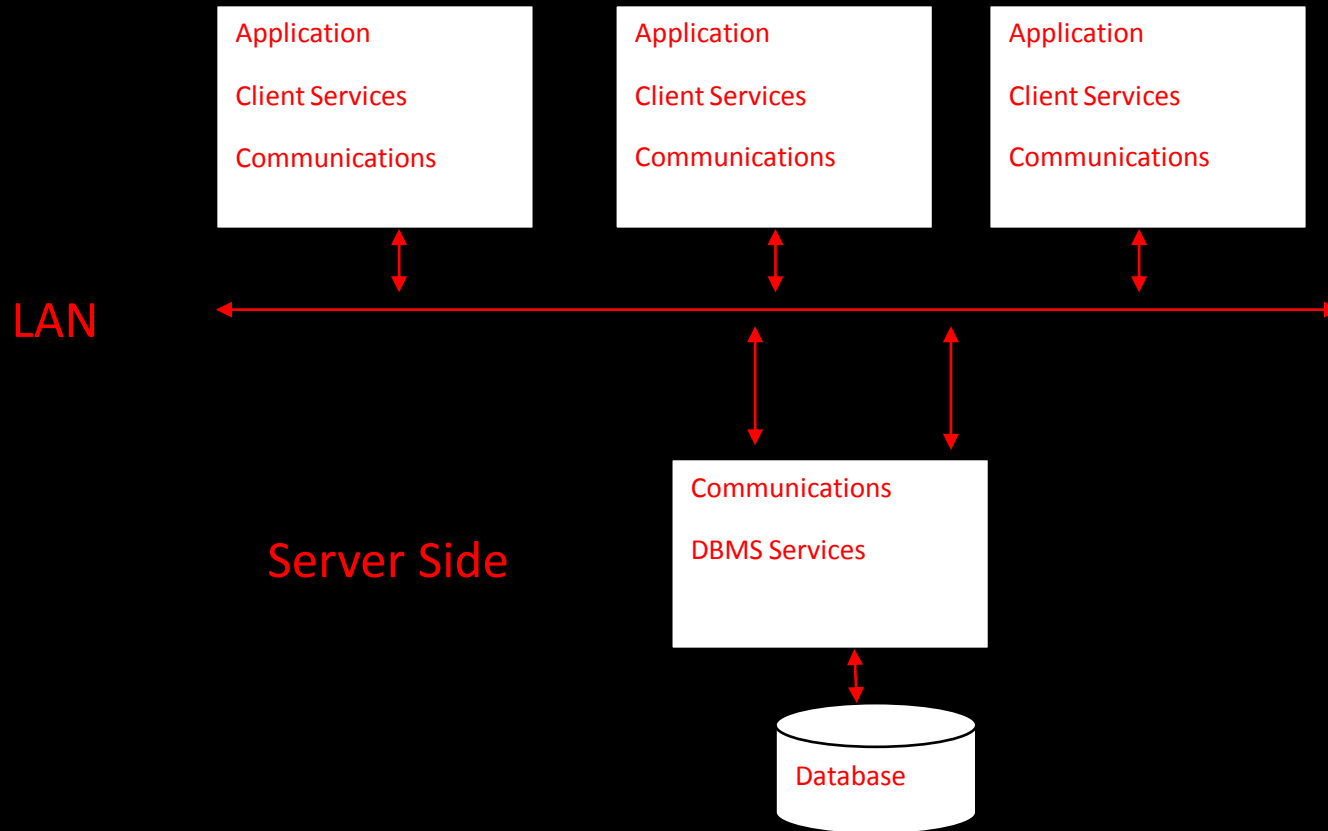
Replication

Fragmentation

Client Server Architecture

It is a application design approach that results in the decomposition of system into small number of server executing on one or more platform and providing services to a large number of server functions executing on one or more different platform.

Client Side



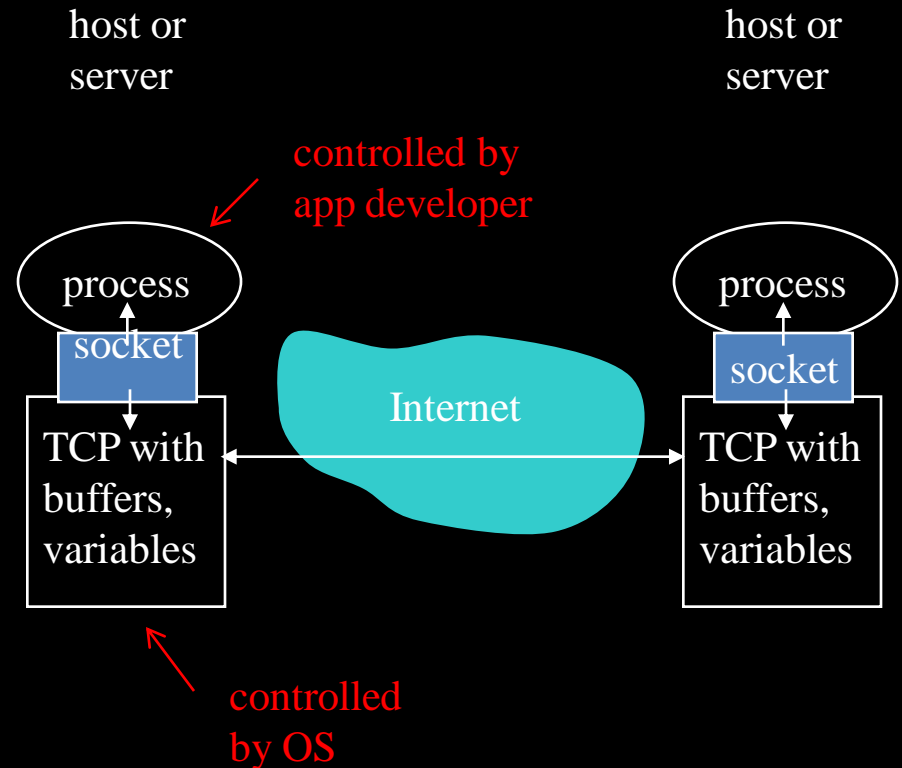
TCP Sockets

process sends/receives
messages to/from its
socket

socket analogous to
door

sending process shoves
message out door

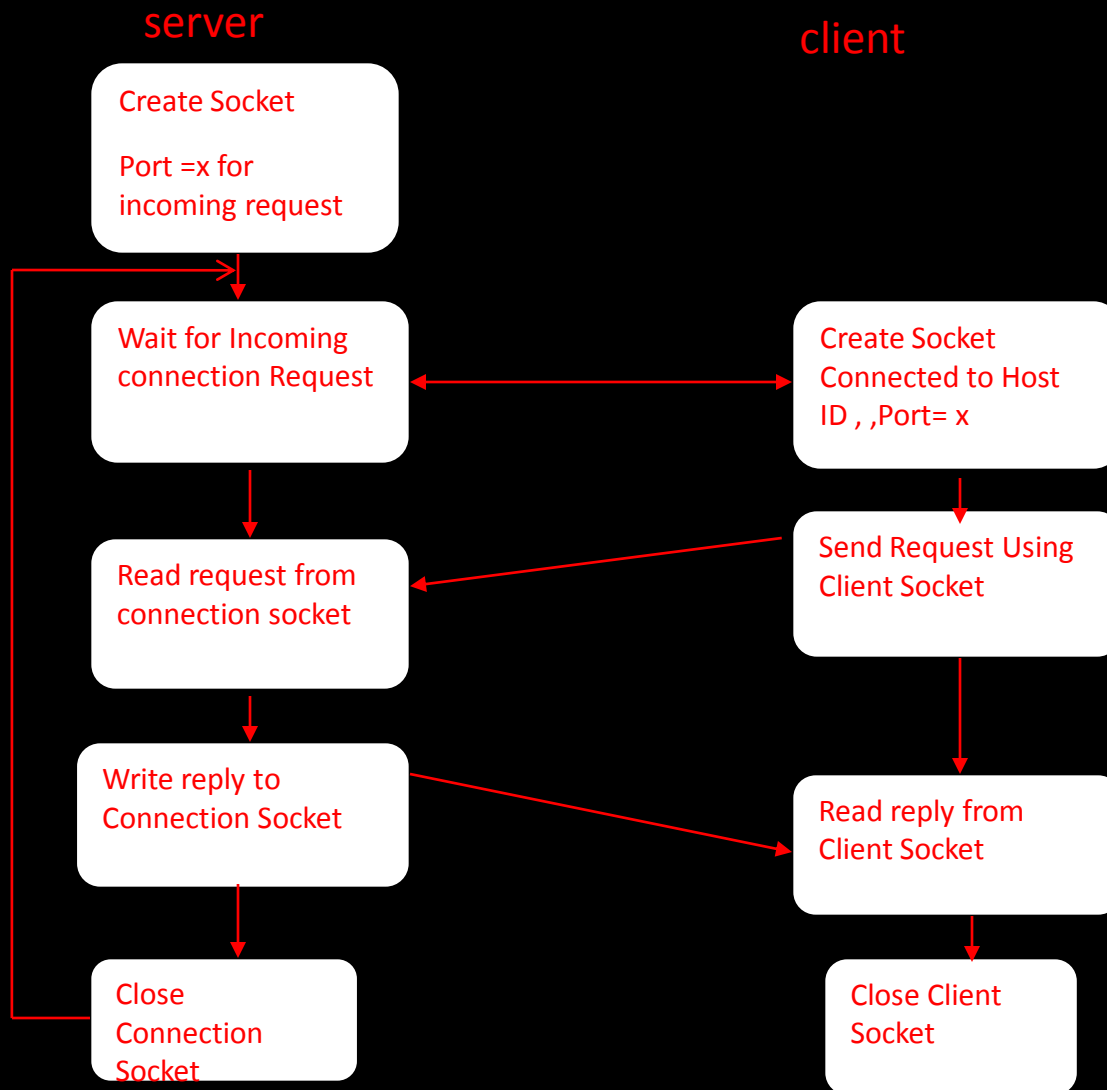
sending process relies on
transport infrastructure
on other side of door
which brings message to
socket at receiving
process



Tools and Technologies

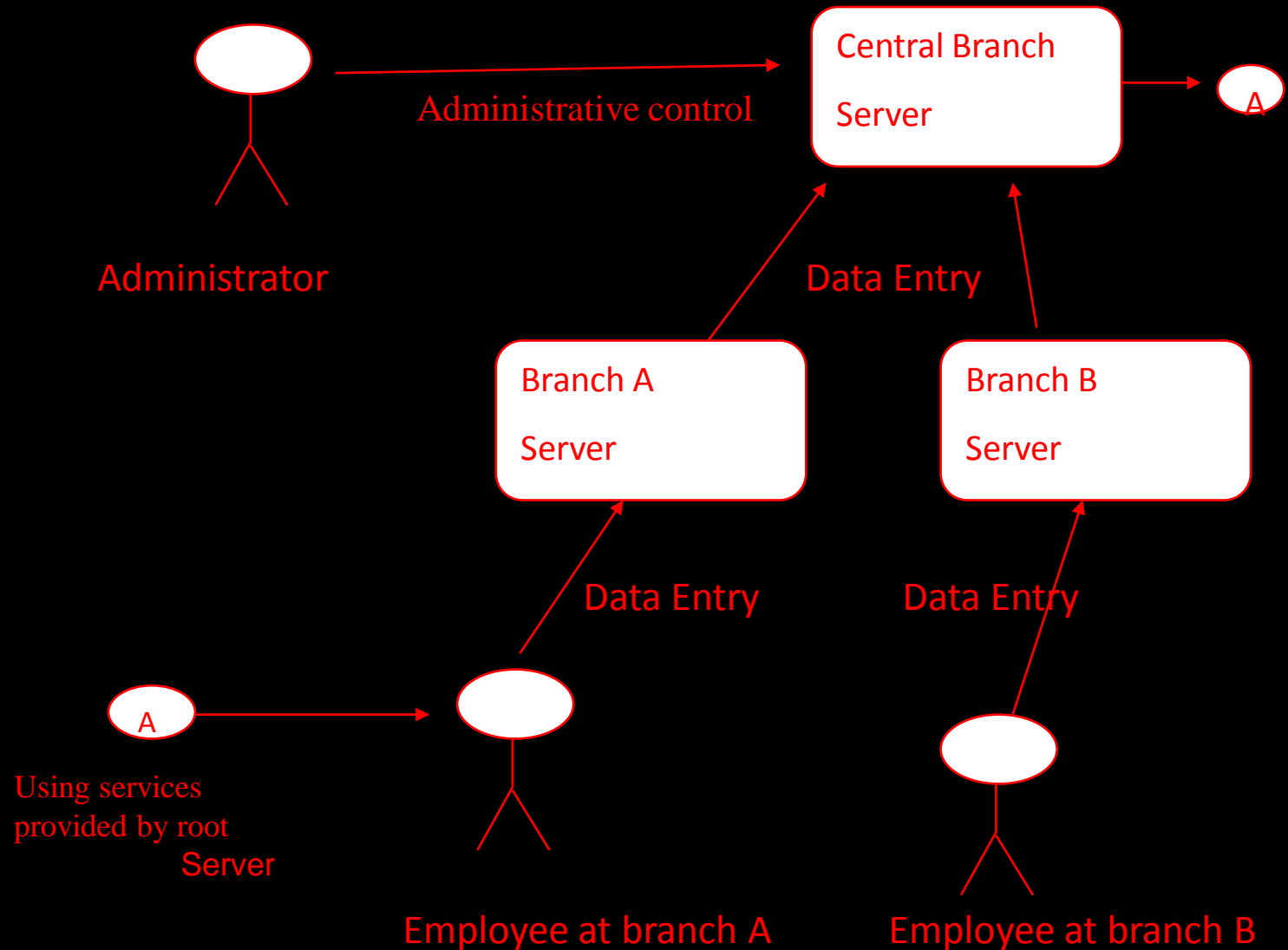
Application	Client-side	Server-Side
Application architecture	JAVA	JAVA
Web-technology	HTML	PHP
Server	-----	FTP ,Web, Apache
Database	-----	MYSQL,MSACCE SS

Blue print of the project

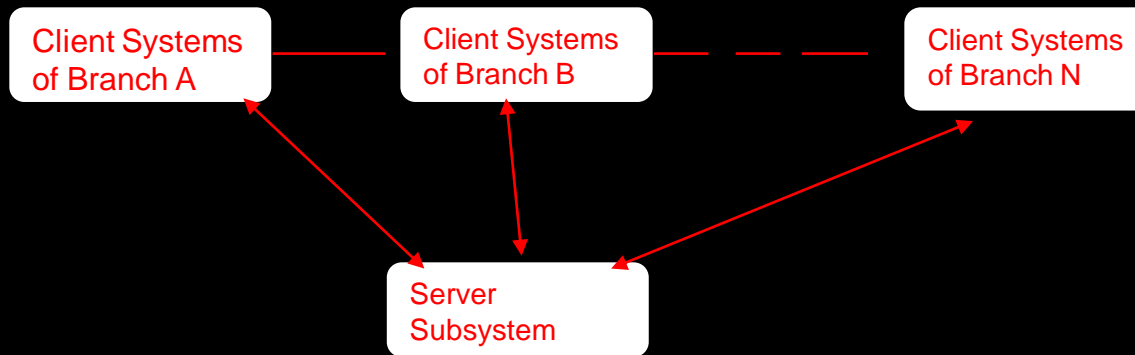


Communication between client and server via socket

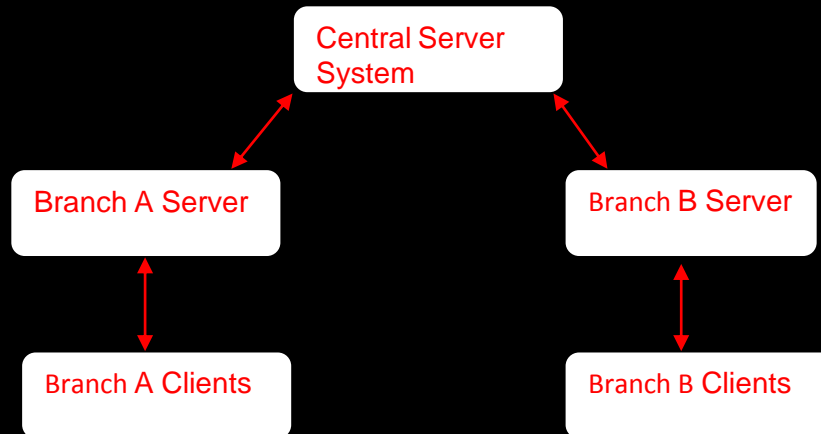
User Case diagram



Organization of client and server Subsystem



The client
Subsystem system



The server Subsystem

Client Side Snap Shoot of the login Screen

Login Form

Username

Password

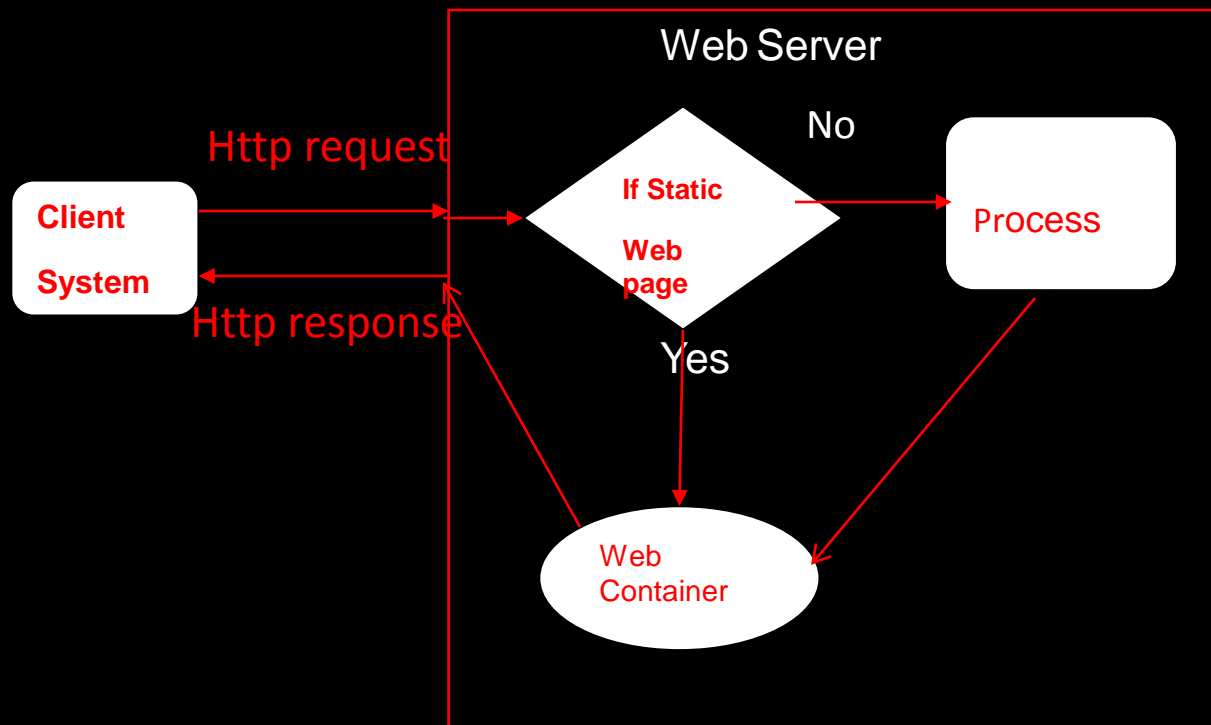
Select Server

localhost
localhost
Main Server
10.10.10.2
10.10.10.1

Ok

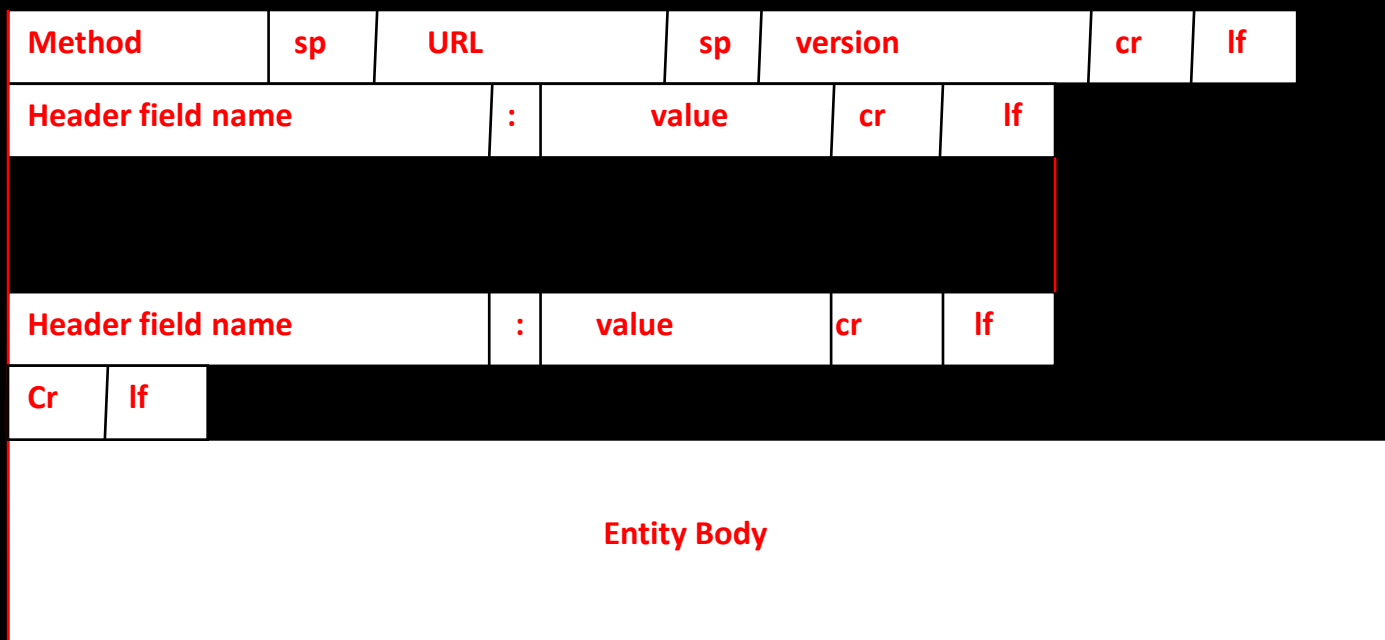
Web Server's Working

The web Server attached to the whole application works as like, We have a 24*7 on Server System at the Central Server like (Apache) when Client ask for a particular page the Web Server first finds is it a static web page or a dynamic if static the it directly return it to the asking Client machine or otherwise if dynamic page request it first invoke the apache server then with the help of it our web server make an equivalent static web page then this static web page is sent to the Client.

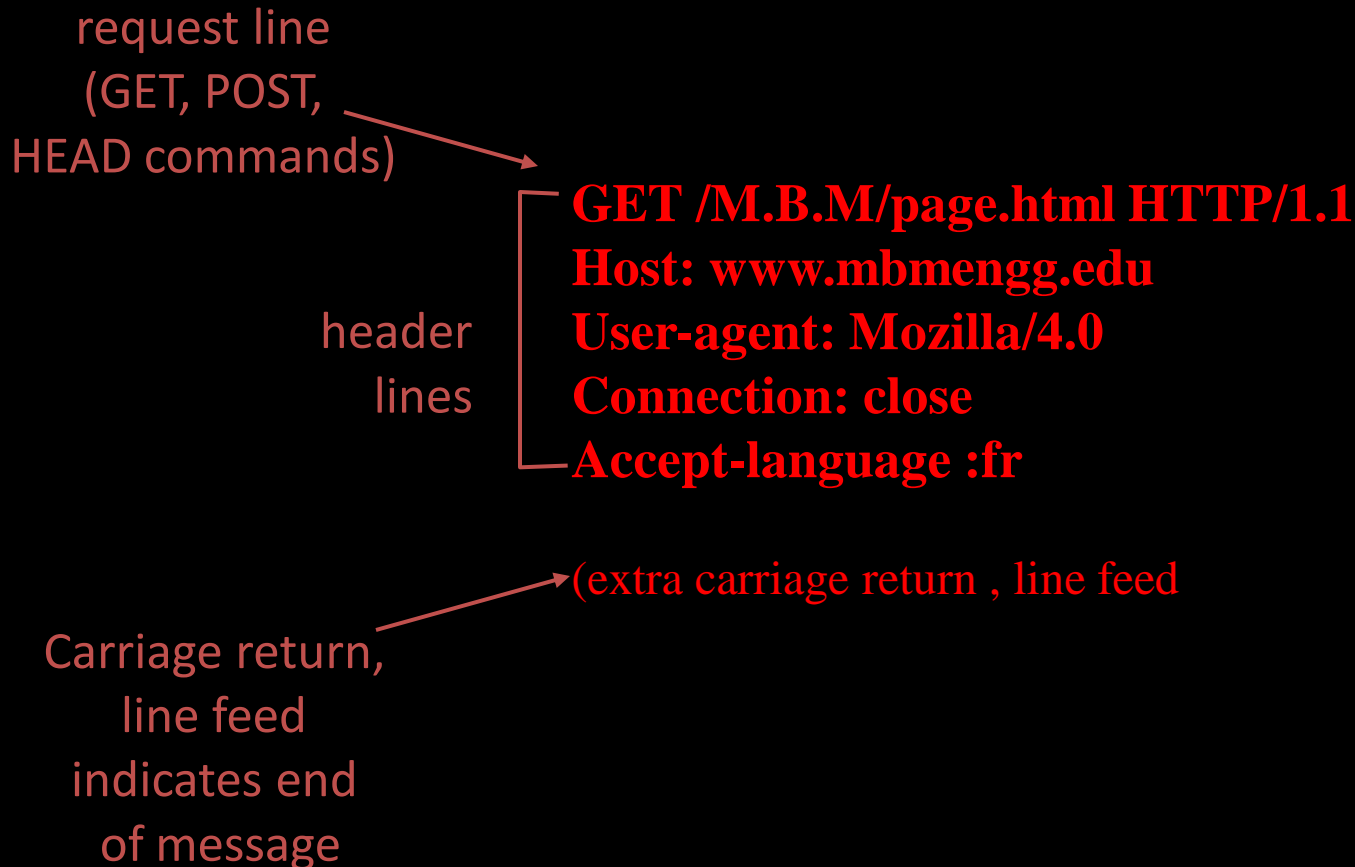


HTTP request message: general format

Request = Request-Line
 *(general-header
 | request-header
 | entity-header)
 CRLF
 [message-body]



HTTP request message



HTTP response message format :-After receiving and interpreting a request message, a server responds with an HTTP response message.

status line (protocol
status code
status phrase)

header
lines

data, e.g.,
requested
HTML file

HTTP/1.1 200 OK

Connection close

Date: Thu, 06 Aug 1998 12:00:15 GMT

Server: Apache/1.3.0 (Unix)

Last-Modified: Mon, 22 Jun 1998

Content-Length: 6821

Content-Type: text/html

data data data data data ...

Getting a static page from web server

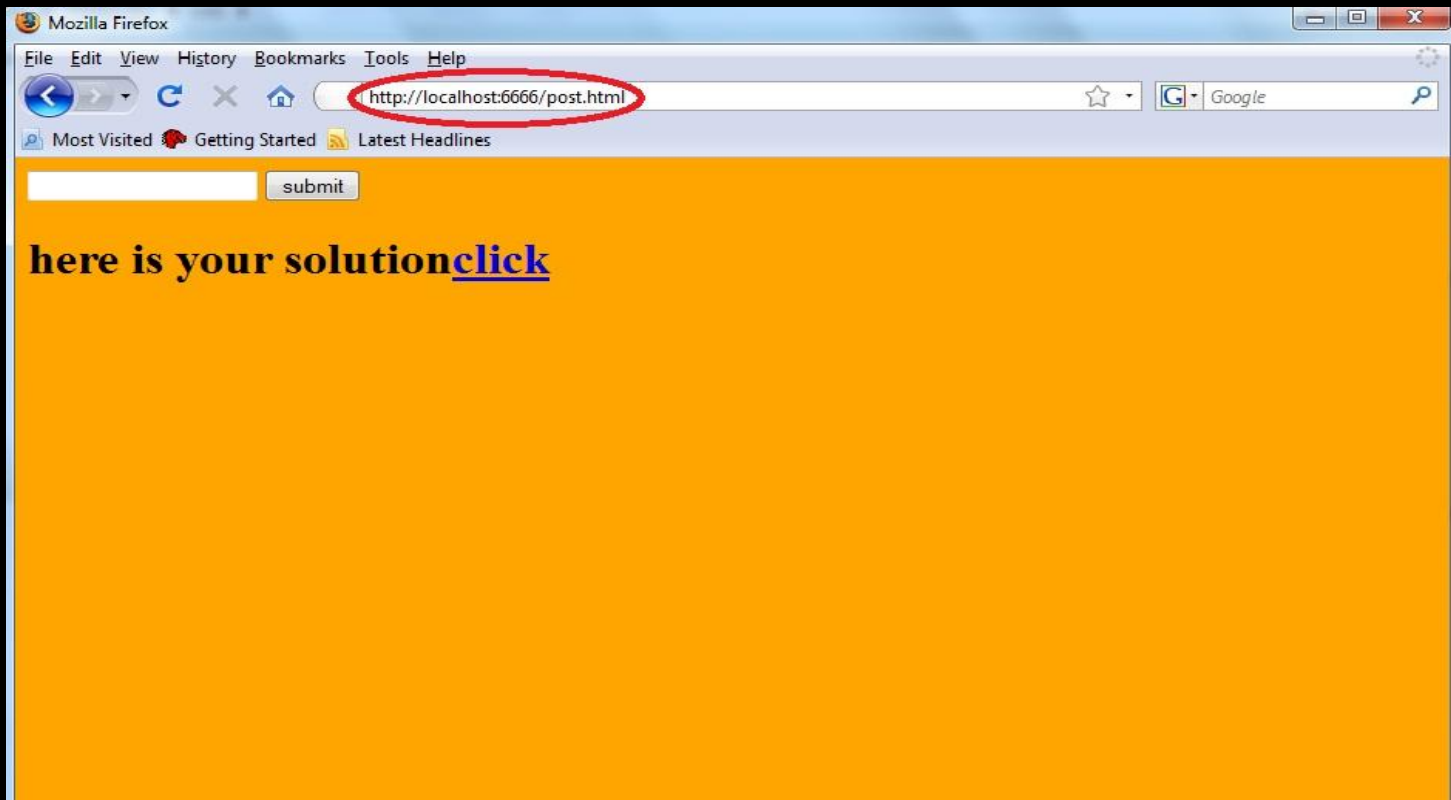
On some of the server machine our web server program is running 24*7 .when a client wants to use services provided by it .he/she first open up the browser and give the uniform resource locator (url) like wise.

protocol → http://10.10.10.2:6666/post.html

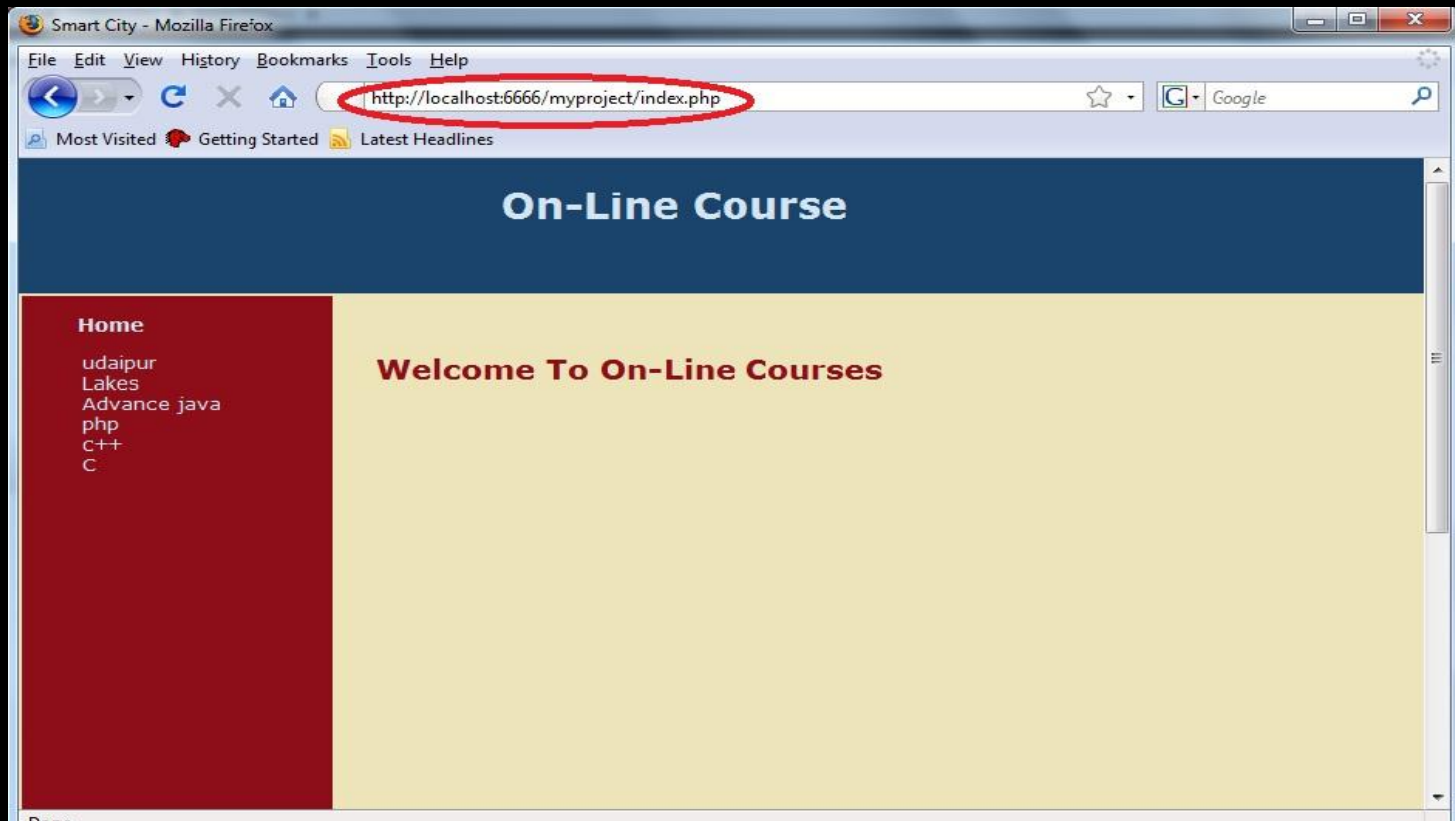
Port no. Where server process running → 6666

File name which client wants → post.html

IP Address of server machine → 10.10.10.2



Getting a Dynamic Page from Server:- Here when we ask for a dynamic page to the server throws an exception as it does not contain any dynamic page this exception is handled by apache server which convert the Dynamic page into equivalent static page the our server program returns this static page back to the client.

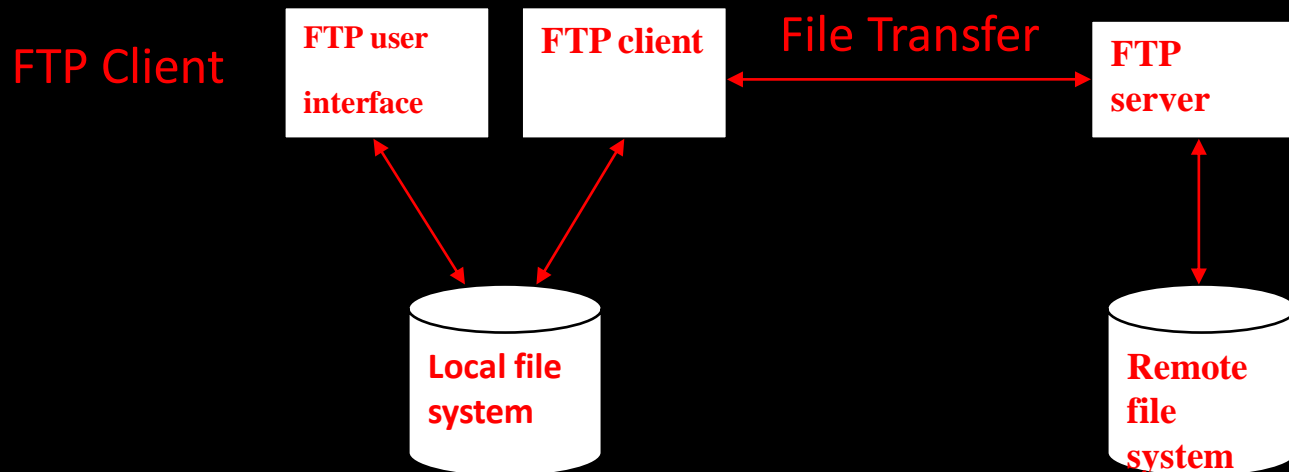


FTP Server

FTP is a protocol for moving files from one computer or server to another. These files may be stored in their new location for storage or for viewing/downloading by others on the World Wide Web.

To transfer the file, two connections are used: -

- i. The control connection and
- ii. The data connection.

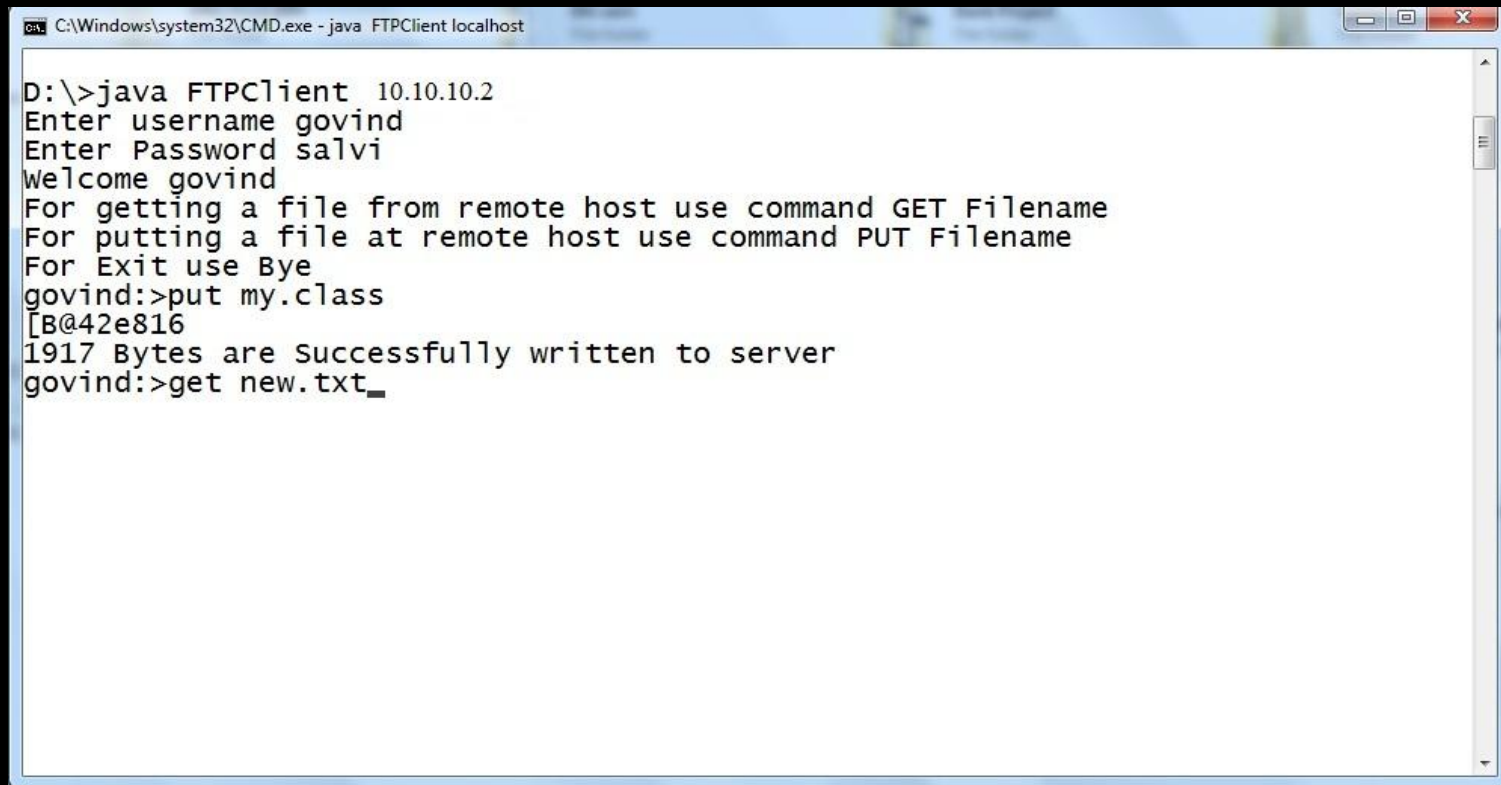


FTP moves between local and remote file system

For connecting to the remote host with FTP client we have to first load the program FTPClient with the IP address of the server the following snap shoot shows how the environment is present in front of the FTP client.

Command are

- i. PUT Filename
- ii. GET Filename



```
C:\Windows\system32\CMD.exe - java FTPClient localhost

D:\>java FTPClient 10.10.10.2
Enter username govind
Enter Password salvi
Welcome govind
For getting a file from remote host use command GET Filename
For putting a file at remote host use command PUT Filename
For Exit use Bye
govind:>put my.class
[B@42e816
1917 Bytes are Successfully written to server
govind:>get new.txt_
```

Enhancement

- Authorization level could be more strict.
- Currently system is working on the bases of double entry. Means first entry is made to the respective branch server then to the central server. By applying the replication technique the limitation can be overcome.
- The Server Subsystem is now working as a private network in future it could be deploy on the public network.
- when we ask for the dynamic page the system redirect the request to apache web server In future we can create such server that could resolve the Dynamic web page by it's own.

References

Books

- i. **Computer Networking by kurose and ross third Edition.**
- ii. **Database system concepts by Korth and sudarshan. Fifth edition**
- iii. **Java – The complete reference by Herbert schildt.**

**Thank
You!**