

# Software Design Document

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## Section 1 - Project Description

### 1.1 Project

Sprint

### 1.2 Description

ETSU-themed game where players attempt to sprint for as long as possible and beat their own scores while avoiding environmental obstacles.

### 1.3 Team Members

Nicholas

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### 1.3 Revision History

Date	Comment	Author
2/10/2025	Created the document and included list of requirements, a design the rest of the team came up with, as well as a Requirements Traceability Matrix	JL Graham
2/12/2025	Added other designs made by a team member and worked on the Requirements Traceability Matrix	JL Graham

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## Section 2 - Overview

### 2.1 Requirements

Your mileage may vary -- we typically break down the requirements to provide a ballpark estimate.

1. The solution must support player movement
  - a. The solution must move the player to the direction the user is inputting
    - i. The solution must also rotate the environment once user has moved far enough one direction
  - b. The solution must move towards the player
2. The solution must reset when the player loses
  - a. If the player chooses to restart then it should reset
  - b. If the player chooses to quit, it should exit
3. The solution must keep track of a player's score during the run
4. The solution can have alternate versions of levels
  - a. The player can select the difficulty of the level
    - i. The player can have the choice of speed of level
5. The solution can have a pause button during a run
6. The solution can have different skins

### 2.3.2 Traceability Matrix

There will be an alternate version included that follows a more traditional format

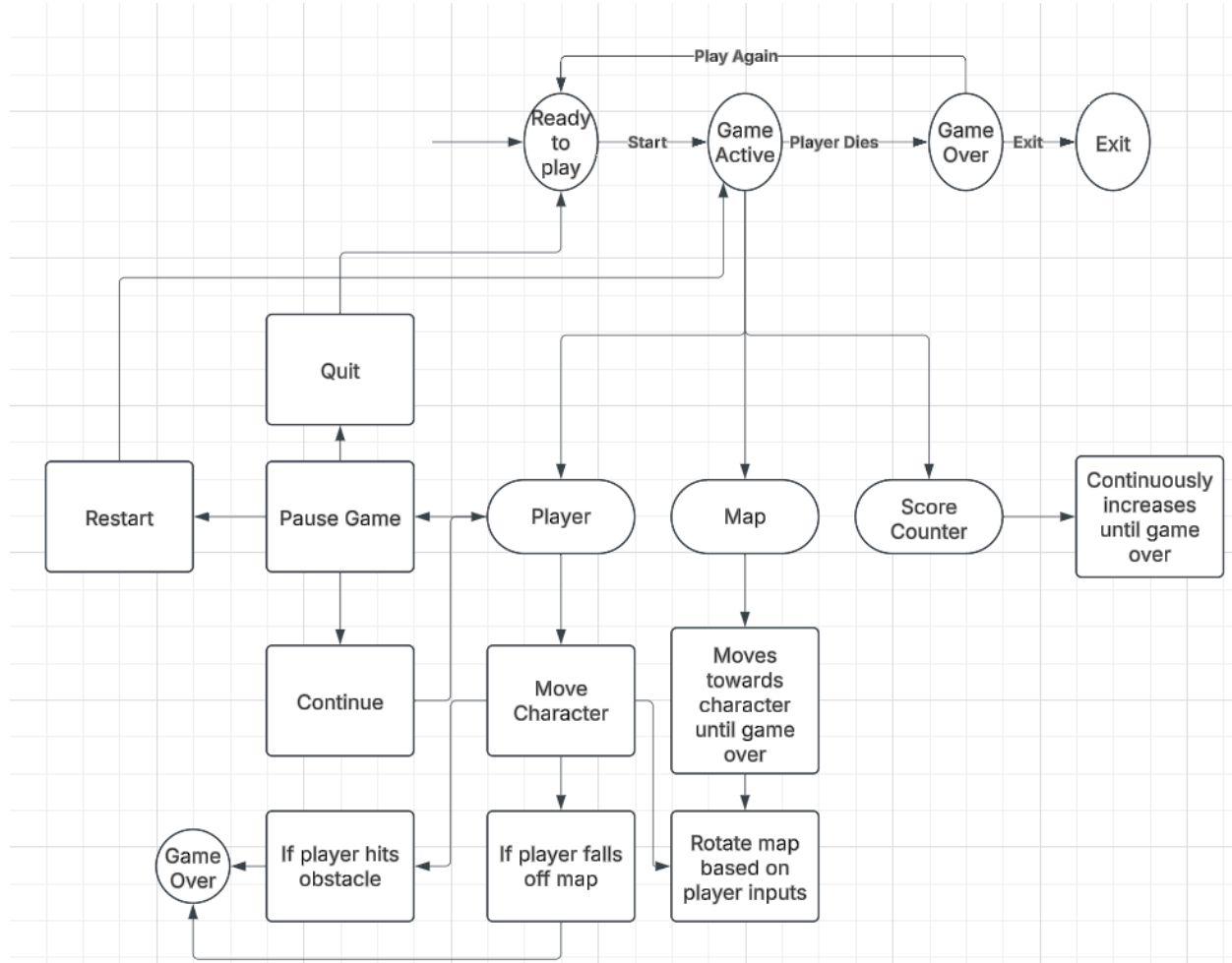
SRS Requirement	SDD Module	Meets
1	1.8 (Player) & 1.9 (Map)	F
1.a	1.8.i	F
1.a.i	1.9.ii	F
1.b	1.9.i	F
2	1.4-2, 1.4, 1.8.ii, 1.8.i.i	F
2.a	1.3.a (Game Over -> Restart)	F
2.b	1.3.b (Game Over -> Exit)	F
3	1.10 (Score Counter)	F
4	2.2.c, 2.2.d, 2.5, 2.6	F
4.a	2.6	F
4.a.i	3.4	F
5	1.7	F
6	3.1, 2.3	F

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## Section 3 - Design

Overall system architecture with a state diagram of the major states at the top of the design with more detailed breakdowns in the lower area.



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2nd pass through, made by Nicholas outside of class. Shows design of the game's menus based on the requirements we made.

