

# COMP 354 - Summer 2021

## ETERNITY Calculator Project Organization

### Summary

Team I

# Initial Project Meeting

- ▶ Deciding the technology and language for ETERNITY

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- ▶ Breakdown of team members' skills, tasks and responsibilities

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- ▶ Breakdown of team members' skills, tasks and responsibilities
- ▶ Organization of future meetings and communication
  - ▶ Discord

# Initial Project Meeting

Breaking the project down into sub-tasks and task allocation based on skills and knowledge.

- ▶ Lead/ project GitHub Repository organizer
- ▶ Documentation
- ▶ Fullstack Developer
- ▶ Backend Developer
- ▶ Frontend Developer
- ▶ Communication and resources

# Roles

**Lead/ project repository:** Robert

**Documentation:** Xavier, Sobhan

**Fullstack:** Chelsie

**Backend:** Elijah

**Frontend:** Michael

**Communication and resources:** Hao mei

**Major present:** Michael

**Minor presenter:** Robert

# Interview Process

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  - ▶ General questions leading into more specific questions related to the ETERNITY calculator.

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  - ▶ General questions to increasingly more specific questions (Funnel Strategy)
- ▶ 5 questions per team member
  - ▶ 10 General questions
  - ▶ 25 Specific questions

# GitHub Repository

Not just for code version control.

- ▶ Issue tracking
- ▶ Kanban board linked to current issues
- ▶ Documentation



# GitHub Repository - Kanban board

weibolu-rm / ETERNITY Private

<> Code Issues 3 Pull requests Actions Projects 1 Wiki Security Insights Settings

Eternity Calculator  
Updated 1 minute ago

1 To Do + ...

Report for D1

#12 opened by weibolu-rm

documentation

Deliverable 1

2 In Progress (this week) + ...

sinh(x) implementation

#6 opened by weibolu-rm

Presentation for D2

#11 opened by weibolu-rm

documentation

Deliverable 2

3 Done + ...

ab<sup>x</sup> implementation

#2 opened by weibolu-rm

x<sup>a</sup>y implementation

#7 opened by weibolu-rm

arccos(x) Implementation

#1 opened by weibolu-rm

documentation

Work on personas

#9 opened by weibolu-rm

documentation

Deliverable 1

σ (Standard Deviation) implementation

#5 opened by weibolu-rm

Web template

#8 opened by weibolu-rm

1 linked pull request

logb(x) implementation

#3 opened by weibolu-rm

MAD (Mean Absolute Deviation) implementation

Automated as To do Manage Automated as In progress Manage Automated as Done Manage

https://github.com/

# GitHub Repository - Documentation

[Code](#) [Issues 3](#) [Pull requests](#) [Actions](#) [Projects 1](#) [Wiki](#) [Security](#) [...](#)

## Home

Sobhan-M edited this page 2 days ago · 2 revisions

[Edit](#) [New Page](#)

## Welcome to the ETERNITY wiki!

Here you can find a lot of information related to the ETERNITY project and the COMP 354 project as a whole.

### Tools

On this page you will be able to find information about the tools used in the development of the ETERNITY project.

### Interview

This page goes into more depth regarding the interview process and the questions asked.

### Personas

This page includes the various personas and target audiences developed and brainstormed before and after the interview.

### Iteration 1

This page contains the crucial information that relates to iteration 1. This involves both deliverable 1 and 2, as well as their respective requirements.

### Roles and Function Assignments

These pages discuss how the work of the project was distributed amongst the collaborators. It also explains who worked on which functions.

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[Helen Hermann \(University Student\)](#)

[Interview](#)

[Iteration 1](#)

[Jason Morin \(Highschool Student\)](#)

[Jeremy Ladovka \(Accountant\)](#)

[Mingming Liu \(Project Manager\)](#)


[Mohammad Memarbashi \(Civil Engineer\)](#)


[Personas](#)

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+ Add a custom sidebar

Clone this wiki locally

<https://github.com/we1> 



# Interview Process

Choosing interviewees:

- ▶ Tried to get a variety of interviewees based on whom we thought would be interested in using a calculator
- ▶ Total of 7 interviewees, one interview conducted by each team member

# Notes about interviews

- ▶ Customizability



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- ▶ People prefer formal notation,  
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- ▶ Customizability
- ▶ People prefer formal notation,  
i.e.  $x^y$  vs  $x^{\wedge}y$
- ▶ There exists a few popular online calculators/ tools with  
advanced features  
i.e. *Wolfram Alpha*, *Symbolab*, *Desmos*

# Notes about interviews

## **Example of an idea we didn't consider:**

*Which functions that are generally not on a calculator, would you like to see added?*

“This is very difficult, maybe some constants could be added, like the gravity constant or the speed of light for our fellow engineer.”

# Personas

7 Initial personas, ranging from a variety of different people and different backgrounds who might contribute to different types of use cases.

## **Initial brainstorm for target groups:**

1. Students
2. Statisticians
3. Data Analysts
4. Businessmen
5. Accountants
6. Engineers
7. Professors

# Personas

## **Actual target groups we ended up having:**

1. Highschool Student
2. University Student
3. Statisticians
4. Data Analyst
5. Accountants
6. Engineer (Program Manager)
7. Engineer (Civil Engineer)

# Personas

Using the interview responses, we come up with positive and negative personas by first writing up a basic bio to make it seem more “real”.

- ▶ Then build a table with the important information

## Persona for the target group “Highschool Student”

Name	Jason Morin
Gender and age	male, 15
Disabilities and restrictions	none
Education	Current highschool student
Profession	Student
Hobbies	Building (customizing) computers, video games, watching Netflix
Location of use	home
Computer literacy	Is very comfortable using computers, and a fast learner for new programs/ tools but not a power user.
Computer environment	<i>Google Chrome 91.0.4472.77 on Windows 10</i>
Internet literacy	High, self-taught and fast learner

## Persona for the target group “Accountant”

Name	Jeremy Ladovka
Gender and age	male, 38
Disabilities and restrictions	none
Education	Masters, Accountancy
Profession	Accountant
Hobbies	Math, Soccer, watching movies, playing video games, going out with friends
Location of use	Office/ Home (Covid-19)
Computer literacy	Very strong computer skills. Uses computers on a daily basis to perform both work related tasks and personal hobbies.
Computer environment	<i>Safari v14.1, Mac OS</i>
Internet literacy	High, communicates via Internet daily



# Use Cases

## High Level

- ▶ Validate Calculations Of Other Software
- ▶ Solve School Assignments
- ▶ Analyze Sale Statistics
- ▶ Estimate Cost Of Engineering Projects
- ▶ Calculate Shopping Expenditures
- ▶ Help During Exams
- ▶ Analyze Biology Lab Results
- ▶ Graph Mathematical Functions
- ▶ Analyze Large Data Sets
- ▶ Design Building Architecture

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## High Level

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## Low Level

- ▶ Input Data Set
- ▶ Input Number
- ▶ Input Function
- ▶ Input Operator
- ▶ Graph Function
- ▶ Calculate Result
- ▶ Display Result
- ▶ Clear Result
- ▶ Modify Colour

# Closing Statements

## Eternity Calculator

9*2			
AC	$\arccos(x)$	$\sinh(x)$	$\log_b(x)$
MAD	$\sigma(x)$	$ab^x$	$x^y$
7	8	9	$\div$
4	5	6	$\times$
1	2	3	$-$
$\cdot$	0	$=$	$+$