SOEN 6481

Software Requirement Specification

Summer 2019

Deliverable 2

Eternity: Numbers

Declaration

I have read and understood the Fairness Protocol and Communal Work Protocol, and agree to abide by the policies therein, without any exception under any circumstances, whatsoever.

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Problem 6. [70 Marks]

Identifier	EternityNumbers_01
Statement	As a user, I want my calculator to display the value of π till 15 decimal places
Constraint	-
Acceptance Criteria	Given that I have to determine the value of π . • I will press the button for π . • The value for π will be displayed till 15 decimal places i.e. $3.1415\ldots\ldots$.
Priority	Should Have
Estimate	Hour

Identifier	EternityNumbers_02
Statement	As a user, I should be able to calculate the circumference directly by just providing the radius of the circle as this is the most frequently used calculation in my field.
Constraint	Number entered by the user for the radius should not be negative.
Acceptance Criteria	Given that I have to calculate the circumference of a circle with radius 3. • I will press the button "CRF" . • I will press 3. • The result "18.84" ($2 * 3.14 * r$) will be displayed.
Priority	Must Have
Estimate	Hour

Identifier	EternityNumbers_03
Statement	As a user, I want my calculator to allow me to choose the precision of π so that I can use it as per my requirement.
Constraint	-
Acceptance Criteria	Given that I have to calculate the area of circle and this will use π . I should be able to choose the value of π up to 2 decimal places as it will give me the required result • While using the formula, I will press π . • I will press "C" to choose its precision. • I will choose 2 and therefore will get the value 3.14 that I can use to calculate the area.
Priority	Must Have
Estimate	Hour

Identifier	EternityNumbers_04
Statement	As a user, if I enter 2 or more operators consecutively, the operation performed should be of the last operator to enhance usability.
Constraint	There must be at least 2 operators occurring consecutively in the expression.
Acceptance Criteria	Given that I have entered 3-+3. The result should be calculated as 3+3 i.e. 6.
Priority	Must Have
Estimate	20 minutes

Identifier	EternityNumbers_05
Statement	My calculator should allow edition on the operator or operand of the current computation until the result is displayed.
Constraint	At least one operator or operand must be entered.
Acceptance Criteria	Given that I have to perform the following calculation "$3+4*2$" . • I will enter $3+4*2$. • Before pressing =, if I want to replace 4 with 5, I can do it.
Priority	Must Have
Estimate	Hour

Identifier	EternityNumbers_06
Statement	As a user, I want my calculator to keep a record of all the computations till the calculator is turned off.
Constraint	There must be at least one result for the record to exist.
Acceptance Criteria	- To open the record, press "R" . - Record empty 3+4=7(stored in record) 5+5=10(stored in record) 4-2=2(stored in record) - Press "R" . 7,10,2 - Calculator is turned off. - After turning on the calculator, press "R" . - Record empty.
Priority	Should Have
Estimate	Hour

Identifier	EternityNumbers_07
Statement	As a user, I want my calculator to give me an option to delete the record of the computation that I would not need.
Constraint	There must be at least 1 calculation in the record.
Acceptance Criteria	3+4=7(stored in record) 5+5=10(stored in record) Press "DEL" , (10 deleted from the record). 4-2=2(stored in record) - Press "R" . 7,2
Priority	Should Have
Estimate	Hour