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SOEN 6011 : SOFTWARE ENGINEERING PROCESSES
SUMMER 2021

SUPER CALCULATOR

PROBLEM - 2
Requirements
ISO/IEC/IEEE 29148 Standard

Authors

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PROBLEM 2 - F2: $tan(x)$

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Repository address : https://github.com/Dakatsu/SOEN6011Calculator

PROBLEM 2 - F3: Hyperbolic Sine, $sinh(x)$

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Repository address : https://github.com/Dakatsu/SOEN6011Calculator

PROBLEM 2 - F*

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Repository address : https://github.com/Dakatsu/SOEN6011Calculator

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Repository address : https://github.com/Dakatsu/SOEN6011Calculator

Requirements and Assumptions

[1][2]

The current section describes the requirements and assumptions to implement the function x^y.

Explicit Assumption : The transcendental function x^y will be accurate and accepts input which comprises of rational and irrational numbers.

Requirement Id : F7-R1

Overview	X(0) to the power of Y(0)
Version	1.0
Description	If the user gives an input for X as Zero and input for Y as Zero. The function may return the 1 as output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R2

Overview	X(0) to the power of Y (Positive Numbers)
Version	1.0
Description	If the user gives an input for X as zero and input for Y as any positive Number. The function may return zero as output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R3

Overview	X(0) to the power of Y (Negative Numbers)
Version	1.0
Description	If the user gives an input for X as zero and input for Y as any Negative Number.The function may return infinity as output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R4

Overview	X(Positive Number) to the power of Y (0)
Version	1.0
Description	If the user gives an input for X of any positive number and input for Y as Zero.The function may return 1 as the output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R5

Overview	X(Negative Number) to the power of Y (0)
Version	1.0
Description	If the user gives an input for X of any negative number and input for Y as Zero.The function may return -1 as the output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R6

Overview	X(Negative Number) to the power of Y (Positive or Negative Number)
Version	1.0
Description	If the user gives an input for X as any negative number and input for Y as positive or negative number. The function may return negative number as the output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R7

Overview	X(Positive Number) to the power of Y (Positive or Negative Number)
Version	1.0
Description	If the user gives an input for X as any positive number and input for Y as positive or negative numbers. The function may return positive number as the output.
Owner	Manimaran Palani
Priority	High
Type	Functional
Difficulty	Medium
Verification Method	

Requirement Id : F7-R8

Overview	Availability
Version	1.0
Description	The system may provide the response with output to the user within finite time.
Owner	Manimaran Palani
Priority	High
Type	Non-Functional
Difficulty	Medium
Verification Method	

Bibliography

[1] ReqView : Nykamp DQ: Requirements Specification Templates
`https://www.reqview.com/doc/iso-iec-ieee-29148-templates`

[2] 29148-2018-ISO/IEC/IEEE International Standard-Systems and software engineering-Life cycle processes-Requirements engineering,
`https://standards.ieee.org/standard/29148-2018.html`