

Deliverable-2
Problem-6

User Story 1:-

ID:	US-1
Statement:	As a normal user I want a desktop application of Scientific Calculator having a graphical user interface So that I can perform calculations for my research area
Acceptance Test:	Given that I am in role of a normal user When i run the desktop application, the GUI should be displayed on the screen
Priority:	Medium
Estimate:	20
Constraint:	The application should be compatible on different operating systems

User Story 2:-

ID:	US-2
Statement	As a normal user I want to Use the Golden Ratio constant in the calculator So that I can use the golden ratio value for computation
Acceptance Test:	Given that I am in a role of user When i click on the ϕ button, Calculator GUI should display 1.618 value on the screen
Priority:	High
Estimate:	40
Constraint:	The application should be scalable to add new irrational constant in future if needed

User Story 3:-

ID:	US-3
Statement	As a normal user I want to perform addition of two numbers So that I can view the result of addition of the given numbers
Acceptance Test:	Given that I am in a role of a normal user When i enter two numbers and, click on '+' symbol on GUI and click on '=', the result of addition of two number should be displayed on screen
Priority:	Medium
Estimate:	15
Constraint:	The application should be able to calculate the result in milliseconds

User Story 4:-

ID:	US-4
Statement	As a normal user I want to perform Subtraction of two numbers So that I can view the result of subtraction of the given numbers
Acceptance Test:	Given that I am in a role of user When i enter two numbers and, click on '-' symbol on GUI and click on '=', the result of subtraction of two number should be displayed on screen
Priority:	Medium
Estimate:	15
Constraint:	The application should be able to calculate the result in milliseconds

User Story 5:-

ID:	US-5
Statement	As a normal user I want to perform Multiplication of two numbers So that I can view the result of Multiplication of the given numbers
Acceptance Test:	Given that I am in a role of user When i enter two numbers and, click on '*' symbol on GUI and click on '=', the result of multiplication of two number should be displayed on screen
Priority:	Medium
Estimate:	15
Constraint:	The application should be able to calculate the result in milliseconds

User Story 6:-

ID:	US-6
Statement	As a normal user I want to perform Division of two numbers So that I can view the result of Division of the given numbers
Acceptance Test:	1. Given that I am in a role of user When i enter two numbers and, click on '/' symbol on GUI and click on '=', the result of Division of two number should be displayed on screen 2. Given that I am in a role of user When i enter the second number as '0' and, click on '/' symbol on GUI and click on '=', the error message should be displayed on screen
Priority:	Medium
Estimate:	15
Constraint:	The application should be able to calculate the result in milliseconds

User Story 7

ID:	7
Statement	As a normal user I want to clear the screen so that the results can be cleared
Acceptance Test:	Given that I am in a role of user When I click on 'C' on the GUI, the screen should be cleared.
Priority:	low
Estimate:	10
Constraint:	The memory of the application should be conserved.

User Story 8

ID:	US-8
Statement	As a normal user I want to Calculate the value in golden ratio to an entered number so that I can use the values to create a golden rectangle
Acceptance Test:	Given that I am in a role of user When I enter a number and click on 'GR' button the value which is in golden ratio to given value should be displayed on screen
Priority:	high
Estimate:	40
Constraint:	The application should be able to calculate the result in milliseconds

Problem -7 Traceability Matrix

US Source	UC-1A	UC-2A	UC-2B	UC-2C	UC-2D	UC-3	UC-4	UC-5	Interview
US-1									X
US-2	X								X
US-3		X				X	X		
US-4			X			X	X		
US-5				X		X	X		
US-6					X	X	X		
US-7								X	
US-8									X

The below table has information about the Use Cases used in Traceability matrix:-

Use case Table

Use case ID	Use case Name
UC-1	Select Operand
UC-1A	Select Golden Ratio Constant
UC-2	Select Operator (Abstract)
UC-2A	Addition
UC-2B	Subtraction
UC-2C	Multiplication
UC-2D	Division
UC-3	Calculate Result
UC-4	Display Result
UC-5	Clear Screen