Task-01: “Write Test Cases for a Simple Calculator Application”

Test Cases

Test Case ID	Test Description	Preconditions	Test Steps	Expected results
TC001	Addition of two positive integers	Calculator is open	Input: 5 + 3	Output: 8
TC002	Subtraction of two positive integers	Calculator is open	Input: 3 - 5	Output: -2
TC003	Multiplication of two positive integers	Calculator is open	Input: 2.5 * 4.2	Output: 10.5
TC004	Division of non-zero denominator	Calculator is open	Input: 10 / 2	Output: 5
TC005	Division by zero	Calculator is open	Input: 10 / 0	Error message: Cannot divide by zero
TC006	Complex expression using BODMAS	Calculator is open	Input: 2 + 3 * 4	Output: 14
TC007	Invalid input: letters instead of numbers	Calculator is open	Input: a + b	Error message: Invalid input
TC008	Adding a negative and positive number	Calculator is open	Input: -3 + 7	Output: 4
TC009	Subtracting two decimal numbers	Calculator is open	Input: 7.5 – 2.3	Output: 5.2
TC010	Invalid input: special characters	Calculator is open	Input: @ + #	Error message: Invalid input
TC011	Multiple operations chained	Calculator is open	Input: 5 + 3 – 2 *4	Output: 0
TC012	Multiply by zero	Calculator is open	Input: 45 * 0	Output: 0
TC013	Very large number addition	Calculator is open	Input: 9999999 + 1	Output: 10000000
TC014	Multiple decimal operations	Calculator is open	Input: 1.5 + 2.5 – 0.5	Output: 3.5
TC015	Empty Input	Calculator is open	Input is blank	Error message: Input is not provided

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Conclusion:

These test cases cover both valid and invalid scenarios for a simple calculator application. By executing them, we can verify the calculator’s core functionality(addition, subtraction, division, multiplication) and ensure it handles edges cases like division by zero and invalid inputs gracefully.

This ensures that the application is not only functionally accurate but also user-friendly, reliable, and error-resilient under expected inputs.

Demo site: