SOEN 6011- Software Engineering Processes

Eternity:Functions- x^y

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Overview

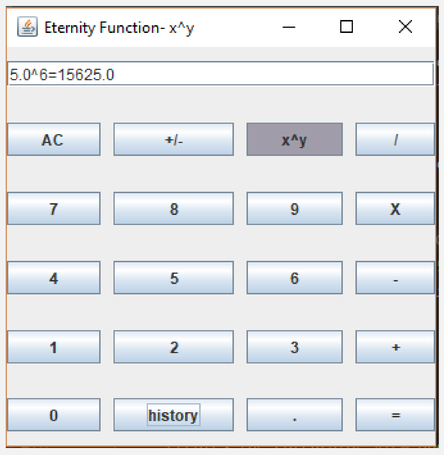
- Exponentiation[1] is a mathematical operation, written as x^y, involving two real numbers, the base x and the exponent or power y.
- When y is a positive integer, exponentiation corresponds to repeated multiplication of the base: that is, x^y is the product of multiplying y bases:

$$f(x, y) = x^y \tag{1}$$

1 is known as the Exponentiation function

$$x^y = x * \ldots * x \text{ (y times)} \tag{2}$$

2 is depicts the evaluation of exponentiation function



Lessons Learnt

- Automation does not replace manual testing
- Importance of Usability
- Everything takes longer than you think
- Accept criticism
- Make changes
- Ask and Clarify

Critical Decisions

- Requirements Elicitation
  - They should include all the features and functions the system should have.
  - They should also be free of any ambiguities.
  - Why: To avoid an undesirable result at the finish line.
- Algorithm[2] Selection
  - Select the best from a set of feasible algorithms
  - Why: Choosing the wrong algorithm will lead to decrease in overall performance.
  - Why: To achieve an elegant solution
- Enforcing Coding Style
  - Source code with multiple team members should look as if only one programmer wrote it.
  - Why: Avoid inconsistency
  - Why: Avoid headaches during code reviews.

Difficulties

- IDE compatibility[3]
- Comprehending Mathematical Concepts

Challenges

- Implementation of Algorithm
- Team Collaboration
- Following Common Coding Style[4]

Github Link

https://github.com/PrashanthiRamesh/SOEN-6011-Project-Calculator

References

[1] Wikipedia.
Exponentiation, 2019.

[2] Martin Ankerl.
Optimized pow() approximation for java, 2017.

[3] JetBrains.
Exporting an intellij idea project to eclipse, 2019.

[4] Joana Be.
Installing the google styleguide settings in intellij and eclipse, 2019.