



# MINIGENIUS

SOFTWARE ENGINEERING

Requirements Document

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# Section 1

## Introduction

The purpose of this document is to give the reader an overview of MiniGenius, the thought process behind our product, and take you through our software development life cycle, what we accomplished and our plan for the future. It is a comprehensive document that outlines everything that is needed to be known about MiniGenius. It's meant for the use and distribution of organizations that would like to integrate our platform into their school, parents that would like to use it as a learning tool for their kids, or other learning tools that would like to integrate MiniGenius.

### 1.1 Product Scope

The e-learning platform is designed to provide an engaging and personalized learning experience for students in the 7-12 age range. The platform will be integrated with a chatbot AI assistant (GPT-3) to tailor the learning experience to each student's individual needs and preferences. The goal of the platform is to make online learning easy, enjoyable, and effective for students, while providing them with the tools and resources they need to succeed in their studies. By collecting information from the survey responses, GPT-3 will be able to provide personalized recommendations and

support to students throughout their learning journey, helping them to stay motivated, engaged, and on track to achieve their goals. The platform can be bought by school administrators where they can create accounts for all their students and enter their basic information like grade, courses, and syllabus. The students will be able to download the application onto their tablets or home device and access the resources online.

## 1.2 Product Value

MiniGenius will provide students with access to a wide range of learning resources and tools, such as interactive videos, quizzes, and games, that will make learning more enjoyable and engaging. Ultimately, the e-learning platform with ChatGPT will help students achieve their learning goals and succeed in their studies, while providing them with valuable skills and knowledge that they can use throughout their lives. This is a means of making learning more accessible to home-learning kids and those who can't attend school on a regular basis or don't benefit from f2f learning as much.

## Section 2

# Overall Description

### 2.1 Product Perspective

The User will be greeted with a page that asks them what type of user they are : student, parent, or teacher. Each type of user has a different interface and so we need to specify the user type in order to tailor the experience and make sure they receive the right content.

#### 2.1.1 Student

Once the student logs into their pre-created account by the school administrator or school district in case of home schooled kids they will be presented with a survey to understand the user and their learning style. This survey will be used to make the study buddy more efficient and make better recommendations. It acts basic questions about how they like to receive their content , how they study, and their most effective learning style. After that, the student is directed to their homepage where they get the chance to watch videos about topics within their syllabus. They can then click one of the icons on the bottom to access the study buddy or edit their profile. They will be able to communicate with the study buddy by chatting via text. For the profile page

they can customize an avatar that they feel looks cool or reflects them. In addition they can view their badges, goals, and progress in said page.

### **2.1.2 Teacher**

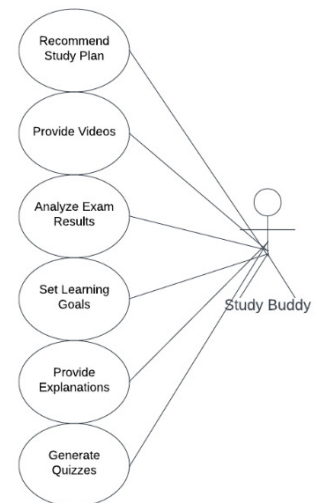
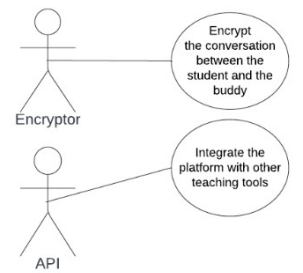
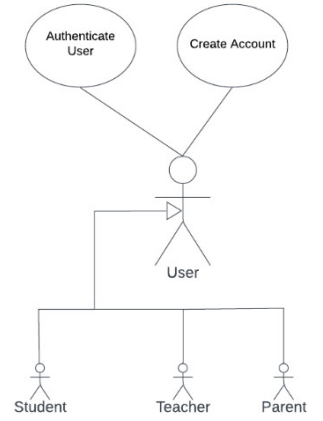
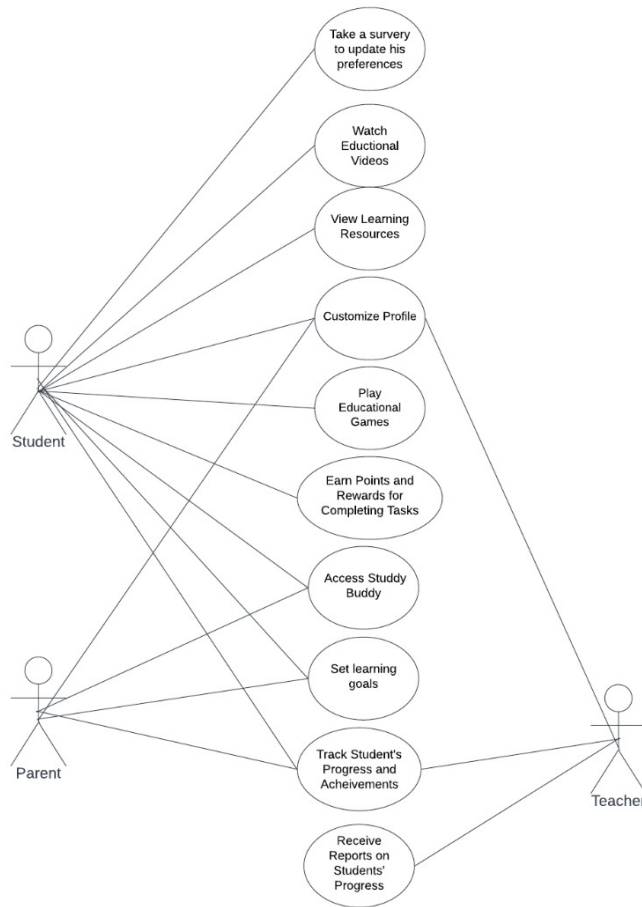
The teacher will be greeted with a dashboard of all their students, their progress, and the courses they teach. It is meant to give an overview of their position at their school and quickly see all the students they teach. It contains graphs outlining the students strengths and weaknesses. The teacher will also have the ability to communicate with the parents via the chat option.

### **2.1.3 Parent**

As soon as a parent logs in they will be directed into the parent homepage that contains an overview of their children, the courses they're taking, and each child's progress. From the information on the dashboard, parents can make informed decisions about the goals they want to set for their children. Parents can also switch between their children with a simple click of a button. They also have the chatting option where they can click on the text bubble icon and be able to chat with their child's teacher to inquire about assignments, grades, etc...

## **2.2 Product Features**

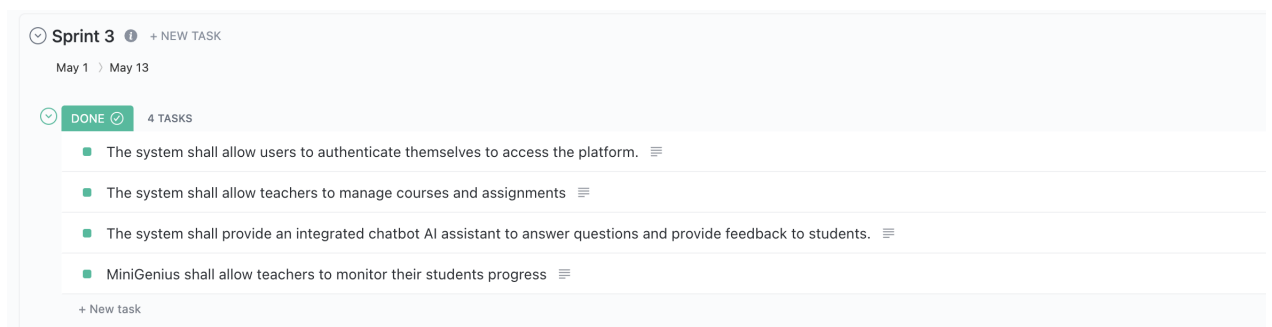
Below you will find a use case diagram outlining the functionalities of the system and the user :



## Section 3

# System Requirements

The following figure outlines the system/functional requirements that we tackled in MiniGenius. For more information you can click on the paragraph button and it will show you a detailed description with a breakdown of the point mentioning the specific requirements that need to be completed in order to say the requirement is met.

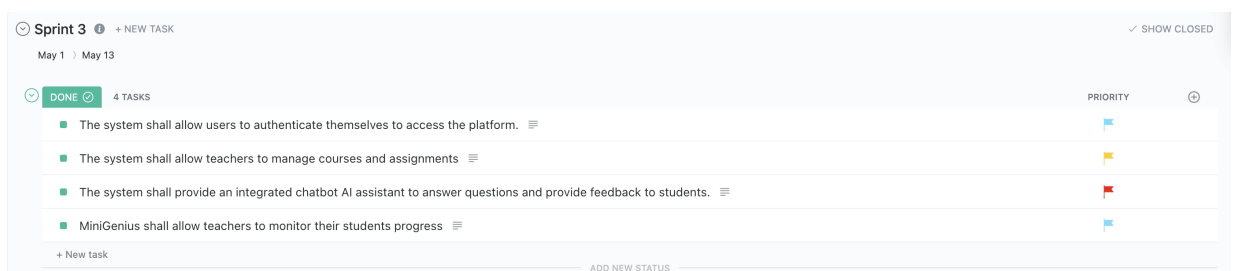




## Section 4

# User Requirements

The following figure outlines the user requirements outlining the functionalities and capabilities different users have. For more information you can click on the paragraph button and it will show you a detailed description with a breakdown of the point, mentioning the specific requirements that need to be completed in order to say the requirement is met.



The screenshot shows a Jira board for 'Sprint 3' from May 1 to May 13. It displays 4 tasks in the 'DONE' column. Each task has a description, a priority flag, and a paragraph icon for more details.

Task Description	Priority
The system shall allow users to authenticate themselves to access the platform.	Low
The system shall allow teachers to manage courses and assignments	Medium
The system shall provide an integrated chatbot AI assistant to answer questions and provide feedback to students.	High
MiniGenius shall allow teachers to monitor their students progress	Low

## Section 5

# Plan for Future Expansion

Since the system has a lot of potential to be developed for the future to show more help for the students, parents and teachers for the future, we plan to do more enhancements for the system in the future.

### 5.1 Administration capabilities

For the administrators, we plan to make him able to create accounts for the children quickly and easily, by uploading a list of student names and email addresses and having the platform automatically generate usernames and passwords for each student, so that the students can start using the platform as soon as possible. Also, It should give them the ability to customize the system to fit their school, configure the platform to suit their students. Also, they should be able to purchase the platform access easily and choose the payment method that suits them.

## 5.2 Study buddy

The study buddy should be able to learn from the interactions by using reinforcement learning to be able to learn from the context and behave based on that.

## 5.3 Teacher

The teacher should have the ability to integrate the tool with other learning tools like (turnitin, blackboard, Google classroom and etc)

## Section 6

### Useful Links

1. [Click-Up System Requirements](#)
2. [Click-Up User Requirements](#)
3. [Use Case Diagram](#)
4. [Figma Prototypes](#)