Thought Note

Here, I am creating three pages with Bootstrap File. All the html file are given Below: -

HTML File
1. Index.html
2. Style.css
3. Script.js

Structure of Index.html while creating this file

1. **Document Type and Language Declaration**:

   - The document is declared as HTML5 (**<!DOCTYPE html>**).

   - The language is set to English (**<html lang="en">**).

2. **Head Section**:

   - Meta tags for character encoding and viewport settings are included.

   - The title of the webpage is set to "JavaScript Calculator".

   - Links to external Bootstrap CSS and custom CSS files are provided for styling.

   - Script tags for external JavaScript files are included with the **defer** attribute, ensuring they are executed after the HTML content is parsed.

3. **Body Section**:

   - The body contains the main content of the webpage.

4. **Header Section**:

   - Displays the title of the calculator in a centered heading (**<h1>**).

5. **Main Content Section**:

   - Contains input fields for entering two numbers and selecting an operator.

   - Utilizes Bootstrap grid system for layout with responsive design.

   - Includes a dropdown for selecting the operator, which reveals checkboxes upon interaction.

   - Provides a submit button for calculating the result.

   - Displays the result in a read-only input field.

Structure of Style.css while creating this file

- **Checkbox Label Hover Styling**: Changes the background color to #1e90ff and applies a border-radius of 20px when hovering over checkbox labels, enhancing their visual appearance on interaction.

- **Checkbox Tick Mark Styling**: Defines the appearance of the tick mark when a checkbox is checked. It creates a red diagonal line resembling a checkmark using CSS transformations.

- **Checkbox Styling**: Adjusts the line-height of checkboxes for better alignment within the layout.

- **Radio and Checkbox Input Types Styling**: Moves radio and checkbox input types off-screen while still making them accessible for screen readers.

- **Checkbox Label Styling**: Sets the position to relative, allowing for absolute positioning of the tick mark. It also adjusts the padding and cursor to provide a better user experience.

Structure of Script.js while creating this file

1. **HTML Element References**: JavaScript variables are assigned references to various HTML elements using **document.getElementById** and **document.querySelectorAll**.

2. **Event Listener for Submit Button**: An event listener is added to the submit button, triggering a calculation based on the values of two input fields (numbers) and a selected operator. The result is then displayed in another input field.

3. **Function to Clear Result**: Defines a function to clear the result field when the number inputs change.

4. **Function to Toggle Visibility of Checkboxes**: Controls the visibility of checkboxes by adjusting their container's width and toggling CSS classes.

1. **Function to Update Selected Operator**: Updates the selected operator in the dropdown menu based on checkbox selections. It also disables other checkboxes when one is selected and clears the result field. Additionally, it toggles the 'selected' class on corresponding labels.