**CALCULATOR**

**HTML Elements:**

* **Text Input (<input>)**:  
  Acts like the calculator screen. Whatever button you press, its value is shown here.
* **Buttons (<button>)**:  
  These are the calculator buttons (numbers, operators, clear, delete, equals, etc.).

**Button Functions (Described Without Code):**

1. **Numbers & Operators (e.g., 7, +, /)**  
   When you click on these, their value is **added to the display**.
2. **Clear Button (C)**  
   Erases everything in the display — like starting fresh.
3. **Delete Button (Del)**  
   Removes **just the last character** you entered. Useful for fixing mistakes.
4. **Equal Button (=)**  
   Calculates the expression shown in the display and shows the **final answer**.
5. **Decimal Point (.)**  
   Lets you add decimal values, like 3.14 or 0.5.

**How It Works (Internally):**

* Every button click is tied to a **JavaScript function** that updates the screen or performs an action.
* When you press =, it evaluates (calculates) the string you typed (like "8\*5" becomes 40).
* Special functions like "clear" and "delete" control what shows up in the display.

**CSS FILE:**

**Layout Details:**

**Body styling:**

* **Centering the calculator** on the screen both **horizontally and vertically**.
* Uses a colorful **background gradient** (from green to yellow).
* Removes default margin for a clean look.

**.calculator box:**

* This is the **main container** of the calculator.
* **Rounded corners**, **padding**, and a **box shadow** make it look like a card.
* Background has a **color gradient** from **yellow to red**, giving it a vibrant look.

**Display screen (#display):**

* Acts like a calculator screen.
* Positioned at the top, slightly bigger text for better visibility.
* Aligned **right**, like most physical calculators.
* Has light background and inner shadow for a **raised look**.

**Button Grid (.buttons):**

* Arranged in a **grid layout** with 4 columns.
* Equal space (gap) between buttons for neat alignment.

**Individual Buttons (button):**

* Each button has:
  + **Rounded corners**
  + **Shadow effect** to make them look "pressable"
  + Gradient color fill (yellow to red)
  + Grows slightly lighter when hovered (hover effect)

**Special Zero Button (.zero):**

* The "0" button is **wider** — it spans across 3 columns instead of 1.
* Mimics typical calculator layout where "0" takes extra space.

**Final Effect:**

* The calculator is **centered**, stylish, touch-friendly, and gives off a **modern glassy gradient feel**, especially on hover or interaction.

**JavaScript File**

**display**

* This refers to the **input box** where numbers and results are shown.

**update(value)**

* This function **adds** the button's value (number or operator like +, -, \*, /) to the calculator screen.

**Example**:  
If you press 7, then +, then 3, it keeps adding to the screen like this:  
7+3

**clearDisplay()**

* It **clears everything** from the display — just like pressing "C" on a real calculator.

**deleteLast()**

* It removes the **last character** from the screen.

Example:  
If the display is 72+9, pressing delete gives 72+

**calculate()**

* It **performs the calculation** of the expression shown (like 7+3 becomes 10).
* Uses eval() to evaluate the math expression.
* If something goes wrong (like invalid input), it shows **"Error"**.