

CONCORDIA UNIVERSITY



SOEN-6011 Software Engineering Processes

SCIENTIFIC CALCULATOR

DELIVERABLE 3 (D3)

Problem 5 & 7

GitHub : <https://github.com/san089/SOEN-6011>

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1 Problem 7: Testing

1.1 Project Details

Below are the details about project.

Table 1: Module 2 - $\tan(x)$

| | |
|-----------------|----------------------------------|
| Project Name | Scientific Calculator |
| Module Name | $\tan(x)$ |
| Developed By | Anusha Keralapura Thandavamurthy |
| Development End | 29-July-2019 |
| Tested By | Sanchit Kumar |
| Testing End | 01-August-2019. |

1.2 Testing Detailed Report

1.2.1 $\cos(x)$ Testing Reports

- **TEST CASE ID** : TC1
TYPE : Functional
DESCRIPTION : $\cos(x)$ value test.
INPUT : 0.7853975
EXPECTED RESULT : 0.7071072502792262
ACTUAL RESULT : 0.7071072502792262
TEST RESULT : PASS
- **TEST CASE ID** : TC2
TYPE : Functional
DESCRIPTION : $\cos(x)$ value test.
INPUT : 0
EXPECTED RESULT : 1
ACTUAL RESULT : 1
TEST RESULT : PASS
- **TEST CASE ID** : TC3
TYPE : Functional
DESCRIPTION : $\cos(x)$ value test.
INPUT : 3.14159
EXPECTED RESULT : -1.0

ACTUAL RESULT : -1.0000000035255
TEST RESULT : FAIL

1.2.2 $\sin(x)$ Testing Reports

- **TEST CASE ID** : TC4
TYPE : Functional
DESCRIPTION : $\sin(x)$ value test.
INPUT : 0.7853975
EXPECTED RESULT : 0.7071072502792262
ACTUAL RESULT : 0.7071072502792262
TEST RESULT : PASS
- **TEST CASE ID** : TC5
TYPE : Functional
DESCRIPTION : $\sin(x)$ value test.
INPUT : 0
EXPECTED RESULT : 0
ACTUAL RESULT : 0
TEST RESULT : PASS
- **TEST CASE ID** : TC6
TYPE : Functional
DESCRIPTION : $\sin(x)$ value test.
INPUT : 3.14159
EXPECTED RESULT : 0
ACTUAL RESULT : 2.65306088421985E-6
TEST RESULT : FAIL
- **TEST CASE ID** : TC7
TYPE : Functional
DESCRIPTION : $\sin(x)$ value test. Test for accuracy.
INPUT : 6.28320000000000000001
EXPECTED RESULT : 0.00001469
ACTUAL RESULT : -0.0010335410874021851
TEST RESULT : FAIL

1.2.3 $\tan(x)$ Testing Reports

- **TEST CASE ID** : TC8
TYPE : Functional

DESCRIPTION : $\tan(x)$ value test.
INPUT : 39
EXPECTED RESULT : 0.809783081231065
ACTUAL RESULT : 0.809783081231065
TEST RESULT : PASS

- TEST CASE ID** : TC9
TYPE : Functional
DESCRIPTION : $\tan(x)$ value test.
INPUT : 0
EXPECTED RESULT : 0
ACTUAL RESULT : 0
TEST RESULT : PASS

- TEST CASE ID** : TC10
TYPE : Functional
DESCRIPTION : $\tan(x)$ value test.
INPUT : 225
EXPECTED RESULT : 1
ACTUAL RESULT : 0.999993366047522
TEST RESULT : FAIL

- TEST CASE ID** : TC11
TYPE : Functional
DESCRIPTION : $\tan(x)$ value test.
INPUT : 315
EXPECTED RESULT : -1
ACTUAL RESULT : -1.0000092876074058
TEST RESULT : FAIL

1.2.4 $\tan(x)$ Negative Values Testing Reports

- TEST CASE ID** : TC12
TYPE : Functional
DESCRIPTION : $\tan(x)$ negative value test.
INPUT : -64
EXPECTED RESULT : -2.0502989318619114
ACTUAL RESULT : -2.0502989318619114
TEST RESULT : PASS

- TEST CASE ID** : TC13
TYPE : Functional

DESCRIPTION : $\tan(x)$ negative value test.
INPUT : -45
EXPECTED RESULT : -1
ACTUAL RESULT : -0.9999986732059835
TEST RESULT : FAIL

- TEST CASE ID** : TC14
TYPE : Functional
DESCRIPTION : $\tan(x)$ negative value test.
INPUT : -180
EXPECTED RESULT : 0
ACTUAL RESULT : 0
TEST RESULT : PASS

1.2.5 $\tan(x)$ Decimal Values Testing Reports

- TEST CASE ID** : TC15
TYPE : Functional
DESCRIPTION : $\tan(x)$ decimal value test.
INPUT : 66.8
EXPECTED RESULT : 2.333168462359474
ACTUAL RESULT : 2.333168462359474
TEST RESULT : PASS
- TEST CASE ID** : TC16
TYPE : Functional
DESCRIPTION : $\tan(x)$ decimal value test.
INPUT : 11111111111111111111.9999999999999999
EXPECTED RESULT : 0.62486935
ACTUAL RESULT : Program Not Responding
TEST RESULT : FAIL
- TEST CASE ID** : TC17
TYPE : Functional
DESCRIPTION : $\tan(x)$ decimal value test.
INPUT : 89.999999
EXPECTED RESULT : 57295779.814
ACTUAL RESULT : 743910.253181
TEST RESULT : FAIL

1.3 Test Results Summary

Table 2: Test Summary

| TEST CASE ID | STATUS | IMPACT |
|--------------|--------|--------|
| TC1 | PASS | - |
| TC2 | PASS | - |
| TC3 | FAIL | Minor |
| TC4 | PASS | - |
| TC5 | PASS | - |
| TC6 | FAIL | Minor |
| TC7 | FAIL | Minor |
| TC8 | PASS | - |
| TC9 | PASS | - |
| TC10 | FAIL | Major |
| TC11 | FAIL | Major |
| TC12 | PASS | - |
| TC13 | FAIL | Major |
| TC14 | PASS | - |
| TC15 | PASS | - |
| TC16 | FAIL | Major |
| TC17 | FAIL | Major |