**Persona**

**Name**: Marco Mignacca

**Gender**: Male

**Age**: 20

**Disabilities and restrictions**: None

**Education**: One year and a half at Concordia University, Pure and Applied Math program

**Profession**: Student

**Description**: Currently studying at Concordia Pure and Applied Math program. He is interested in developing new math skills and working on a problem after being given all the tools needed. Prefers more algebraic and stepwise problem solving over proofs and theoretical work. Most preferred field is Algebra, but current studies include a mix of both computation and proofs.

**Values**: Honesty, Hard-Working, Integrity, Thoroughness, Not Assuming, Neatness

**Goals**: To become a TA (Teaching Assistant) for a math class soon.

To become a professor or researcher in a math field but is unsure of specific field now.

**Frustrations**: Does not enjoy proofs and theoretical math studies

No way to return to previous functions and work with current scientific calculator. Difficult to manage open and closing brackets.

Having one button dedicated to more than one function, needing to click shift or second function to use some functions.

Screen is too small on regular calculator, makes it difficult for longer expressions.

**Hobbies**: Drawing and baking

Listening to music (mostly pop)

Reading (informational texts/learning new things)

Watching TV and movies (Anime and documentaries)

**Needs**: Ability to return to previous functions, history for calculator.

Functions to input matrix and perform matrix operations.

Exact values be returned, instead of decimal, either fraction or simplified version of expression.

Nice, formatted input, like one would see on paper.

**Location of use**: School and at home

Computer literacy: Has used command line before, but not for programs.

Has used calculator on computer.

**Special needs when using a computer**: None.

**Mathematical proficiency**: Familiar with all the functions to be included in Eternity.

1 and a half years in Pure and Applied Math, 3 years in Pure and Applied Sciences, mostly Physics.

Preferred fields are algebra and statistics.

**Summary of Personas (Deliverable 2)**

The Personas chosen were to help show the different kinds of users and fields in which the Eternity Scientific Calculator could be used. While the primary targets may be students in Math related programs or physics, the personas also showed those in graduate programs, ones with full time jobs and even in programs not immediately related to Math. The approach for the personas was to establish them as a person first with their likes and dislikes as well as information about them as individuals, before addressing the Eternity calculator.

The fields used in the template were used to display the information gathered from the interviews. First with personal information about the user, a description, likes and dislikes, experiences. Then, focusing on their thought for Eternity, their needs, frustrations, experience in Math and tasks to be performed. The personas help organize the wants and pain points of the target audience as well as the uses for Eternity. The template also makes it easy to structure the personas using a table. Any special needs or disabilities could also be addressed from the personas which could be used to improve the calculator even more.

Diagram

Description automatically generated**Use Case**

**Figure**: UML Use Case Diagram for Eternity Scientific Calculator by Student for Assignment Problem in Pure and Applied Math.

**Analysis of Use Cases (Deliverable 2)**

The use cases were gathered from the interviews after determining what the different interviewees would use the Eternity system for. They were modeled using the UML Use Case Diagram and realized after organizing the responses from our interviews together. The use cases describe more general uses of Eternity, and how different actors may use the system for different reasons or uses. In the case of the student in Pure and Applied Math use case, the functions used are a mix of simple arithmetic, subordinate functions and special functions, since the student is not specializing in a specific math field yet.