Q1 What is HTML?

Ans:- HTML is the standard markup language for creating web pages. HTML stands for Hyper Text Markup Language.

Q2 What is CSS?

Ans:- CSS stands for cascading style sheets. It is a style sheet language which is used to describe the look and formatting of a document written in Markup language.

Q3 What is JavaScript?

Ans:- An object oriented computer programming language commonly used to create interactive effects within web browsers.

Q4 What is C language?

Ans:- C is a mid-level and procedural programming language. The Procedural programming language is also known as the structured programming language is a technique in which large programs are broken down into smaller modules, and each module uses structured code. This technique minimizes error and misinterpretation.

It was initially developed by Dennis Ritchie between 1969 and 1973 at Bell labs.

Q5 What is C++?

Ans:- C++ is an object-oriented programming language created by Bjarne Stroustrup. It was released in 1985.

C++ is a superset of C with the major addition of classes in C language.

Q6 What is JAVA?

Ans:-Java is the high-level, object-oriented, robust, secure programming language, platform-independent, high performance, Multithreaded, and portable programming language. It was developed by James Gosling in June 1991. It can also be known as the platform as it provides its own JRE and API.

Q7 What is Servlet?

Ans:- Servlet is a class that extends the capabilities of the servers and responds to the incoming requests. It can respond to any requests.

Q8 What is JSP?

Ans:- Java Server Pages technology (JSP) is a server-side programming language used to create a dynamic web page in the form of HyperText Markup Language (HTML). It is an extension to the servlet technology.

Q9 What is Hibernate?

Ans:- Hibernate is an open-source and lightweight ORM tool that is used to store, manipulate, and retrieve data from the database.

Q10 What is Spring?

Ans:- It is a lightweight, loosely coupled and integrated framework for developing enterprise applications in java.

Q11 What is Spring MVC?

Ans:- A Spring MVC is a Java Framework which is used to develop dynamic web applications. It implements all the basic features of a core spring framework like Inversion of Control and Dependency Injection. It follows the Model-View-Controller design pattern.
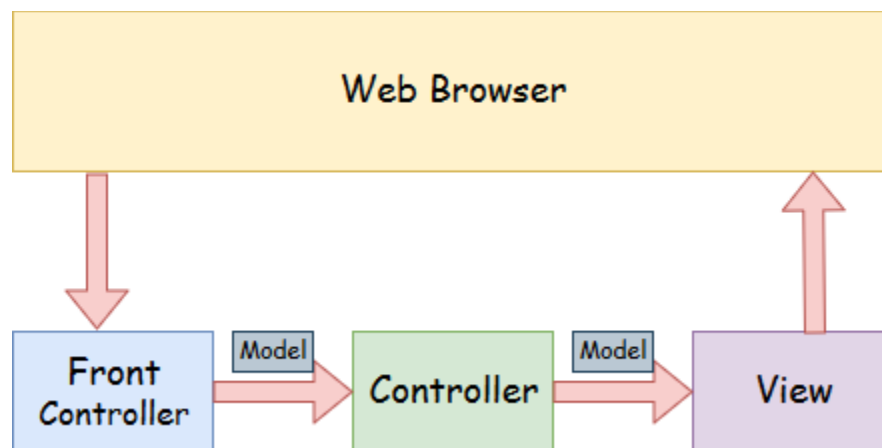

Here,

- o **Model** - A model contains the data of the application. Data can be a single object or a collection of objects.
- o **Controller** - A controller contains the business logic of an application. Here, the @Controller annotation is used to mark the class as the controller.
- o **View** - A view represents the provided information in a particular format. So, we can create a view page by using view technologies like JSP+JSTL, Apache Velocity, Thymeleaf, and FreeMarker.
- o **Front Controller** – In Spring web MVC, the Dispatcher Servlet Class Works as the front controller. It is responsible to manage the flow of the Spring MVC application.

Q12 What is MVC?

Ans:- The MVC (Model-View-Controller) is a software architectural design pattern. It separates the functionality of an application into three interconnected parts - Model, View, and Controller. This approach facilitates the reusability of the code and parallel development.

Q13 What is Spring Boot?

Ans:- Spring Boot is a framework that makes it easy to create stand-alone, production-grade Spring applications. It provides a number of features that make it easier to develop, test, and deploy Spring applications, such as auto-configuration, starter dependencies, and embedded servers.
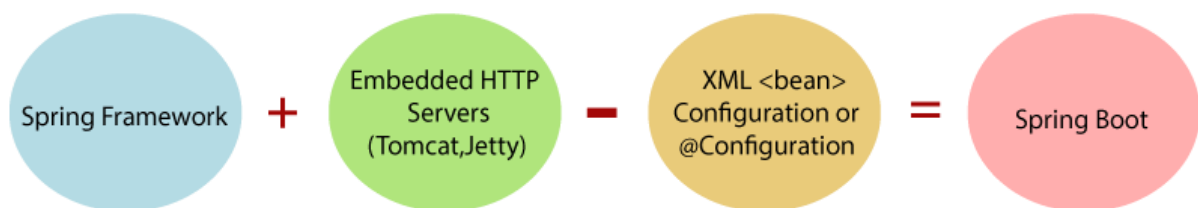
Q14 What is JPA(Java Persistence API)?

Ans:- Java Persistence API (JPA) is a Java Specification that provides certain functionality and standard to ORM tools. The javax.persistence package contains the JPA classes and Interfaces.

Q15 What is Spring Data JPA?

Ans:- It is a library/framework that adds an extra layer of abstraction on top of our JPA provider (like Hibernate). We can

use Spring Data JPA to reduce the amount of boilerplate code required to implement the data access object (DAO) layer.

Q16 What is ORM?

Ans:- ORM is an acronym for Object/Relational mapping. It is a programming strategy to map object with the data stored in the database. It simplifies data creation, data manipulation, and data access.

Q17 What is a Framework?

Ans:- A Framework is a group of predefined libraries, which comes with set of Jar files.

It is not a new technology but it is an abstraction layer on the top of existing technology.

Q18 What is XML?

Ans:- XML stands for extensible Markup language.

A metalanguage which allow users to define their own customized markup languages, specially in order to display documents on the internet.

XML is a markup language much like HTML.

Q19 What is JSON?

Ans:- JSON stands for JavaScript Object Notation.

JSON is a lightweight format for storing and transporting data.

JSON is often usen when data is sent from a server to a web page.

JSON is "self-describing" and easy to understand.

JSON is easy to read and write.

Q20 What is AJAX?

Ans:- AJAX stands for Asynchronous JavaScript and XML.

It is a group of inter related technologies used to display data asynchronously. In other words, it sends and retrieves data without reloading the whole page.

AJAX is not a programming language.

Exa:- Gmail, Facebook, YouTube, Google doc etc.

Q21 What is Maven?

Ans:- Maven is a powerful *project management tool* that is based on POM (project object model). It is used for projects build, dependency and documentation.

Q22 What is a Design Pattern?

Ans:- A design patterns are well-proved solution for solving the specific problem or task.

Design patterns are formalized best practices that the programmer can use to solve common problems when designing an application or system.

Q23 What is a web application?

Ans:- A web application is an application accessible from the web. A web application is composed of web components like Servlet, JSP, Filter, etc. and other elements such as HTML, CSS, and JavaScript. The web components typically execute in Web Server and respond to the HTTP request.

Web Terminology

Servlet Terminology	Description
Website: static vs dynamic	It is a collection of related web pages that may contain text, images, audio and video.
HTTP	It is the data communication protocol used to establish communication between client and server.
HTTP Requests	It is the request send by the computer to a web server that contains all sorts of potentially interesting information.
Get vs Post	It gives the difference between GET and POST request.
Container	It is used in java for dynamically generating the web pages on the server side.
Server: Web vs Application	It is used to manage the network resources and for running the program or software that provides services.
Content Type	It is HTTP header that provides the description about what are you sending to the browser.

HTTP Requests

HTTP Request	Description
GET	Asks to get the resource at the requested URL.
POST	Asks the server to accept the body info attached. It is like GET request with extra info sent with the request.
HEAD	Asks for only the header part of whatever a GET would return. Just like GET but with no body.
TRACE	Asks for the loopback of the request message, for testing or troubleshooting.
PUT	Says to put the enclosed info (the body) at the requested URL.
DELETE	Says to delete the resource at the requested URL.
OPTIONS	Asks for a list of the HTTP methods to which the thing at the request URL can respond

Get vs. Post

There are many differences between the Get and Post request. Let's see these differences:

GET	POST
1) In case of Get request, only limited amount of data **can be sent because data is sent in header.**	**In case of post request,** large amount of data **can be sent because data is sent in body.**
2) Get request is not secured **because data is exposed in URL bar.**	**Post request is** secured **because data is not exposed in URL bar.**
3) Get request can be bookmarked.	**Post request** cannot be bookmarked.

4) Get request is idempotent **. It means second request will be ignored until response of first request is delivered**	**Post request is** non-idempotent.
5) Get request is more efficient **and used more than Post.**	**Post request is** less efficient **and used less than get.**

Content Type

Content Type is also known as **MIME (Multipurpose internet Mail Extension)**Type. It is a **HTTP header** that provides the description about what are you sending to the browser.

Q24 Why study javascript?

Ans:- JavaScript is one of the 3 languages all web developers must learn :

1) HTML to define the content of web pages.
2) CSS to specify the layout of web pages.
3) JavaScript to learn the behaviour of web pages.

Q25 What is Angular? / What do you know about Angular?

Ans:- Angular is an open-source, JavaScript Framework which allows you to create reactive single-page web applications (SPAs).

It is developed and maintained by Google.

Q26 What is HTTP?

Ans:- The Hypertext Transfer Protocol (HTTP) is designed to enable communications between clients and servers.

HTTP works as a request-response protocol between a client and server.

Example: A client (browser) sends an HTTP request to the server; then the server returns a response to the client. The response contains status information about the request and may also contain the requested content.

HTTP Methods

- GET
- POST
- PUT
- HEAD
- DELETE
- PATCH
- OPTIONS
- CONNECT
- TRACE

The two most common HTTP methods are: GET and POST.

The GET Method

GET is used to request data from a specified resource.

The POST Method

POST is used to send data to a server to create/update a resource.

The PUT Method

PUT is used to send data to a server to create/update a resource.

The HEAD Method

HEAD is almost identical to GET, but without the response body.

The DELETE Method

The DELETE method deletes the specified resource.

The PATCH Method

The PATCH method is used to apply partial modifications to a resource.

The OPTIONS Method

The OPTIONS method describes the communication options for the target resource.

The CONNECT Method

The CONNECT method is used to start a two-way communications (a tunnel) with the requested resource.

The TRACE Method

The TRACE method is used to perform a message loop-back test that tests the path for the target resource (useful for debugging purposes).

Q27) What is Spring Security?

Ans: Spring security is a powerful access control framework. It aims at providing authentication and authorization to java applications. It enables the developer to impose security restrictions to save from common attacks.