Concordia University

Deliverable 2

EULER NUMBER

ETERNITY:NUMBERS

Repository Address: `https://github.com/ZinniaRana/Eternity_Numbers/tree/master/Deliverable2`

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ABSTRACT

From previous analysis of the interviews and what possible domain model and its Use Cases can be, it helped me focus on the main aspects of the User Stories. I did some research and figured out the requirements of user for the calculator and estimated the priority and time considering time constraints and implementation factors. The user stories are source from existing user stories and mainly external existing user stories. Below are the details of the user stories which helped me implement my calculator important features.

USER STORIES

0.1 User Story 1

Statement: As a Statistical Analyst, I want to calculate value of e base x to compute time taken to get a task done which will help me depict the graph distribution.
Constraints: Accuracy, Reusability
Acceptance Criteria:

- Correct precise value of e is returned
- Operations performed upon e must give precise answer upto 3 decimal places
- Time calculated must be precised upto 2 digits

Priority: Medium

Estimate: 3

0.2 User Story 2

Statement: As a research assistant, I want to save the result to use it in later calculations.
Constraints: Re-usability
Acceptance Criteria:

- Given any number pressed or result calculated, when press MM key, number saved in the memory should be equal to number displayed on screen.

Priority: High

Estimate: 1

0.3 User Story 3

Statement: As a research assistant, I want to calculate growth rate so that I can estimate software utilization over the period of time.
Constraints: Precision, Usability
Acceptance Criteria:

- Given that user press 'Op' to calculate growth formula.
  Then it prompts the user for input values in the equation.
  And then system evaluates the equation and displays the result.

Priority: High

Estimate: 2

0.4 User Story 4

Statement: As a Student, I want predefined operations in calculator so that I can just select which equation to calculate and input values to get final output
Constraints: Re-usability
Acceptance Criteria:

- Check the entered number for calculation is valid
- Check the expected output is accurate as expected.

Priority: High

Estimate: 2

0.5 User Story 5

Statement: As an Entrepreneur, I want to calculate probability of a particular instance occurring using Euler identity so that I can estimate the priority of implementing features.
Constraints: Precision, Extensibility
Acceptance Criteria:

- Output result needs to be checked whether it is precise.
- Need to check correct precise value of pi and e is returned.

Priority: Medium

Estimate: 4

0.6 User Story 6

Statement: As a Graduate Mathematics student, I want my calculator should contain e and pi to calculate Euler identity for probability solving questions.
Constraints: Extensibility, Re-usability
Acceptance Criteria:

- Correct precise value of pi returned.
- Operations feasible with pi and other mathematical constants.
- Result displayed should match precision decimal points user entered.

Priority: Medium

Estimate: 5

BACKWARD TRACEABILITY MATRIX

	Use Case	User Story	Interview	External
User Story 1		X		
User Story 2		UC 1		
User Story 3				X
User Story 4	X			
User Story 5				X
User Story 6	US 5			

CONCLUSION

After analyzing the user requirements and what features they want to be implemented in the calculator, I have chosen three highest priority user stories for implementing my calculator features, keeping time constraints into account.

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