collection of web pages.

Web - Application vs website.

→ Brower
→ Internet

collection of webpages → HTML

website → Static [content is fixed permanently] / Dynamic

HTML + Server-side- Technology ← Dynamic website.

→ JAVA
→ JAVASCript
→ Python
→ Ruby.

why we used server- side- technology ?

⇒ for the extra Space Storage, ⇒ [Dynamic.]
[database technology]

* ⇒ web- Application is always Dynamic in nature.

* without server-side technology, web-App. is not possible

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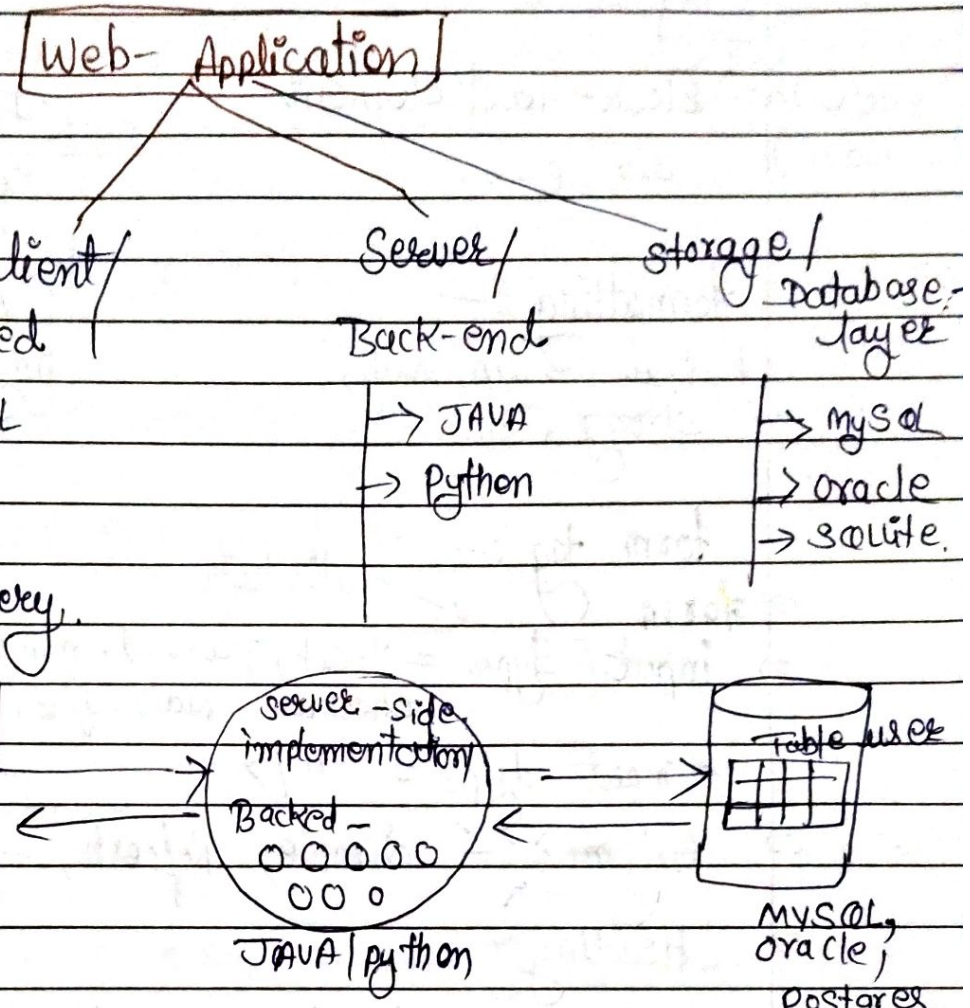

JavaScript :- Technology manages frontened, server-side implementation and Database.

HTML ⇒

Why :- It is used to create a structure of web-page

What :- It is Markup language. Stands for Hyper Text (Link) Markup (Tag) language.

How :-

HTML Tag :- <> HTML Element <start-tag> Content </closing-tag>

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Tag :-

Block-level element (By default width size 100%)
div, p ---.

Inline element (wrap-content)
span, small, label, input ----.

formatting :-
b, i, u, sup, sub, strong, em ---.

Media :-
img, vedio, audio.

form tag :-
⇒ form (attribute)
⇒ input [type = "text, password, number, email, checkbox, radio, file, color, button"]
<input type = "" />
⇒ button :- Simple, Refresh, ---.

⇒ Heading
Large, H1, H2, H3, ---- H6 ← small

⇒ Header,
⇒ footer,
⇒ Main, Section, article, nav
⇒ Link :-
a
⇒ Table :-
Table, Thead, tbody, tfoot, tr, th, td.

⇒ Listing :-
ol, ul, li, dl.

interview que...

Q. Margin in box model, in paragrap
By default 16.

Q. Can we convert block-level ele to inline, inline to block-level ele.

⇒ yes, we can do with the help of CSS property

SEO Search engine optimization.

strong bold. <b>
↓ ↓
Text has special meaning, you want to highlight — Only Text

  [A ² + B ²]
H_2O. $A^2 + B^2$

H₂O

unorderlist orderlist
 Item   Item 1

<dl></dl>
<dt></dt>
<dd></dd>

"./images/teddy.jpeg"

"../../images/teddy.jpeg"

* <marquee>welcome</marquee> ⇒ flowing Text

* <form>
<input type="text" placeholder="~~Password~~ enter username" />

</br>

* input type="number" placeholder="Enter age" min="18" max="30" />

JAVA <input type="checkbox" value="JAVA" />

* Male <input type="Radio" value="male" name="gender" />
* <input type="date" />

* <select>
<option> select qualification </option>
<option> Doctoration </option>
<option> PG </option>

</select>

* <input type="Submit" value="Submit" />

<!-- -->

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* CSS :- Cascading Style Sheet
Types to write CSS.

1) Inline CSS :- Scope :- Current Tag

2) Internal CSS :- Scope :- Current Page/current HTML Document.

3) External CSS :- Scope :- Current Application

* CSS Selector :- we apply CSS on HTML tags with the help of CSS Selector.

(1) Universal SELECTOR :- (*) Example :-

```
*{
    color : red;
}
```

(2) Id Selector :- (#)

```
#{
    color : red;
}
```

3. Class Selector :- (.)

```
.textColor{
    color: red;
}
```

4. Group SELECTOR :- (,)

```
h1, h2{ color : red;
}
```

5. nth child Selector

```
container div : nth-child(even)
{
}
```

6. PSuedo Class Selector.

7. Attribute selector :-

8. Tag Selector :-

Coz it refers current tag.

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- Inline CSS (Bad Problem code redundancy)

<div style="color: red;> .....

- Internal CSS

<head>
<style>
p{
color: green;
}
</style>

</head>

 ...

Generally it written in <head> </head> tag.

Id Selector is used to give unique styling.

~~# Id Selector.~~

# <style>
~~# paragraph-color~~{
color: green;
}
</style>
 ...

(•) class Selector.

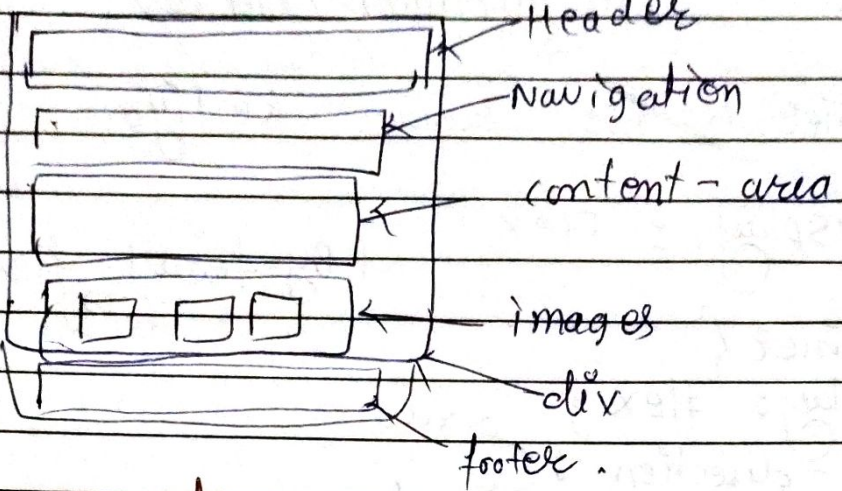
<style>
• paragraph-color {
color: green;
}
</style>
 ...

Ak Hi HTML tag per multiple CSS apply karni ho To Hum class (•) selector use karenge.

Height of div is auto (wrap-content) but div is block-level

1vh (viewport height)

Structure of web-page ...



Properties :-

(1) Position :-
- Absolute (According to parent)
- Relative (self)
- fixed. (According to viewport)
- ~~String~~ sticky

Moving
Top
Left
Right
Bottom.

(2) Z-Index :- (upar lakar anne ke liye div ko, when overlapping)

```
z-index : 1;
```

- Container div : nth-child(4){
  z-index : 1;
  }

(3) Center :-

```
Position: absolute
top : 50%
left : 50%;
transform : translate (-50%, -50%
```

we do flex instead of this

flex :- To maintain child div.

Container ko flex banane keliye

⇒ display : Flex (By default flex direction is row)

```
Container {
  display: flex;
  flex-direction :
}
```

flex-direction → row
flex-direction → column
flex-direction → row-reverse
flex-direction → column-reverse

depends on flex-direction:
- Justify-content :
- align-items :

Justify-content → center
Justify-content → space-around
Justify-content → space-between
Justify-content → space-evenly.

align-items → horizontally
align-items → vertically.

forcefully implementation :-

! Important

Bootstrap

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Bootstrap :- Bootstrap is a popular and open-source framework for building responsive and mobile-first websites. It provides pre-designed CSS, JAVAScript components, and utility classes to quicky create modern & consistent user-interface.

It provides :- pre-built responsive grid-systems, wide range of UI Components (buttons, modals, navbars) & built-in support for responsive, typography, spacing & utilities

(1) Bootstrap Layout :-

it built on a flexible-grid Layout that adjust seamlessly to different screens. it uses 12-Column grid System to create responsive designs.

- Breakpoints.
- Containers
- Grid
- Column
- Gutters
- Utilities
- Z-index

(2) Bootstrap Content :- Range of classes to enhance and structure content. It includes typography classes for heading, paragraphs & text alignment, as well as helper classes for spacing and text-colors

- Reboot
- Imgges
- figures.
- Typography
- Tables

Bootstraps forms :- It includes classes for forms controls like text inputs, select menus, checkboxes.

- forms
- Range
- Form Controls
- Input groups
- Select
- floating labels
- check and Radios
- form Layout
- Horizontal form
- validation

Bootstrap Components :- pre-defined components to streamline UI development. It includes buttons, cards, modals, navbars, and more

- Badges
- Card
- modals
- Breadcrumb.
- Caroussel
- Navbar .....
- Buttons
- Collapse
- Button group
- Drop-downs

Bootstrap Helpers :- Bootstraps helpers are utility classes for that simplify common tasks & improve readability.

- clearfix
- visually Hidden
- Colored links
- Stretched link
- Ratios
- Text Truncation
-

Bootstrap Utilities :- They are small, reusable classes that provide additional functionality & Control. They include classes for spacing, alignment, borders & background - Colors

- Background
- Borders
- Colors
- Display
- Flex
- Float
- Position
- Shadows
- Sizing
- Spacing
- Text
- visibility
- vertical align.

Features of Bootstrap :-

- Grid System
- forms
- Buttons
- Navigation
- Alerts
- Images.

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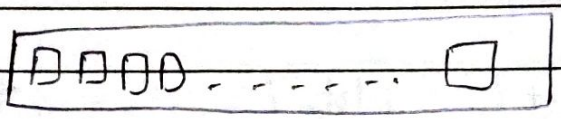
⇒ "Grid System"

Bootstrap Classes

- .Container / .Container-fluid
  - [it does not provide 100% width, gives it left some margin]
  - [it cover 100% width from left or right]
  - .row (12-column)
    - .Column.




```
<div class="Container">
  <div class = "row">
    <div class = "Column col-4"></div>
    <div class = "col-4"></div>
    <div class = "col-4"></div>
  </div>
</div>
```

[it creates three colum in horizontal line]

Break Points :- (Screen changed then colum width is take 100% width)

```
<div class = "col-md-4"></div>
```

lg ⇒ large screen size.
md ⇒ medium
small ⇒ small. (By default).

Classes :-

- text-white
- d-flex
- pr ⇒ Padding right
- pt ⇒ Padding Top
- pb ⇒ Padding bottom
- pL ⇒ Padding Left.

"Bootstrap4 Library"

Pom.xml
dependency ... then add Pom.xml

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JDBC [Hybi Hibernate]

- **model ⇒**
  Java class, present the data.

- **DAO ⇒**
  to perform database operations,

insert / create, delete / Remove, update ? If data Consistency is there

⇒ By default
⇒ auto_commit
⇒ True ;

Solution
we have to handle transcation handling

Rollback → commit

There is no need of transaction handling in "Select" Operation

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executeQuery - returns resultset

Before first is the default position of resultset.

Type of ResultSET :-

(1) TYPE_FORWARD_ONLY. (By default)

(2) TYPE_SCROLLABLE_INSENSITIVE

(3) TYPE_SCROLLABLE_SENSITIVE

Interview Q ⇒ ?

Q. Can TYPE_FORWARD_ONLY moves forward in direction

Ans ⇒ Cant Say., (but yes)
it depends on implementation, which provided by Database developer.

```
pre...sta... ps = con.prepare..stat-(sql, ResultSet.
                                    TYPE_FORWARD_ONLY);
```

ResultSET methods :-

1) next ( )
2) getString ( )
3) getInt ( )
4) getBoolean( )
5) beforeFirst ( ) ← direction before first directly — return void (it sets the position)
6) isBeforeFirst ( ) → boolean return karega.
7) afterLast ( )
8) isafterLast ( ) ← current position se 3 niche.
9) absolute (3); } set Cursor direction. ⇒ default position before first
10) Relative (3); } position.

current position se 3 Niche

ResultSet :- represents the data retrieved from a database after executing a SQL query (usually a select statement).

Result set

"TYPE_FORWARD_ONLY"

1) Moves in forward direction (from top to bottom)
2) cannot go back to previous row.
3) This is default type of resultSET.
4) fatest & less-memory consuming

ResultSET. TYPE_FORWARD-ONLY
ResultSet. CONCUR_READ-ONLY.

TYPE_SCROLL_INSENSITIVE

1) Both forward & Backward direction.
2) jump to any row. (first, last, absolute, relative).

Insensitive means → if the database data changes after the ResultSet is created, these changes are not reflected in this resultset

ResultSet. TYPE_SCROLL_INSENSTTVE.

"TYPE_SCROLL_SENSITIVE"

1) Can both forward & Backward direction

2) Senitive means → if the underlying database data changes, these changes are reflected in the resultset.

ResultSet. TYPE_SCROLL_SENSITIVE

Concurrency Mode :-

each ResultSET type can be used with two concurrency mode.

(1) CONCUR_READ-ONLY (only read)

(2) CONCUR_UPDATABLE (update, insert, delete)

" Database ke changes Reflect nahi honge "

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- **Insensitive :-** insensitive to database changes.

ek bar ka resultset banne ke bad, database me koi changes hote he to bhi, vo changes resultset me nahi, dikhai dete hai.

- **Sensitive :-** Sensitive to database changes.

○ opposite of sensitive
○ it reflects the changes
○ when we again call (rs.getString("name"), than all changes seen. in resultset.