Test Cases for Simple Calculator Application

Test Case 1: Addition of Two Positive Numbers

- **Test Case ID:** TC-001
- **Test Description:** Verify that the calculator correctly adds two positive numbers.
- **Preconditions:** Calculator application is open.
- **Test Steps:**
    1. Enter `5` as the first number.
    2. Enter `+` as the operator.
    3. Enter `10` as the second number.
    4. Click the `=` button.
- **Expected Result:** The result displayed is `15`.

Test Case 2: Subtraction of a Positive and Negative Number

- **Test Case ID:** TC-002
- **Test Description:** Verify the calculator subtracts a negative number from a positive number.
- **Preconditions:** Calculator application is open.
- **Test Steps:**
    1. Enter `20` as the first number.
    2. Enter `-` as the operator.
    3. Enter `-5` as the second number.
    4. Click the `=` button.
- **Expected Result:** The result displayed is `25`.

Test Case 3: Multiplication of Decimals

- **Test Case ID:** TC-003
- **Test Description:** Verify multiplication of two decimal numbers.
- **Preconditions:** Calculator application is open.

- **Test Steps:**
    1. Enter `2.5` as the first number.
    2. Enter `*` as the operator.
    3. Enter `4.2` as the second number.
    4. Click the `=` button.
- **Expected Result:** The result displayed is `10.5`.

Test Case 4: Division by Zero

- **Test Case ID:** TC-004
- **Test Description:** Verify that the calculator handles division by zero appropriately.
- **Preconditions:** Calculator application is open.
- **Test Steps:**
    1. Enter `10` as the first number.
    2. Enter `/` as the operator.
    3. Enter `0` as the second number.
    4. Click the `=` button.
- **Expected Result:** An error message is displayed (e.g., "Division by zero error").

Test Case 5: Handling Non-Numeric Inputs

- **Test Case ID:** TC-005
- **Test Description:** Verify that non-numeric characters are not accepted as valid inputs.
- **Preconditions:** Calculator application is open.
- **Test Steps:**
    1. Enter `A` as an input.
    2. Attempt to perform any operation.
- **Expected Result:** The calculator displays an error or does not allow the input.

Test Case 6: BODMAS Rule Application

- **Test Case ID:** TC-006
- **Test Description:** Verify that the calculator applies BODMAS (Bracket, Order, Division, Multiplication, Addition, Subtraction) rule.
- **Preconditions:** Calculator application is open.
- **Test Steps:**
    1. Enter the expression `2 + 3 * 4`.
    2. Click the `=` button.
- **Expected Result:** The result displayed is `14` (Multiplication performed before Addition).

Test Case 7: Addition of Negative Numbers

- **Test Case ID:** TC-007

- **Test Description:** Verify the addition of two negative numbers.

- **Preconditions:** Calculator application is open.

- **Test Steps:**

  1. Enter -3 as the first number.

  2. Enter + as the operator.

  3. Enter -7 as the second number.

  4. Click the = button.

- **Expected Result:** The result displayed is -10.