****Full Description Report on the Advanced Calculator Project****

This report provides an overview of the files contained in the "MultipleFiles" folder related to the Advanced Calculator project. The project consists of HTML, CSS, and JavaScript files that work together to create a functional and visually appealing calculator application.

### ****1. HTML File:**advanced caculator.html**

* ****Purpose****: This file serves as the structure of the calculator application.
* ****Key Features****:
  + ****DOCTYPE Declaration****: Specifies the document type and version of HTML.
  + ****Head Section****: Contains metadata, character set, viewport settings, title, and links to external CSS stylesheets.
  + ****Body Section****:
    - Contains a **div** for the calculator with an accessible role and label.
    - Displays the current input/output in a **div** with the ID **display**.
    - Contains buttons for numbers, operations, and functions (like clear, backspace, voice input, etc.).
    - Uses ARIA attributes for accessibility.

### ****2. JavaScript File:**advanced calculator.js**

* ****Purpose****: This file contains the logic and functionality of the calculator.
* ****Key Features****:
  + ****IIFE (Immediately Invoked Function Expression)****: Encapsulates the code to avoid polluting the global scope.
  + ****Variables****:
    - **display**: References the display element.
    - **currentInput**: Stores the current input string.
    - **lastResult**: Stores the last calculated result.
    - **speechVolume** and **isMuted**: Manage voice output settings.
  + ****Functions****:
    - **updateDisplay(value)**: Updates the display with the current value.
    - **factorial(n)**: Calculates the factorial of a number.
    - **calculate(expression)**: Evaluates mathematical expressions safely.
    - **appendInput(value)**: Appends input to the current input string and updates the display.
    - **clearInput()**: Resets the calculator.
    - **backspace()**: Removes the last character from the input.
    - **performFunction(action)**: Executes mathematical functions (like square root, sine, etc.).
    - **printInvoice()**: Generates and opens an invoice based on the current calculation.
    - **voiceInput()**: Implements speech recognition for input.
    - Event listeners for button clicks to handle user interactions.

### ****3. CSS File:**advanced calculator.cs**

* ****Purpose****: This file styles the calculator application to enhance its visual appearance.
* ****Key Features****:
  + ****Basic Reset****: Resets box-sizing for all elements.
  + ****Body Styles****: Sets the font, background color, and layout properties.
  + ****Calculator Styles****:
    - Uses gradients for backgrounds and buttons.
    - Applies padding, border-radius, and shadows for a modern look.
    - Defines styles for buttons, including hover and active states.
  + ****Responsive Design****: Media queries adjust styles for smaller screens, ensuring usability on mobile devices.

### ****4. Workspace File:**advanceed calculator.code-workspace**

* ****Purpose****: This is a workspace configuration file, likely for a code editor like Visual Studio Code.
* ****Key Features****:
  + Contains settings and configurations for the workspace, allowing for a tailored development environment.

### ****Summary of Technologies Used****

* ****HTML****: Provides the structure and layout of the calculator, ensuring accessibility and usability.
* ****CSS****: Enhances the visual presentation of the calculator, making it user-friendly and aesthetically pleasing.
* ****JavaScript****: Implements the core functionality, allowing for calculations, user interactions, and voice input features.

This report summarizes the components and technologies used in the Advanced Calculator project, highlighting the purpose and functionality of each file. The combination of HTML, CSS, and JavaScript creates a comprehensive and interactive calculator application.