Name : G. Nithish

Reg No. : 19BCS0012

Course : Open Source Programming

Code : CSC1006

Solt : A1

Date : 3/7/2022

Recent Web development in terms of languages, Frameworks, architecture etc.

Web development:

- Web development is the work involved in developing a website for the internet or an Intranet.
- Web development can range from developing a simple single static page of plain text to complex web applications, electronic businesses & social network services.

Languages:-

Due to a combination of requirements, Popularity & historical accident, certain Programming languages have become especially associated with web development, rather than with desktop applications.

Such Programming languages fall into two broad categories:-

- Client-side Languages:
- Server-side Languages.

Client - Side languages:

- Files written in client-side languages are sent directly to web browsers, which interpret the files & display the content to end-User of a website.

Server - side languages:-

- Server side languages are Programming languages that are used to build web applications that run on the server.

Client - side languages:-

If we are doing any type of client-side web or front-end development work, You will likely be using the following languages.

- HTML - Hyper Text Markup Language
- CSS - Cascading Style Sheet
- Js - JavaScript.

HTML → Hyper Text Markup Language.

- Website pages & documents are written in HTML, which consists of base content Combined with inter-linear tags that Provides semantic information about the content they enclose.

CSS → Cascading Style Sheet

- CSS provides a set of detailed instructions to the browser (or a printer) about how the content of an HTML document should be displayed. CSS include details like font declerations, sizing, color, on page Placements, and layering precedence.

Js - JavaScript:

- Javascript is a scripting language that can be used to provide rich web interaction inside a browser. Js is event-driven, responding to actions taken by the user (such as clicking, mousing, hovering & typing).

- JavaScripts have full access to the document structure of their associated web pages.

Server-Side languages:-

- Almost any Programming Language (C#, Objective-C, etc) can be used to build server-side applications, but a handfull of specific languages have come to be especially popular for doing so.
- Some of them were designed for Web (PHP, Asp) while others began as general-purpose languages that have been extended with a set of standardized tools for doing web development.
  - Java
  - PHP
  - Perl
  - Python
  - Ruby
  - Asp

JAVA :-

- Java is a general-purpose object-oriented language used for desktop, web, embedded applications on a wide variety of platforms.

- It has been used as a client-side Scripting language, but this requires a browser plugin so it is no longer common.

PHP

- Php - Hypertext preprocessor - is the most popular sewer-side Scripting language in the world.

- PHP is behind the most popular Content management system like Word Press, Drupal, Joomla & Mediawiki.

Perl

- Perl is a high-level Programming language that's easier to learn when compared with Python.

- Perl is a family of two high-level Programming languages. General-Purpose, Interpreted, dynamic Programming languages.

Python :-

Python is a Popular general-Purpose object-oriented Programming language that is excellent for Shell scripting & Popular for others uses among the type of People who really get into shell scripting.

Ruby :-

- Ruby is an interpreted, high-level, general-Purpose Programming language which supports multiple Programming Paradigms.

- It was designed with an emphasis on Programming Productivity and Simplicity.

Asp Language:-

- The Asp Programming language is used to code dynamic web Pages, Web Savices & applications.
- The term ASP is an acronym for Active Server Pages.

WED APPLICATION ARCHITECTURE

- The web Application architecture describes the interaction between Applications, database and middleware systems on the web.
- It ensures that multiple application work simultaneously. Let us understand it with a simple example of opening a webpages.
- A web application architecture has to not only deal with efficiency but also with reliability, Scalability Security, & Robustness.

Types of Web Application Architecture:-

A web application architecture is a pattern of interaction between various web application components. The type of web application architecture depends on how the application logic is distributed among the Client & Server Sides.

There are three Primary types of

- Web application architecture.

1) Single-Page Applications (SPAs)

- Instead of loading completely new Pages from the server each time for a user action, Single Page web applications allows for a dynamic interaction by means of providing updated content to the current Pages.

• AJAX, a concise form of Asynchronous JavaScript & XML is the foundation for enabling Page communications & hence making SPAs a Reality. Because single-Page applications prevent interruptions in user experience, they in a way, resemble traditional desktop applications

2. Microservices:-

• These are small & light weight services that execute a single functionality. The microservices Architecture framework has a number of advantages that allows developers to not only enhance productivity but also speed up the entire deployment process.

• The components making up an application build using the microservice Architecture aren't directly dependent on each other. As such they don't necessitate to be built using the same programming

34 Serverless Architectures:

- In this type of web application architetur. an application developer Consults a third party cloud infrastructure service provider for outsourcing servers as well as infrastructure management.

- The benefit of this approach is that it allows applications to execute the code logic without bothering with the infrastructure-related tasks.

- This serverless Architecture is best when the developmeat company doesn't want to manage or support the servers as well as the hardware they have developed the web application.