MERN Stack Training / Web Full Stack / Javascript Full Stack

Duration: 140 hours

MongoDB: NoSQL Database to maintain the data

Express.js: Backend services

React.js: Frontend

Node.js: Runtime environment

Contents:

* Applications
* Fundamentals of Computer Programming
* Algorithms & Pseudocode
* Linux
* Git & Git Hub
* HTML
* CSS
* Javascript & Typescript
* React.js
* Node.js
* Express.js (REST Api’s)
* MongoDB
* DevOps

Applications: They are computer programs which can perform tasks for the users, there are 2 types of applications

1. Standalone
2. Distributed

Standalone applications: These are applications which you can used only after running in the machine

Two types

* Desktop based: This can be installed on your desktop
* Mobile based: This can be installed on your mobiles

ex: Word document, Mobile based applications

Distributed applications: These are the applications which you can access over the internet

ex: Banking services, Twitter, Facebook, Gmail, Food Ordering Systems, Shopping cart applications

How do we access distributed applications

We can access them using Browser or Client applications

Browser: It is an application which helps to enter URL and use the distributed application

Client applications: These are the applications that can internally use the URL to access distributed application

ex: Mobile applications, ATM machine programs, Swiping Machines programs

URL: Uninform Resource Locator, it is a name given to the applications to easily access it, in real time the applications use IP address & Port numbers, but users can’t remember it hence, URL will be given

Browser:

Browser is an application which helps to access any websites through URL, there are many browsers

1. Google Chrome
2. Edge
3. Mozilla
4. Opera
5. Older browsers like
   1. World wide web browser
   2. Mosaic
   3. Internet explorer

Distributed Applications:

These are the applications that can be accessed over the internet, these applications will be running in some remote machines, there are mainly 2 types of Distributed applications

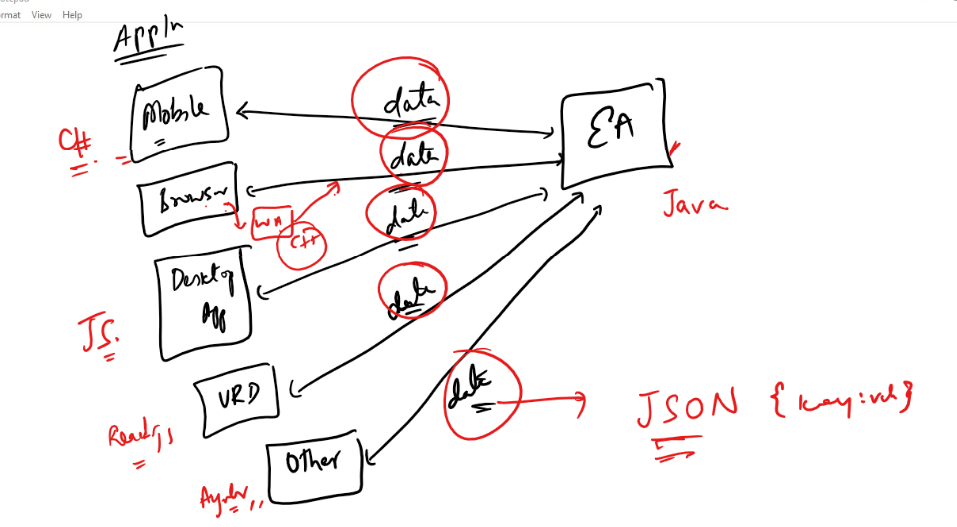
1. Web applications
2. Enterprise wide applications

Web application:

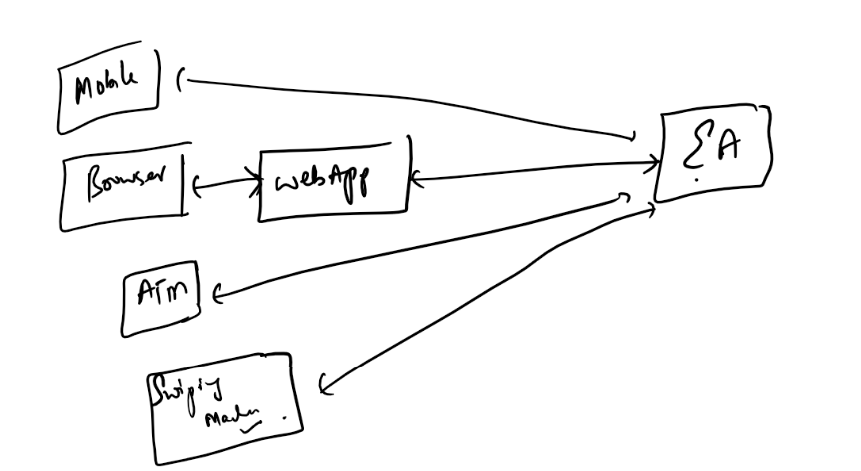
A web application takes request from the browser & returns the response in the format the browser understands i.e., HTML, CSS & Javascript

Enterprise application:

These are business related applications which can serve various types of applications written in different languages.



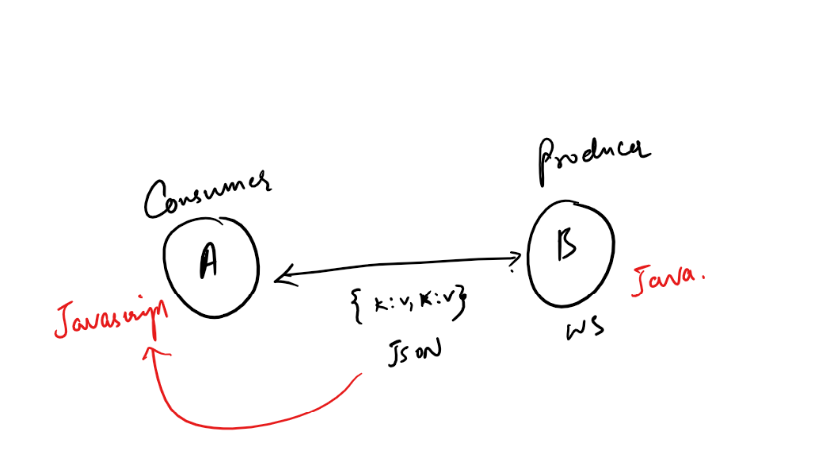
The enterprise application return data in a format which every application can convert to their respective types, suppose Java wants to share data to C#, then Java wouldn’t share data in Java instead it shares in one common format JSON that will be converted to C# by C# applications, same can be converted to Javascript by Javascript applications, same can be converted to Python by Python applications.



How does these enterprise applications share/exchange data to other applications

Enterprise applications will have webservices (ReST based Webservices) to share the data to any applications.

REST WebServices: These are online services or API’s which are made available on the internet so that any applications can use their URLs to consume the data, usually data will be in JSON format which is converted to the format the consuming application is written in



What are the common formats the webservices can use to share the data

1. JSON (More widely used): Easy to understand & maintain hence its used widely almost 99.9% of the time
2. XML
3. TEXT
4. HTML