Team 2

Calculatorator

Test Case

Version 1.0

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Revision History

Date	Version	Description	Author
<dd/mmm/yy>	<x.x>	<details>	<name>
12/09/2024	1.0	Add test cases	Riley Anderson

Table of Contents

Test Case

1. Purpose

This Test Case Specification document for the <Project Name> defines a test case for an item that should be tested.

[The sections of the test case specification shall be ordered in the specified sequence. Additional sections may be included at the end. If some or all of the content of a section is in another document, then a reference to that material may be listed in place of the corresponding content. The referenced material must be attached to the test case specification or available to users of the case specification.].

NOTE: for sections 2, 3, 4, and 5: It is OK to use a table like the one proposed in class, also suggested on the project part 5 description.

2. Test case identifier

Specify the unique identifier assigned to this test case.

3. Test item

Identify and briefly describe the items and features to be exercised by this test case.

For each item, consider supplying references to the following test item documentation:

a) Requirements specification

b) Design specification

c) Users guide

4. Input specifications

Specify each input required to execute the test case. Some of the inputs will be specified by value, while others, such as constant tables or transaction files, will be specified by name. Identify all appropriate databases, files, terminal messages, memory resident areas, and values passed by the operating system. Specify all required relationships between inputs.

5. Output specifications

Specify all of the outputs and features required of the test items. Provide the exact value for each required output or feature.

Test ID#	Description	Test Input	Expected Output	Actual Output	Pass / Fail
TC01	Test simple addition (positives)	3 + 5	8	8	P
TC02	Test simple addition (negatives)	-3 + -5	-8	-8	P
TC17	Test addition plus a negative number	-4+2	-2	-2	P

TC03	Test simple subtraction (positives)	18 - 14	4	4	P
TC04	Test simple subtraction (negatives)	-15 - -20	5	5	P
TC05	Test multiplication (positives)	7 * 3	21	21	P
TC06	Test multiplication (negatives)	-5 * -5	25	25	P
TC07	Test division (even positives)	36/6	6	6	P
TC08	Test division (fractional positives)	20/15	1.3333	1.3333	P
TC09	Test division (even negatives)	-80/-40	2	2	P
TC10	Test division (fractional negatives)	-6/-30	-0.2	-0.2	P
TC15	Test modulo (positive)	70%4	2	2	P
TC18	Test modulo (negative)	114%-10	-4	-4	P
TC19	Test exponentiation (positive)	5**2	25	25	P
TC20	Test exponentiation (negative, positive result)	-1**8	1	1	P
TC21	Test exponentiation (negative, negative result)	-1**7	-1	-1	P
TC22	Test exponentiation (positive to negative power)	10**(-2)	0.01	0.01	P
TC23	Parenthesis grouping / precedence	10 + (2*10)	30	30	P
TC24	Parenthesis grouping / precedence	(10 + 2)*10	120	120	P
TC25	Exponentiation precedence	6 + 2**2	10	10	P
TC26	Unary operator	-(12+6)	-18	-18	P
TC27	Divide by 0	7/0	Error	Div by 0 err	P
TC28	Open parenthesis	(42+8	Error	Error	P
TC29	Lone closed parenthesis	36+4)	Error	Error	P
TC30					

6. Environmental needs

6.1.1 Hardware *(nothing particular for the arithmetic expression project)*

Specify the characteristics and configurations of the hardware required to execute this test

6.1.2 Software *(nothing particular for the arithmetic expression project)*

Specify the system and application software required to execute this test case. This may include system software such as operating systems, compilers, simulators, and test tools. In addition, the test item may interact with application software.

6.1.3 Other

Specify any other requirement.

7. Special procedural requirements

Describe any special constraints on the test procedures that execute this test case. These constraints may involve special set up, operator intervention, output determination procedures, and special wrap up.

8. Intercase dependencies

List the identifiers of test cases that must be executed prior to this test case. Summarize the nature of the dependencies.