Ethics Game Team

Game Abstract

Our game will be centered around teaching software engineers various topics in regard to the ethics of their field. Our game will consist of 4 stages and along with those stages, there will be 3 levels of difficulty(easy, medium, hard) associated with each level. Each level will consist of multiple questions and minigames dealing with software engineering ethics as the subject matter. To progress through the levels, the user must know and apply the ethics principle being featured correctly. We will be using the agile method for developing this game.

Purpose

To create a fun game that will help educate players about ethical issues in Software Engineering.

Scope

To create a game without advanced art assets and 2 or 3 stages to create a prototype from which to expand upon with later projects. Utilizing Unity, a popular framework in the medium, this project should be easily expandable by other teams in the future. We will not be implementing the saved games feature or the feature to allow an administrator or educator to add additional content.

Objective

This project will hopefully instill the knowledge of software engineering ethics onto the player so that the player can approach software engineering with an ethical mindset.

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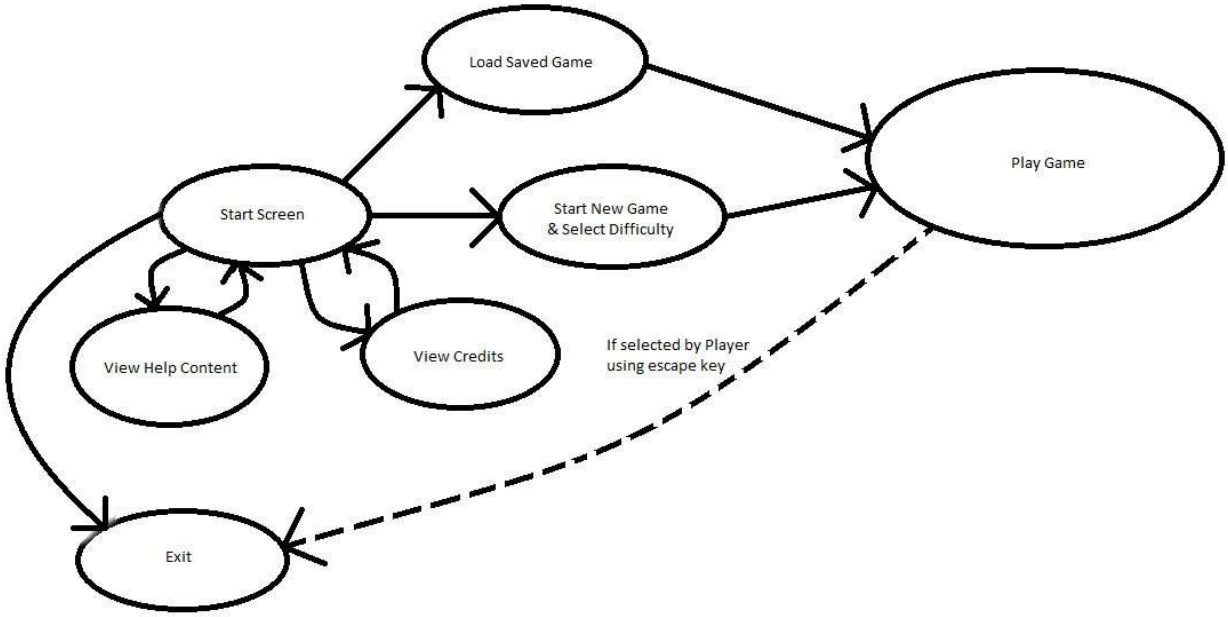
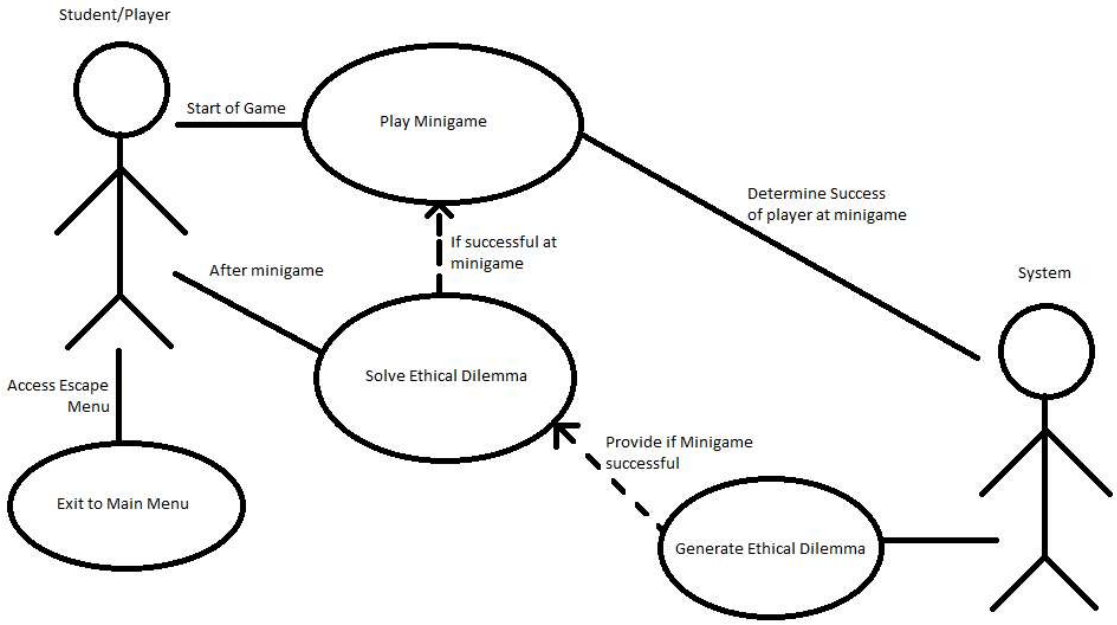
Navigation Diagram #1: Start Screen (encompasses selecting difficulty, changing settings, and looking at credits)



Detailed Diagram for Play Game (controls for the minigames are all mouse and keyboard input with an optional escape back to the main menu)



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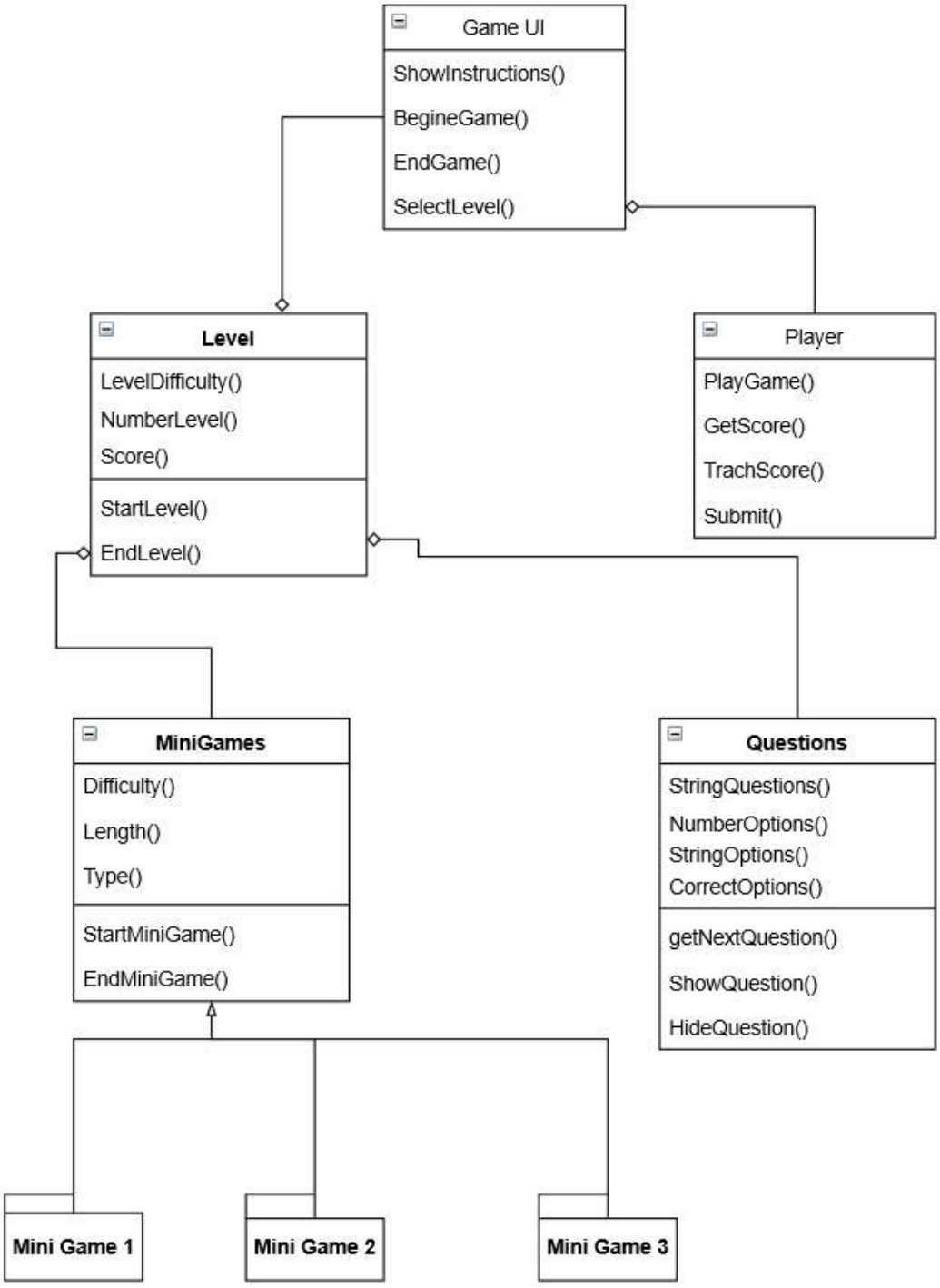
UML Diagram :



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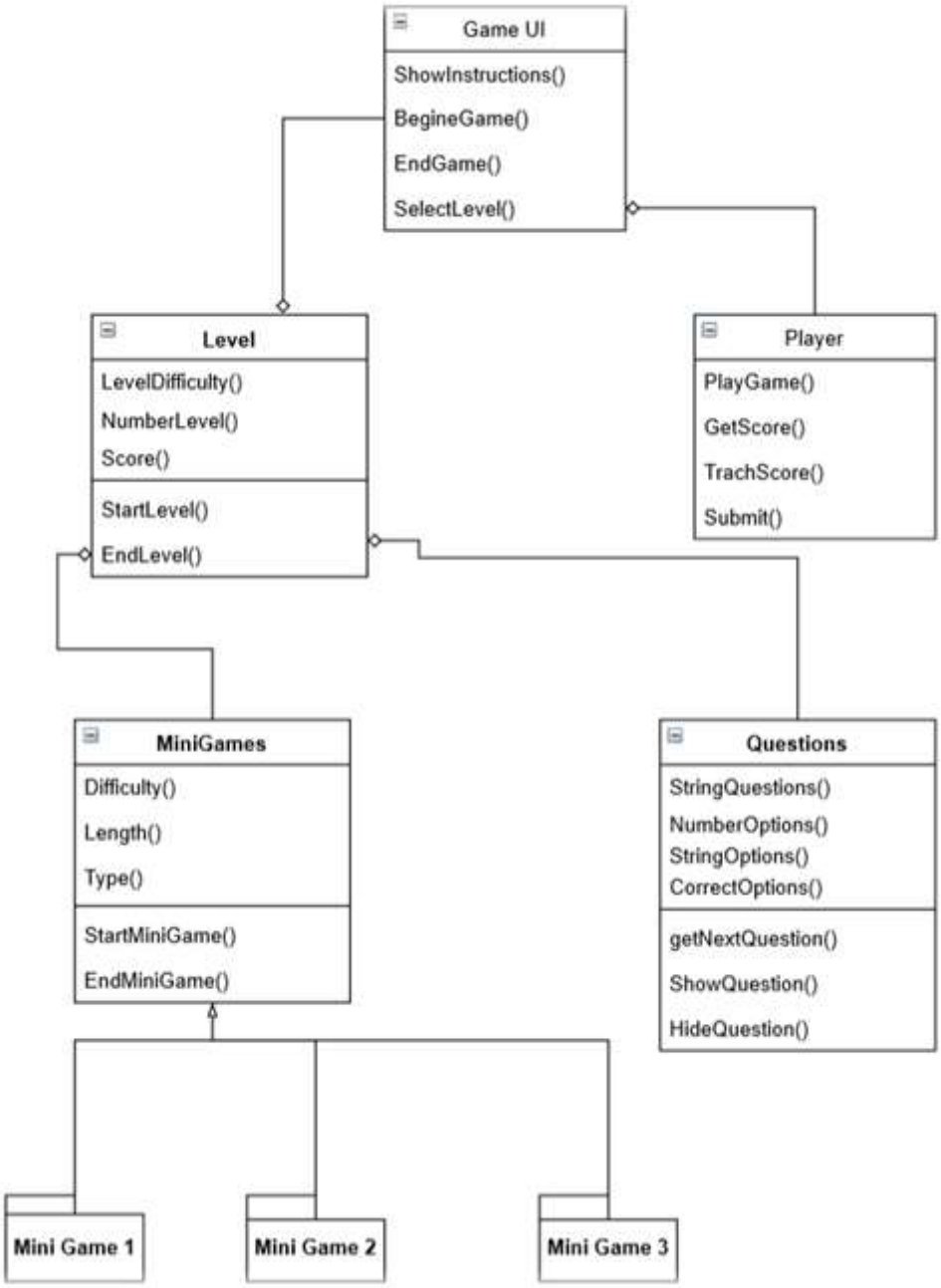

Use Case 1:

Actor: Player

Use case name: Exit screen

Scenario:

When the player clicks the exit screen, the game will terminate.

Use Case 2:

Actor: Player

Use case name: Displaying credits

Scenario:
When the player selects the credit option, it will display the names of the team.

Use Case 3:

Actor: Player

Use case name: Starting a new game

Scenario:
When the player launches the game it will display the start screen. If he/she clicks the new game option, it will open a new game.

Use case 4:

Actor: Player

Use case name: Selecting difficulty level

Scenario:
When the player launches a new game he/she has to select the level of difficulty(easy/medium/hard). The user selects easy.

Use Case 5:

Actor: Player

Use case name: Read Ethics

Scenario:
The user will start a level, then the system will display a video or a textual description of a software engineering principle for the player to study. When the player is ready to move on, the user will click the next button.

Use Case 6:

Actor: Player

Use case name: Answer questions based on the ethical concept presented

Scenario:

After the user has studied(or been presented) an ethical passage/content, the system displays the questions with a list of possible solutions. When all questions answered, the user then “submits” their answers to all questions, the system scored the responses and awards points.

Use Case 7:

Actor: Player

Use case name: Play Minigames

Scenario:

In between the questions, the player is directed to a minigame which could create some refreshment to the player. The player has to collect Hint points which can be used during the questionnaire on choosing the appropriate answer. Then the system will display the hint points collected by the player, on the screen, throughout the game.

Use Case 8:

Actor: System

Use case name: Determine players success at the minigame

Scenario:

The system will determine the player's success at the minigame and the player solves the ethical dilemma questions only if he/she succeeded in the minigame.

Use Case 9:

Actor: Player

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Use case name: Check Scores.

Scenario:

The player can check the score on the screen after completion of each level.

Use Case 10:

Actor: Player

Use case name: Exit Game

Scenario:

The player can exit the game anytime during or after the completion of the game.