

Software Engineering Project

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#1 Sprint Backlog

Scientific Programmable Calculator

User Stories

Priority Order

The priority order goes from value 1 to 6 where 1 is the highest priority and 6 the lowest.

ID	Description	Priority	Story points
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Basic Operations

A1.	As a user I want to add 2 complex numbers in order to calculate their sum	1	1
A2.	As a user I want to subtract 2 complex numbers in order to calculate the difference between them	1	1
A3.	As a user I want to multiply 2 complex numbers in order to calculate the product between them	1	1
A4.	As a user I want to divide 2 complex numbers in order to calculate the quotient between them	1	1
A5.	As a user I want to make the square root of a complex number	1	1
A6.	As a user I want to invert sign of a complex number	1	1
A7.	As a user I want to insert a number without his imaginary part if this one is equal to zero in order to execute operations with real numbers	1	1

Data Access

B1.	As a user I want to save entered numbers to use them in next operations	2	1
B2.	As a user I want to delete all saved numbers because they might be useless	2	1
B3.	As a user I want to delete the last saved number in case I don't need it	2	1
B4.	As a user I want to duplicate the last saved number	2	1
B5.	As a user I want to swap the last two entered numbers to invert their order in the next operation	2	2
B6.	As a user I want to pick the second last element saved	2	2

Graphical User Interface

G1.	As a user I want to interact with the calculator through a graphical interface so I can perform the operations in a more intuitive way	1	3
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Acceptance Criteria

Basic Operation

- A1. Given I've saved at least 2 complex numbers, when I press the "+" button or digit "sum" in the text area, then I want as result the sum between the last 2 saved numbers
- A2. Given I've saved at least 2 complex numbers, when I press the "-" button or digit "diff" in the text area, then I want as result the difference between the last 2 saved numbers
- A3. Given I've saved at least 2 complex numbers, when I press the "x" button or digit "prod" in the text area, then I want as result the product between the last 2 saved numbers
- A4. Given I've saved at least 2 complex numbers, when I press the "/" button or digit "div" in the text area, then I want as result the division between the last 2 saved numbers
- A5. Given there are some complex numbers saved, when I press the "rad" button or digit "rad" in the text area, then I want as result the square root of the last one saved
- A6. Given there are some complex numbers saved, when I press the "+/-" button or digit "invsign" in the text area, then I want as result the opposite of the last one saved
- A7. Given I'm a user who want to use real numbers in operations, when I want to insert numbers that have imaginary part equals to zero, then I can insert only the real part

Data Access

- B1. Given I've entered a complex number, when I press the "save" button, then I can memorize the value of this number
- B2. Given I've saved some numbers, when I press the "clear" button, then I can delete all saved numbers
- B3. Given I've saved a number, when I press the "del" button, then I can delete just the last number saved
- B4. Given I've saved a number, when I press the "dup" button, then I can duplicate the last number saved

- B5. Given I've saved at least 2 numbers, when I press the "swap" button, then I can invert the order of the last 2 saved numbers
 - B6 Given I've saved at least 2 numbers, when I press "csl" (copy second last) button, then I can have access to the second last element
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Graphical User Interface

- G1. Given I'm a user, when I open the Calculator Software, then I can perform the operations through a graphical interface
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Sprint Velocity

Estimated velocity for the first sprint: 18
