CONCORDIA UNIVERSITY

SOEN-6011 Software Engineering Processes

SCIENTIFIC CALCULATOR

DELIVERABLE 3 (D3)

Problem 5 & 7

GitHub : `https://github.com/san089/SOEN-6011`

Author: Sanchit Kumar(40081187)

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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   : 6.2832000000000000001
  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 : 1111111111111111111111.99999999999999999
  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