**Design Test Plan for Calculator Program**

**1. Introduction:**

This Design Test Plan outlines the testing strategy and comprehensive details to ensure the Calculator Program functions as intended, both in terms of core functionality and user interface design. The plan covers various aspects, including functionality, usability, and performance of the calculator.

**2. Test Plan Identifier:**

- Version: 1.0

- Date: 24/02/2024

- Author: Mitul Das

**3. References:**

List any documents, such as requirements specifications, design documents, and user manuals, that are relevant to this test plan.

**4. Test Items:**

These are the items that will be tested under this plan:

- Basic arithmetic operations (addition, subtraction, multiplication, division)

- Advanced functions (if applicable, such as square root, exponentiation)

- User interface elements (buttons, display screen, error messages)

- User experience aspects (ease of use, intuitiveness)

- Performance metrics (calculation speed, responsiveness)

**5. Features to be Tested:**

Detail the features of the calculator that will undergo testing:

- Accuracy of calculations for all supported operations

- Responsiveness and visual feedback of UI elements

- Error handling and messaging

- Compliance with design specifications (color scheme, button size, font, layout)

- Performance under normal and peak loads

**6. Features Not to be Tested:**

Specify any features or components that are out of scope for this testing phase, if any.

**7. Approach:**

Describe the overall approach to testing:

- Functional Testing: To verify that all mathematical operations perform correctly.

- UI Testing: To ensure the calculator's interface matches design specifications and provides a good user experience.

- Performance Testing: To assess the application's responsiveness and stability under various conditions.

**8. Item Pass/Fail Criteria:**

Define specific criteria for passing or failing each test case, such as:

- Calculation results must match expected values with a defined tolerance for rounding.

- UI elements must conform to design specifications (size, color, positioning).

- All operations must be completed within a maximum acceptable response time.

**9. Suspension Criteria and Resumption Requirements:**

Outline the criteria for pausing the test and the conditions for resuming.

**10. Test Deliverables:**

List the documents and tools that will be delivered as part of the testing process, including:

- Test cases and scripts

- Test results and reports

- Defect logs and issue tracking reports

- Test summary report

**11. Testing Tasks:**

Identify specific tasks required to prepare for and execute the testing, such as:

- Setting up the testing environment

- Creating and reviewing test cases

- Executing test cases

- Logging defects

- Analyzing test results

**12. Environmental Needs:**

Specify the hardware, software, and network configurations required for the testing environment.