



HEXAWARE

Web Application Design

Course Objectives

Introducing the web technology
Introducing UI Languages.
Introducing Script Languages

Session Objective

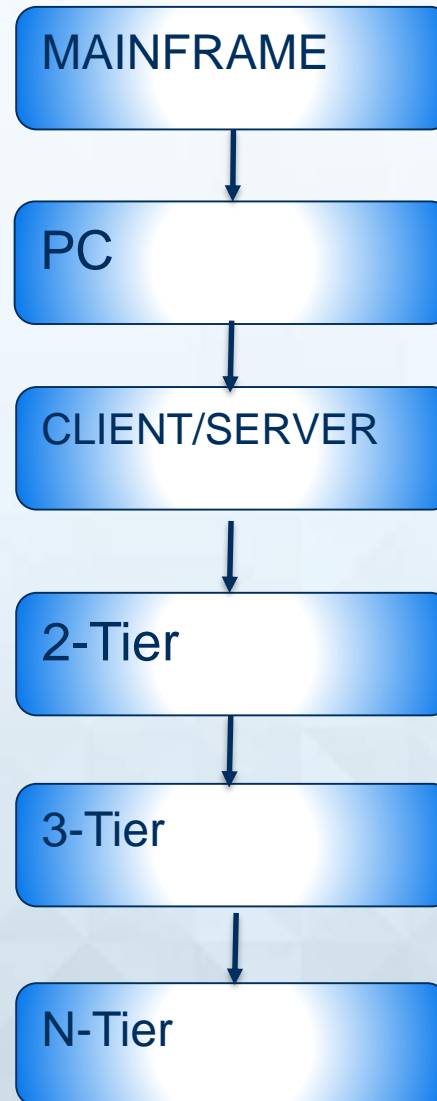
Describe Internet services

Describe the World Wide Web

Distinguish between web applications and web sites

Server

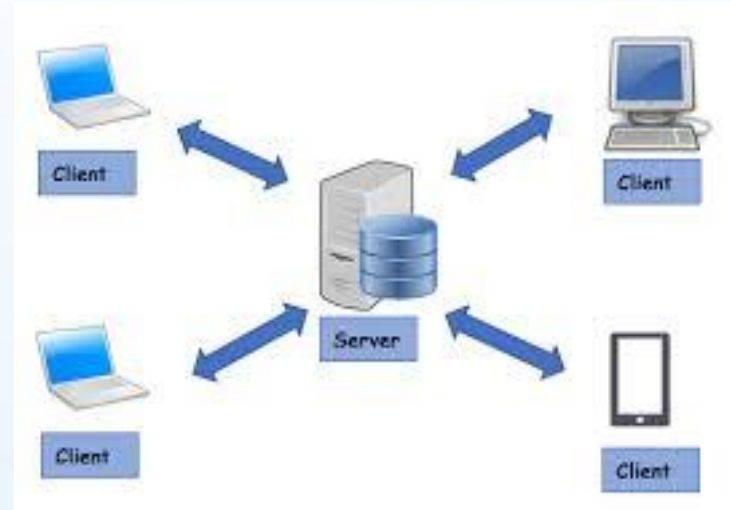
Evolution of Computers



Mainframe Computers



Mainframe Computer



Client Server architecture



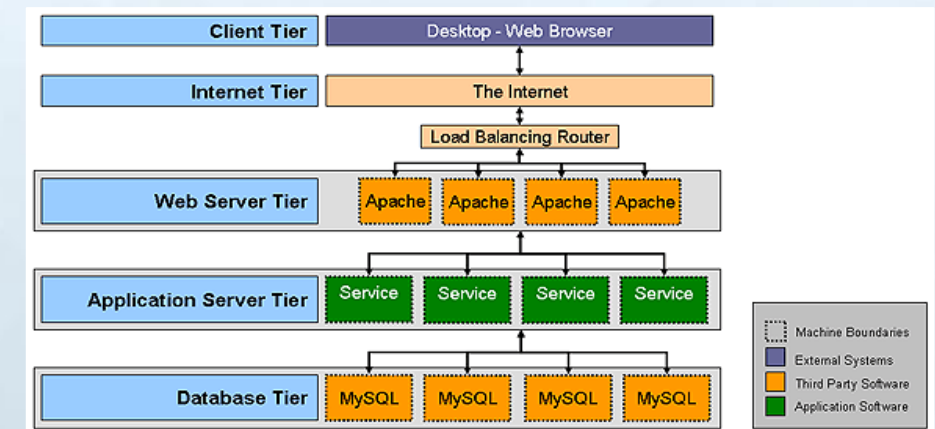
Personal Computer



Two-Tier Architecture



Three-Tier Architecture

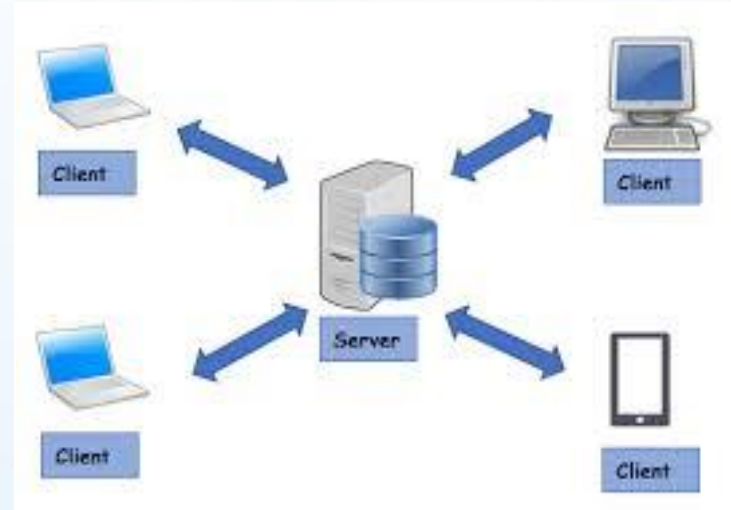


N-Tier Architecture

Evolution of Computers



Mainframe Computer



Client Server architecture



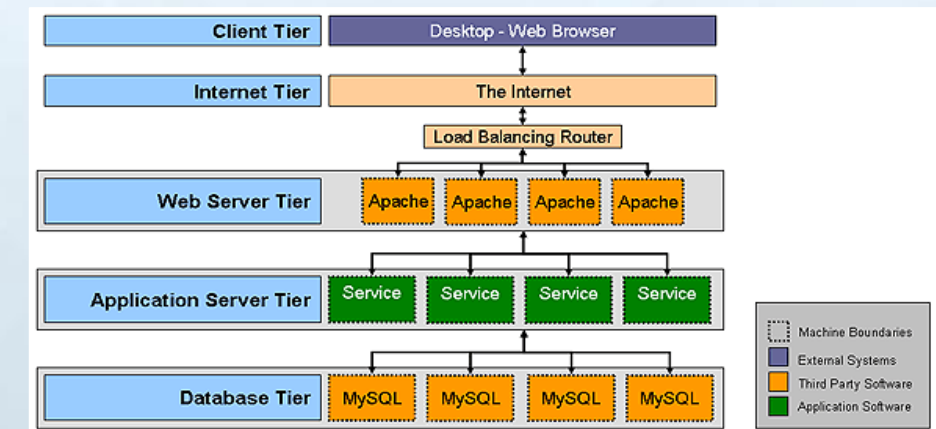
Personal Computer



Two-Tier Architecture



Three-Tier Architecture



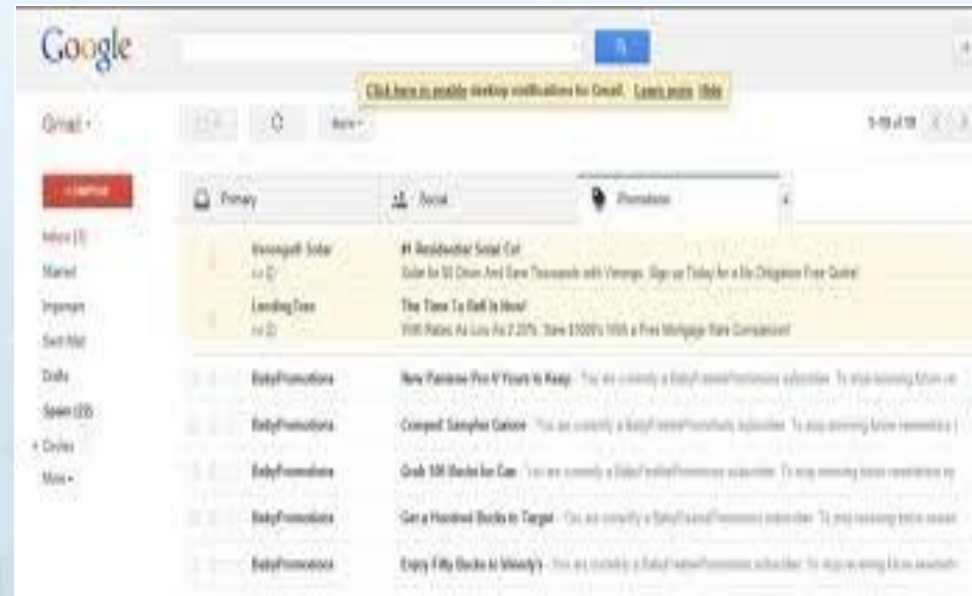
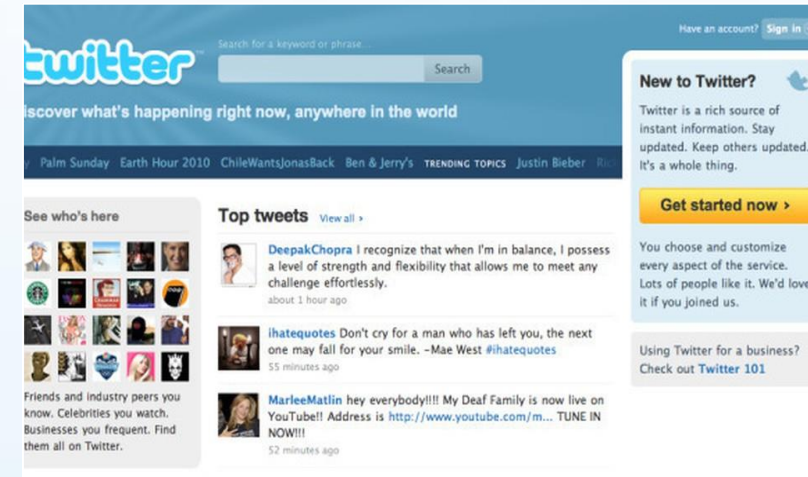
N-Tier Architecture

Web Application

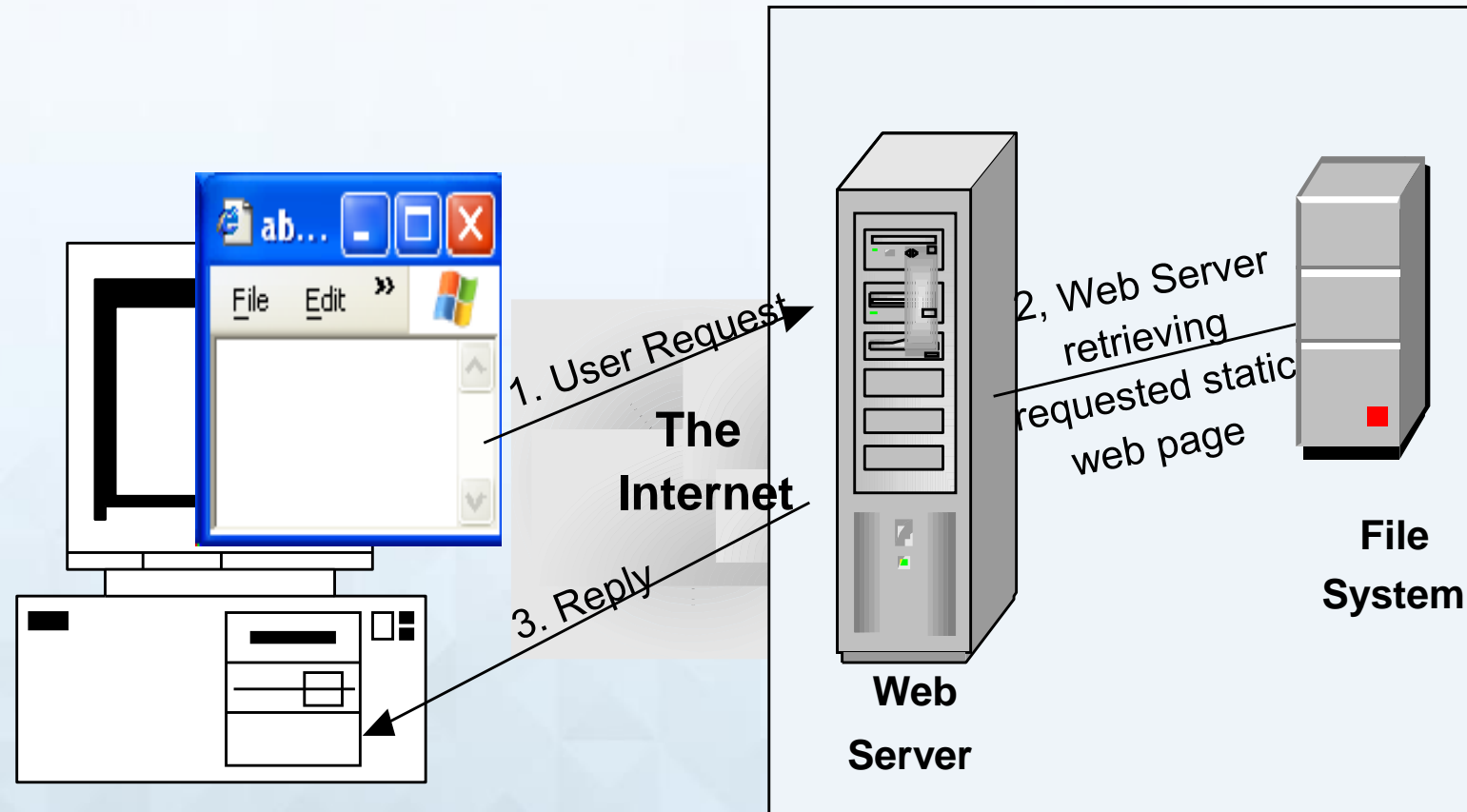
- A web application is a software application that runs on a remote server.
- Web browsers are used to access Web applications, over a network, such as the Internet.

(ex: Facebook, Gmail etc..)

Web Applications



Web Application work flow



Hypertext Transfer Protocol

- Hyper Text Transfer Protocol or HTTP is the protocol used by the world wide web
- The Hypertext Transfer Protocol (HTTP) supports serving up documents in the Hypertext Markup Language (HTML):
- HTML documents include links to other web documents.
- Web documents can also include forms to pass data from the user to the web server.
- HTTP can serve any type of document.
- The Multipurpose Internet Mail Extensions (MIME) specification defines a canonical naming convention for documents of various media.

HTTP Request

- The following is the request generated by Internet Explorer when the URL was <http://www.yahoo.com>

HTTP Method

Request-URI

Protocol
version

GET <http://www.yahoo.com/> HTTP/1.0

Accept: image/gif, image/x-bitmap, image/jpeg,
application/vnd.ms-excel, application/vnd.ms-
powerpoint, application/msword,application/x-
shockwave-flash, */*

Accept-Language: en-us

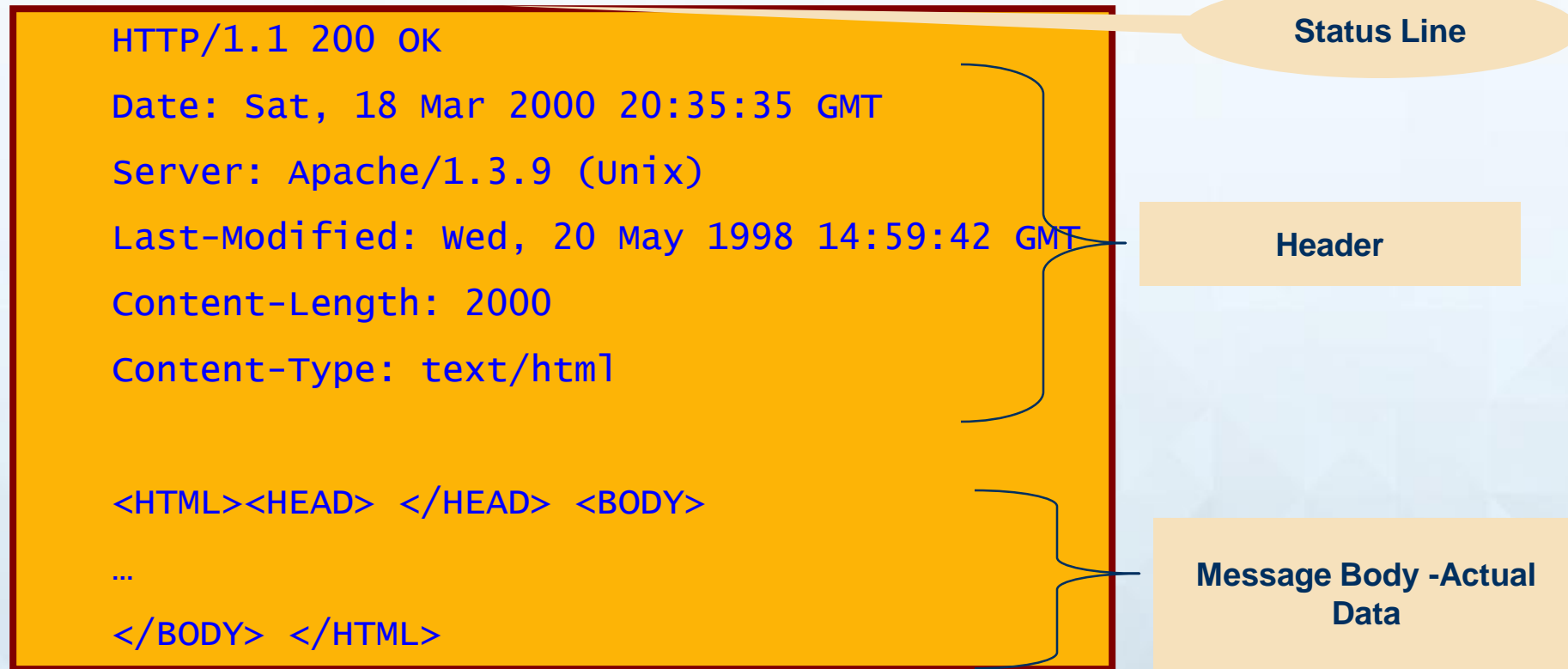
User-Agent: Mozilla/4.0(compatible; MSIE 6.0;
Windows NT 5.1)

Host: www.yahoo.com

Header

HTTP Response

- The server processes the request and sends a Response
- The following is an example of a response



Http protocol methods

Http Methods

Get

- Get is the default method
- The GET method means retrieve whatever information (in the form of an entity) is identified by the Request-URI
- Get Method is Idempotent
- Get method carry only 266 characters at a time

Post

- In post method Data is not Visible
- You can send huge amount of data through post method

Static Page Vs Dynamic Page

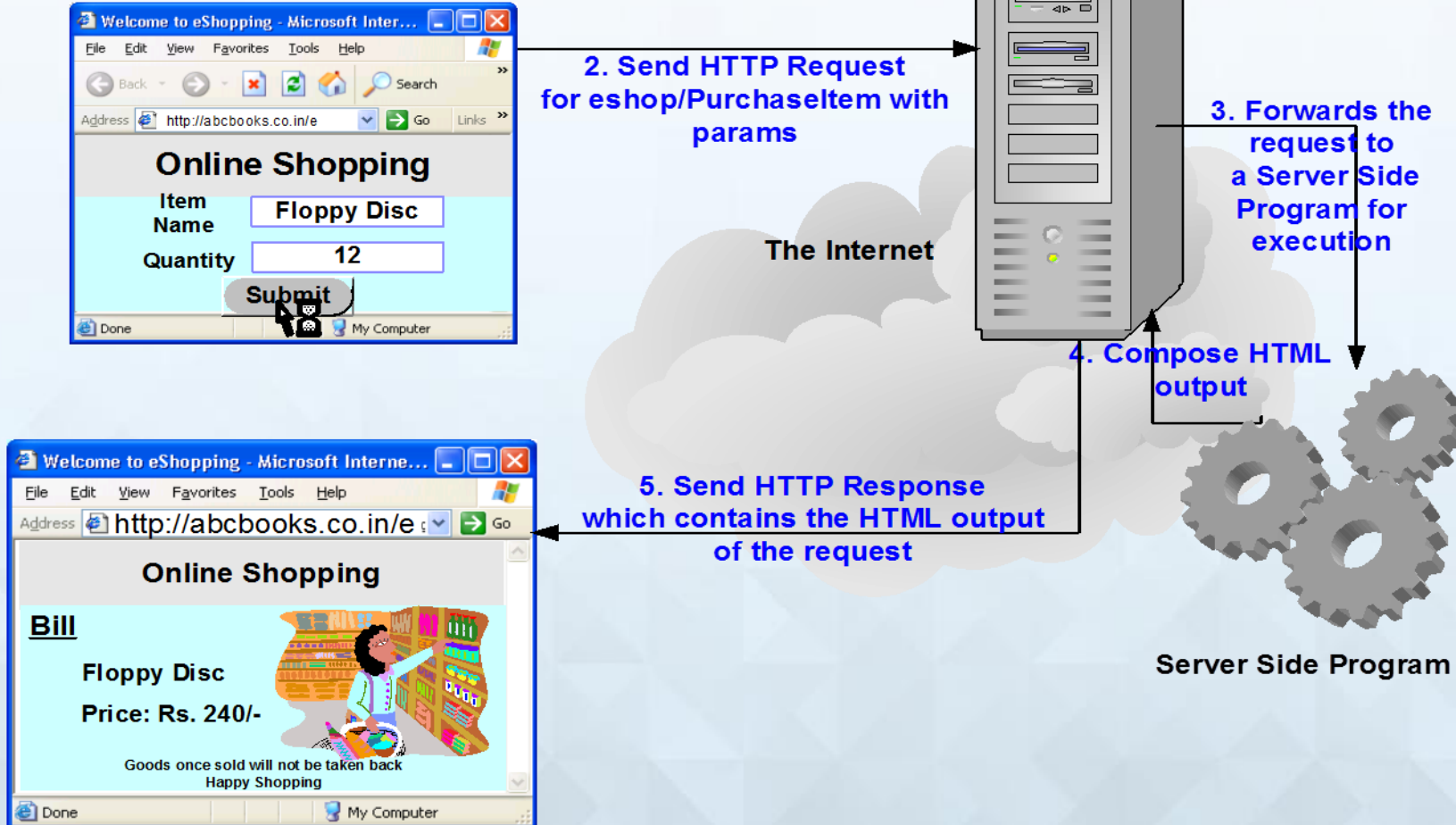
From the web, we get static pages as well as dynamic pages

Static Page	Dynamic Page
Can be created and stored in web server in advance as HTML file.	Can NOT be created and stored in web server in advance as HTML file.
Static page does not change with user and/or time.	Dynamic page changes as per the user and/or time.
For delivery of static page, all we require at server side, HTML files in Web Server.	For delivery of dynamic page, apart from Web Server, we require program to generate dynamic content.

The software component that runs the server side program to generate the dynamic content is known as the Web Container

Generation of Dynamic Pages

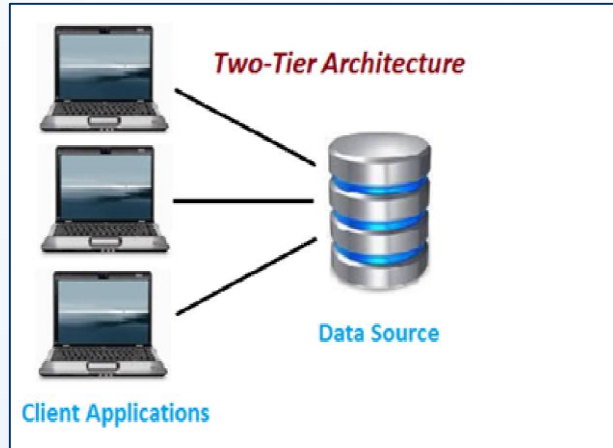
1. User Submits Form and resultant URL:
[http://abcbooks.co.in/eshop/
PurchaseItem?iname=Floppy+Disc&qty=12](http://abcbooks.co.in/eshop/PurchaseItem?iname=Floppy+Disc&qty=12)



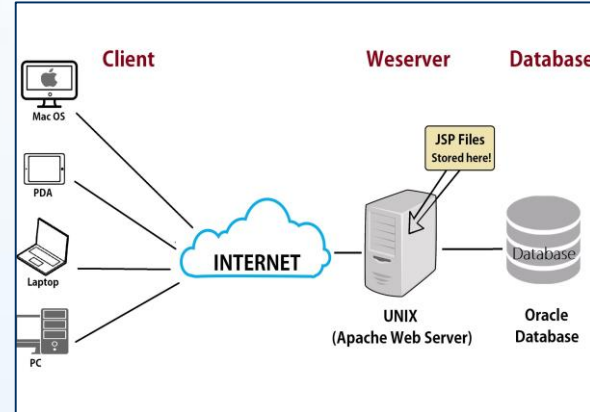
Packet Travel - Video

<https://www.youtube.com/watch?v=O7CuFIM4V54>

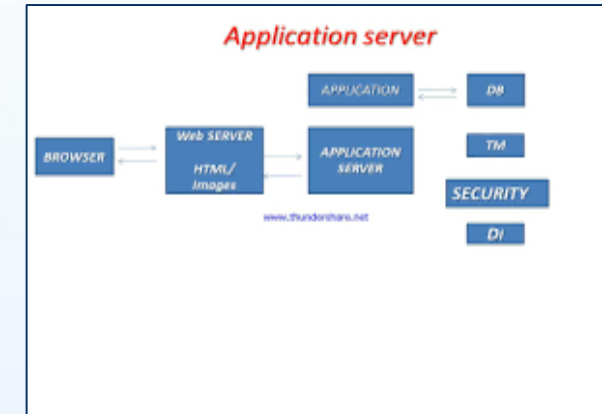
Types of servers



Database Server



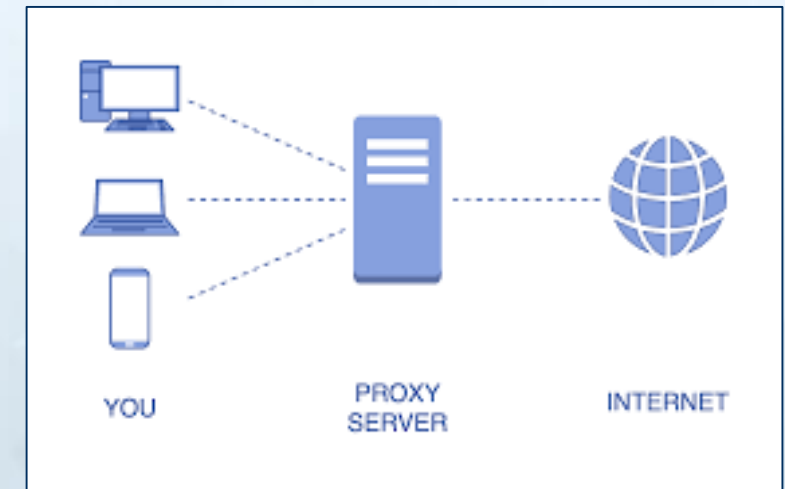
Web Server



Application Server



Mail Server



Proxy Server



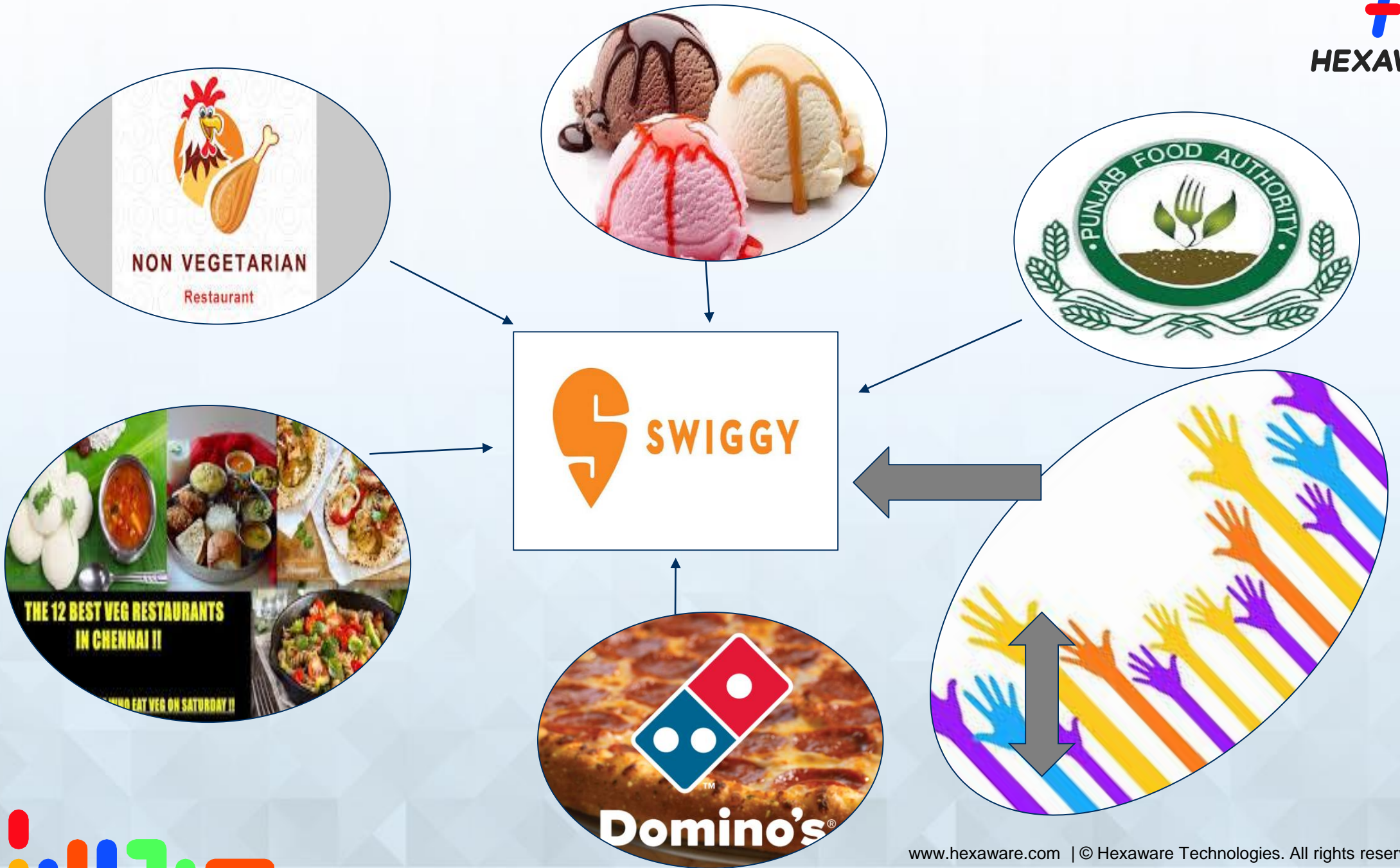
Web Services



Web Service

- Web service is a technology to communicate one programming language with another.
- Web service provides a way to achieve interoperability.
- For example:

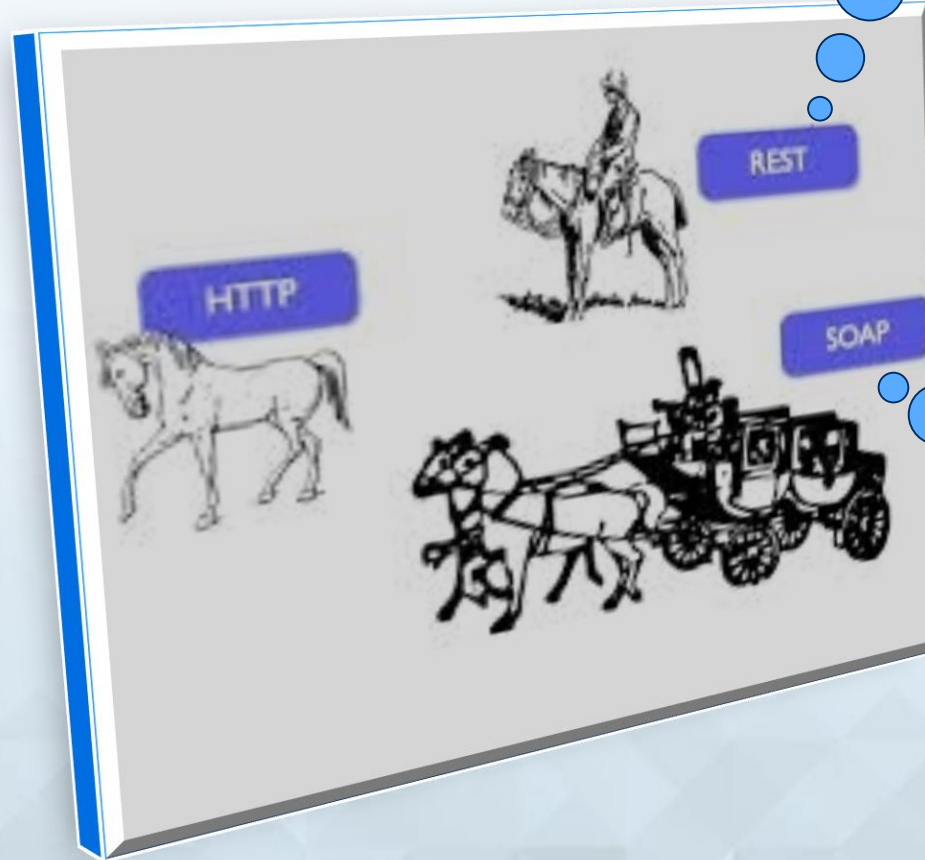
Java programming language can interact with PHP and .Net by using web services.



Types of Web Services

- There are mainly two types of web services
 - SOAP web services.
 - RESTful web services.

Rides directly on HTTP. Plain and simple.



The coach is the soap. It wraps the data to be carried.

SOAP Vs REST



No.	SOAP	REST
1)	SOAP is a protocol.	REST is an architectural style.
2)	SOAP stands for Simple Object Access Protocol.	REST stands for REpresentational State Transfer.
3)	JAX-WS is the java API for SOAP web services.	JAX-RS is the java API for RESTful web services.
4)	SOAP permits XML data format only.	REST permits different data format such as Plain text, HTML, XML, JSON etc.

SOAP Vs REST



No.	SOAP	REST
1)	SOAP OverHead with its Head body and other Info.	REST will pass only the data
2)	In SOAP it is easy to specify the contracts using xsd and wsdl	In REST it is possible from wsdl 2.0 (supporting for mobile application)
3)	SOAP will follow the WS – standards(security ,Transaction Management etc..)	You have to develop your own code for non functional requirements
4)	SOAP permits XML data format only.	REST permits different data format such as Plain text, HTML, XML, JSON etc.



Innovative Services

Passionate Employees

Delighted Customers

Thank you

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