

## Project Introduction

### Problem Statement:

With the popularity of the Assassin's Creed series, there's a demand for a new immersive gaming experience that captures the essence of stealth, action, and historical adventure. However, developing such a game requires game design, storytelling, and technical implementation expertise. Additionally, ensuring the game meets player expectations in terms of graphics, gameplay mechanics, and overall experience is crucial for its success.

### Problem Solution and Scope:

The Hoax aims to address these challenges by delivering an exciting desktop game inspired by the Assassin's Creed series. The project will focus on developing a single-player, narrative-driven experience set in a richly detailed historical world. The scope of the project includes creating immersive environments, implementing stealth and combat mechanics, crafting an engaging storyline with intriguing characters, and optimizing performance for desktop platforms. Players will assume the role of a skilled assassin navigating through various missions and quests, blending seamlessly into bustling cityscapes and treacherous landscapes alike. The game's mechanics will balance strategic planning and dynamic action, allowing players to approach challenges with their preferred playstyle.

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## Sprint 3 Module:

### NPC Interaction and Side Quests

#### User Stories

##### User Stories 1:

As a player, I want to engage with NPCs to progress the game's story and experience additional content beyond the main storyline.

###### Sub user story 1.1:

As a player, I want to approach NPCs in the game world to initiate interactions.

##### User Stories 2:

As a player, I want to see cutscenes throughout the game with captivating and engaging audio.

###### Sub user story 2.1:

As a player, I want cutscenes to feature high-quality visuals and animations that enrich the game's narrative.

###### Sub user story 2.2:

As a player, I want cutscenes to be accompanied by immersive audio, including voice acting and sound effects.

#### Rework or Left Out Stories from Previous Sprints:

##### Sub User Stories:

- Refine HUD elements (health bars, minimap) for clarity.
- Implement interactive tooltips for item descriptions.

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## User Stories (All Sprints)

### User Story 1:

As a player, I want to be able to explore a historical open-world environment freely so that I can complete missions.

#### Sub user story 1.1:

As a player, I want to discover and explore historical landmarks and hidden locations within the open-world environment.

#### Sub user story 1.2:

As a player, I want to engage in quests scattered throughout the historical setting.

*Story Point: 8*

### User Story 2:

As a player, I want to blend into crowds and perform ruthless takedowns, so I can evade enemies and approach objectives stealthily.

#### Sub user story 2.1:

As a player, I want to use environmental interactions.

#### Sub user story 2.2:

As a player, I want to jump and parkour over buildings to avoid detection.

*Story Point: 3*

### User Story 3:

As a player, I want to be able to fight enemies using guns, blades, and grenades.

#### Sub user story 3.1:

As a player, I want to be able to fight enemies using fists.

#### Sub user story 3.1:

As a player, I want to be able to fight enemies using rifles and bayonets

*Story Point: 3*

### User Story 4:

As a player, I want to engage in tactical combat, so that I can experience challenging battles.

#### Sub User Story 4.1:

I want different combat styles and weapon options.

#### Sub User Story 4.2:

I want to see feedback when hitting or being hit.

#### Sub User Story 4.3:

I want the ability to use the environment during combat to my advantage.

*Story Point: 5*

## **User Story 5:**

As a player, I want diverse enemy types so that each encounter feels fresh and challenging.

### **Sub User Story 5.1:**

I want enemies with different attack patterns.

### **Sub User Story 5.2:**

I want enemies with special abilities so that I can face epic, memorable battles.

*Story Point: 2*

## **User Story 6:**

As a player, I want to interact with the system in meaningful ways, so that I can influence the world and progress in the story.

### **Sub User Story 6.1:**

I want a system to react to my decisions and actions so that I can see the consequences of my choices in the game world.

*Story Point: 13*

## **User Story 7:**

As a player, I want to engage with NPCs to progress the game's story and experience additional content beyond the main storyline.

### **Sub user story 7.1:**

As a player, I want to approach NPCs in the game world to initiate interactions.

*Story Point: 13*

## **User Story 8:**

As a player, I want to see cutscenes throughout the game with captivating and engaging audio.

### **Sub user story 8.1:**

As a player, I want cutscenes to feature high-quality visuals and animations that enrich the game's narrative.

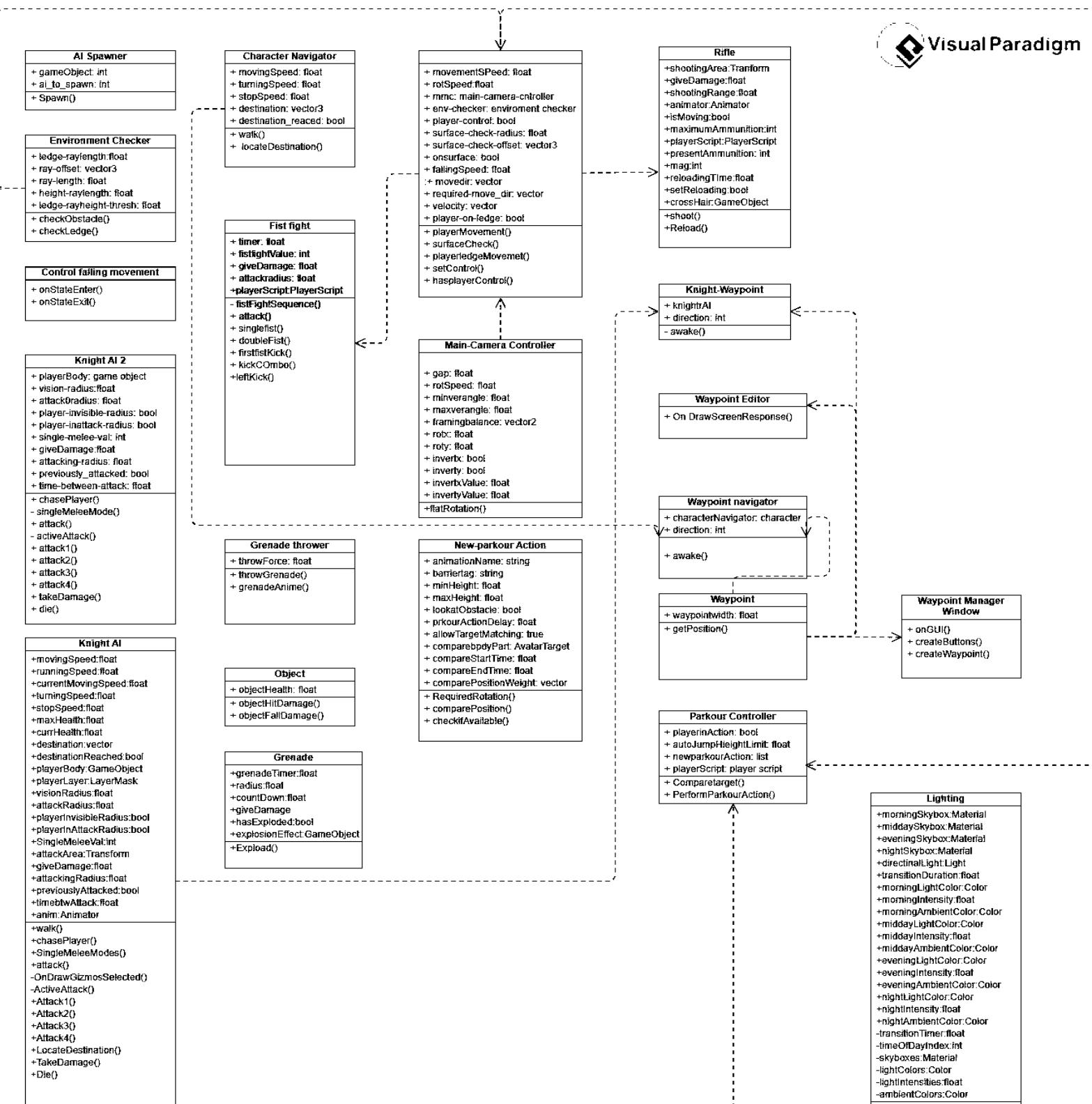
### **Sub user story 8.2:**

As a player, I want cutscenes to be accompanied by immersive audio, including voice acting and sound effects.

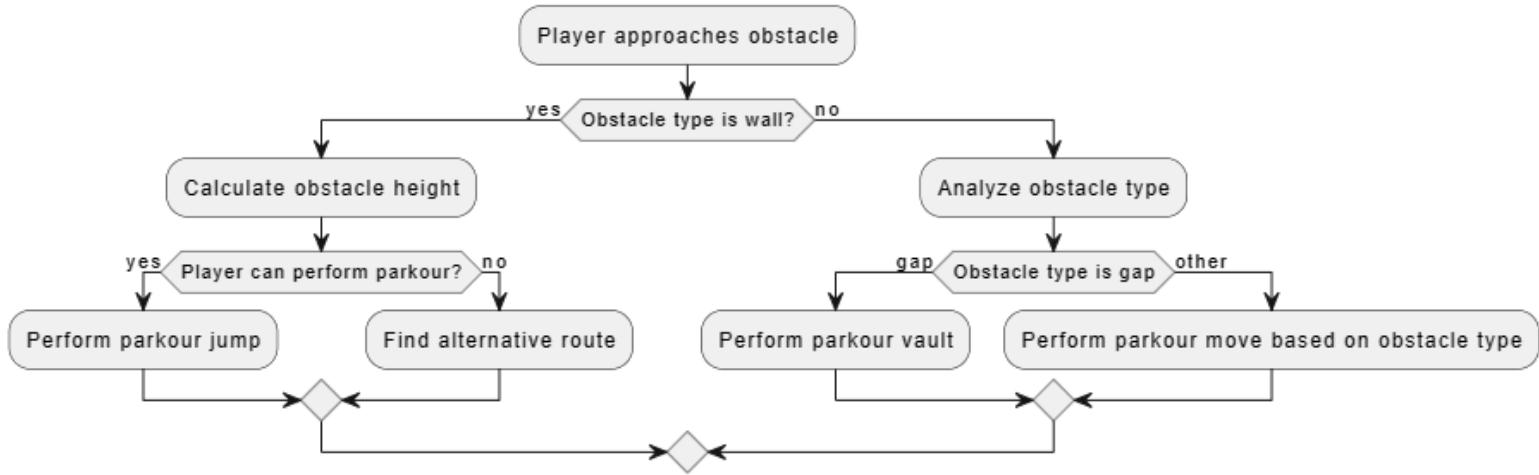
*Story Point: 2*

# System Design

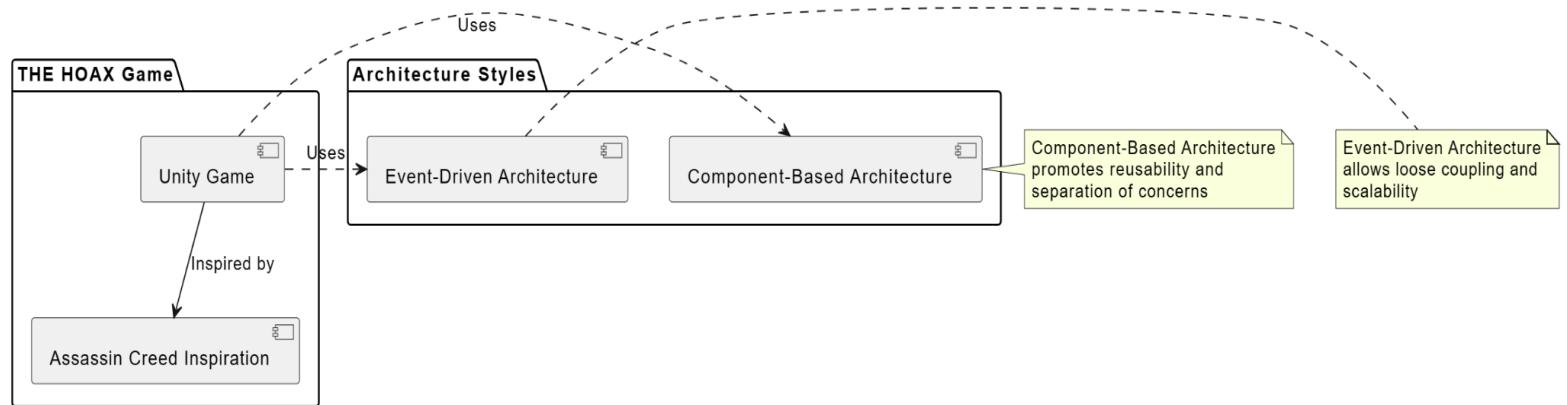
## 1. Class Diagram:



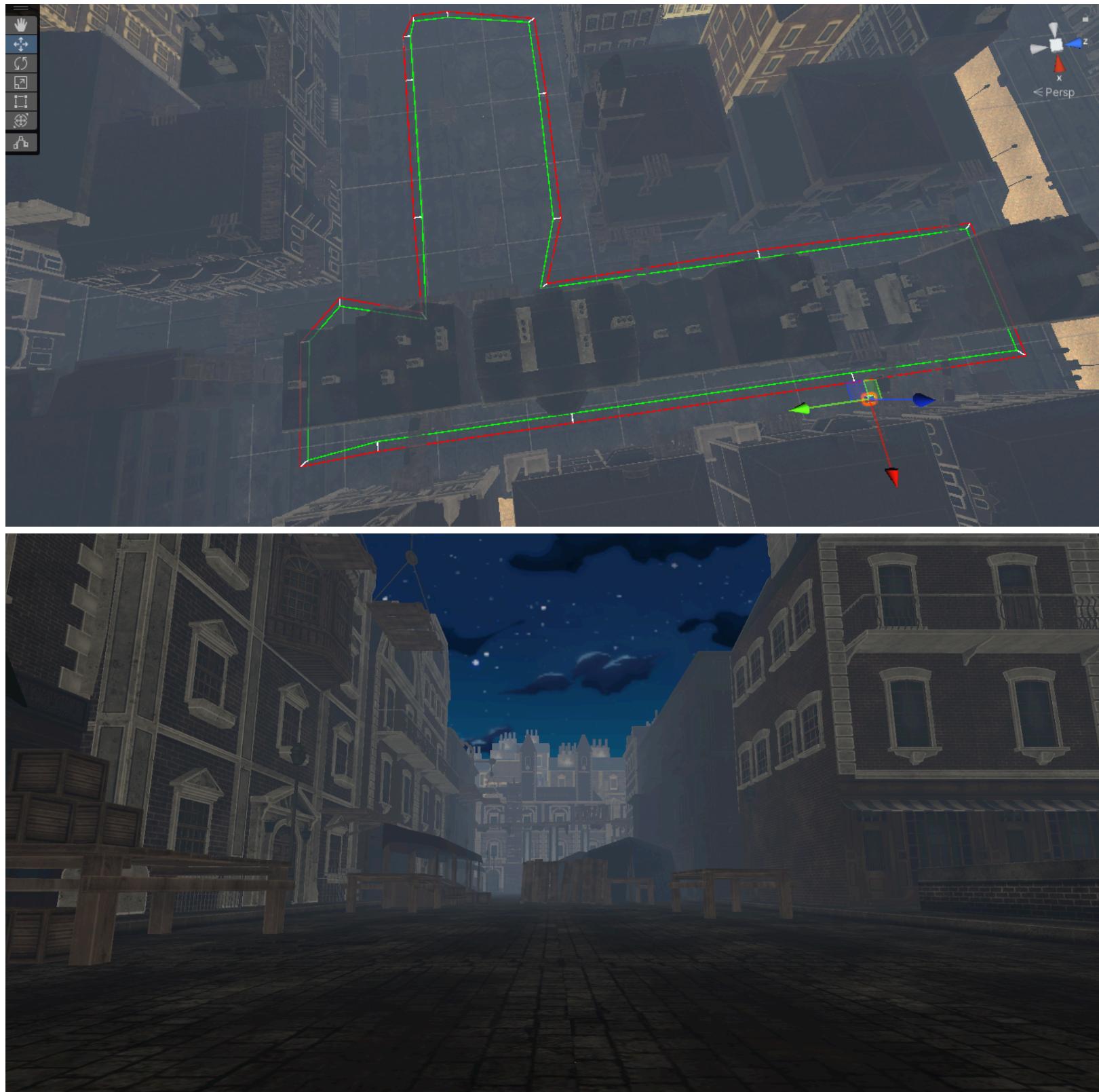
## 2. Parkour Activity Diagram:



## Architecture Design



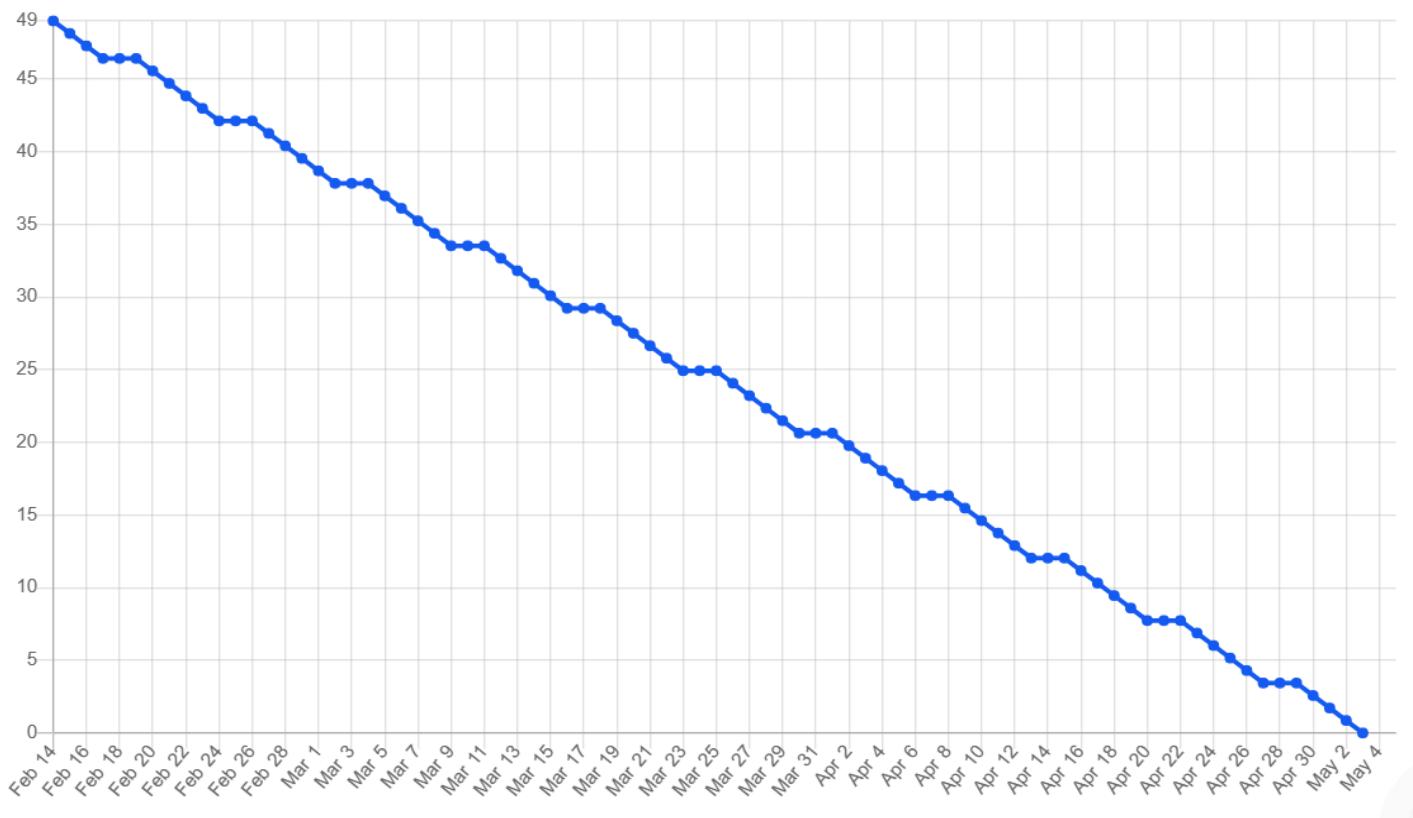
## Implementation Screenshots



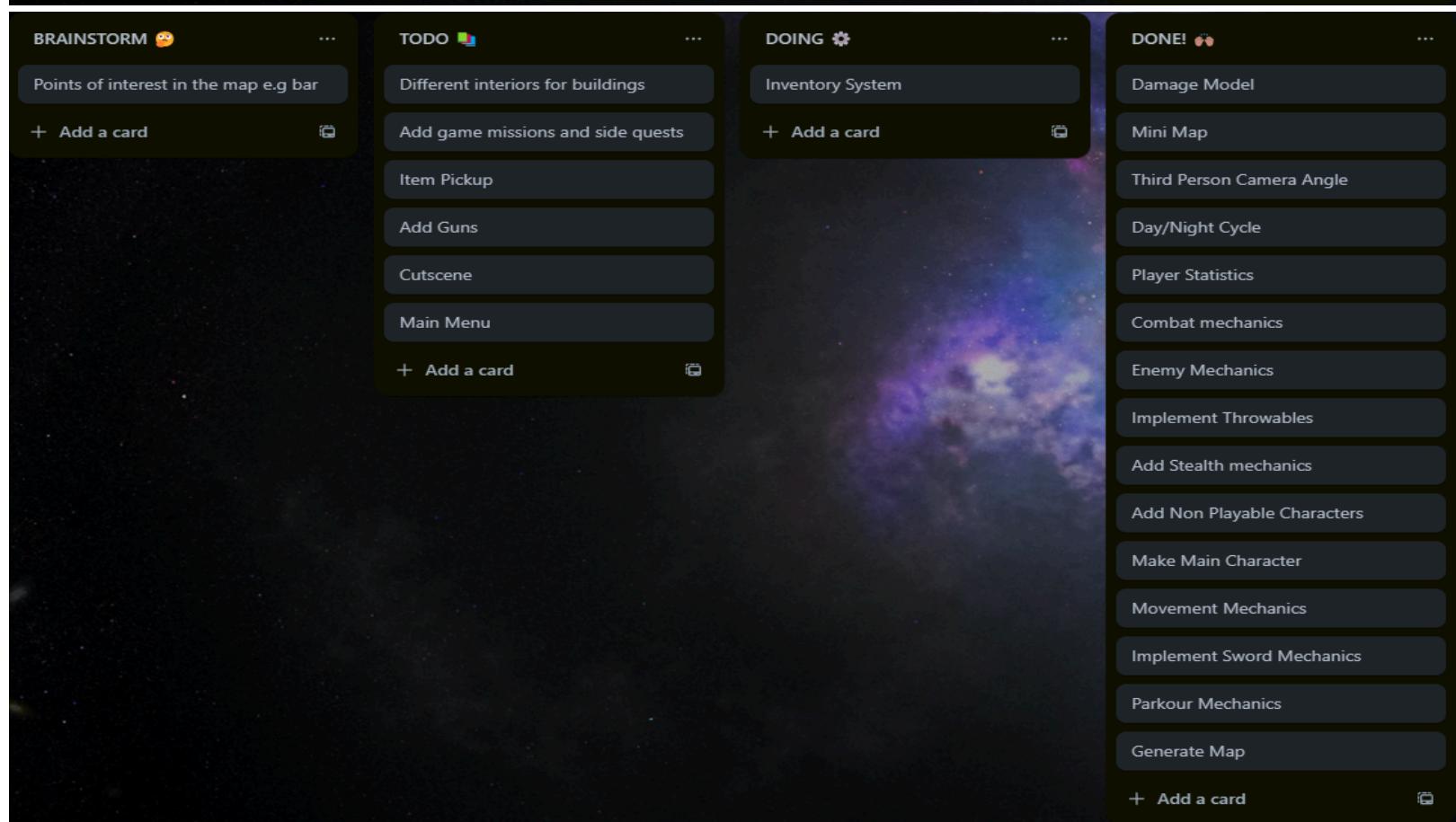
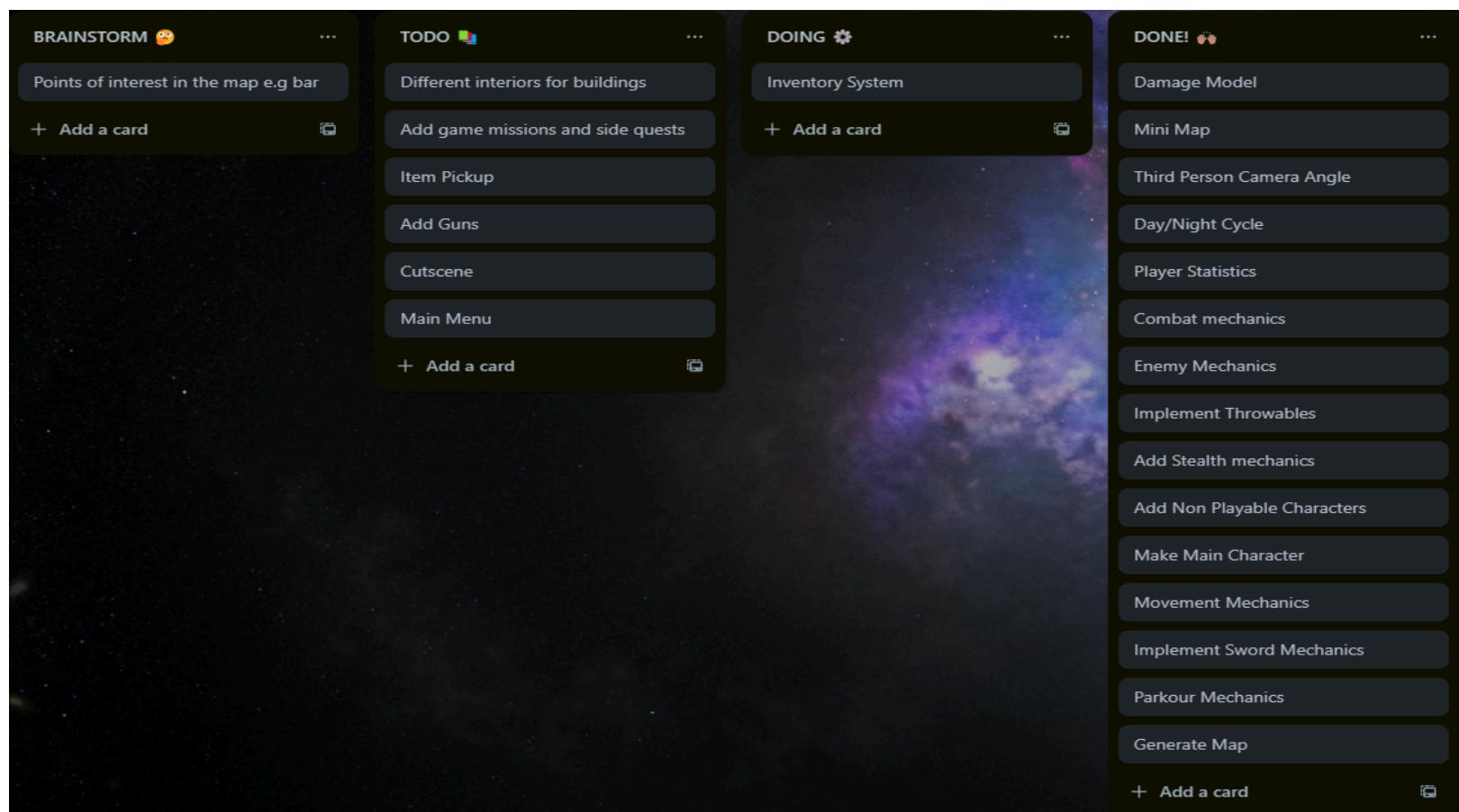


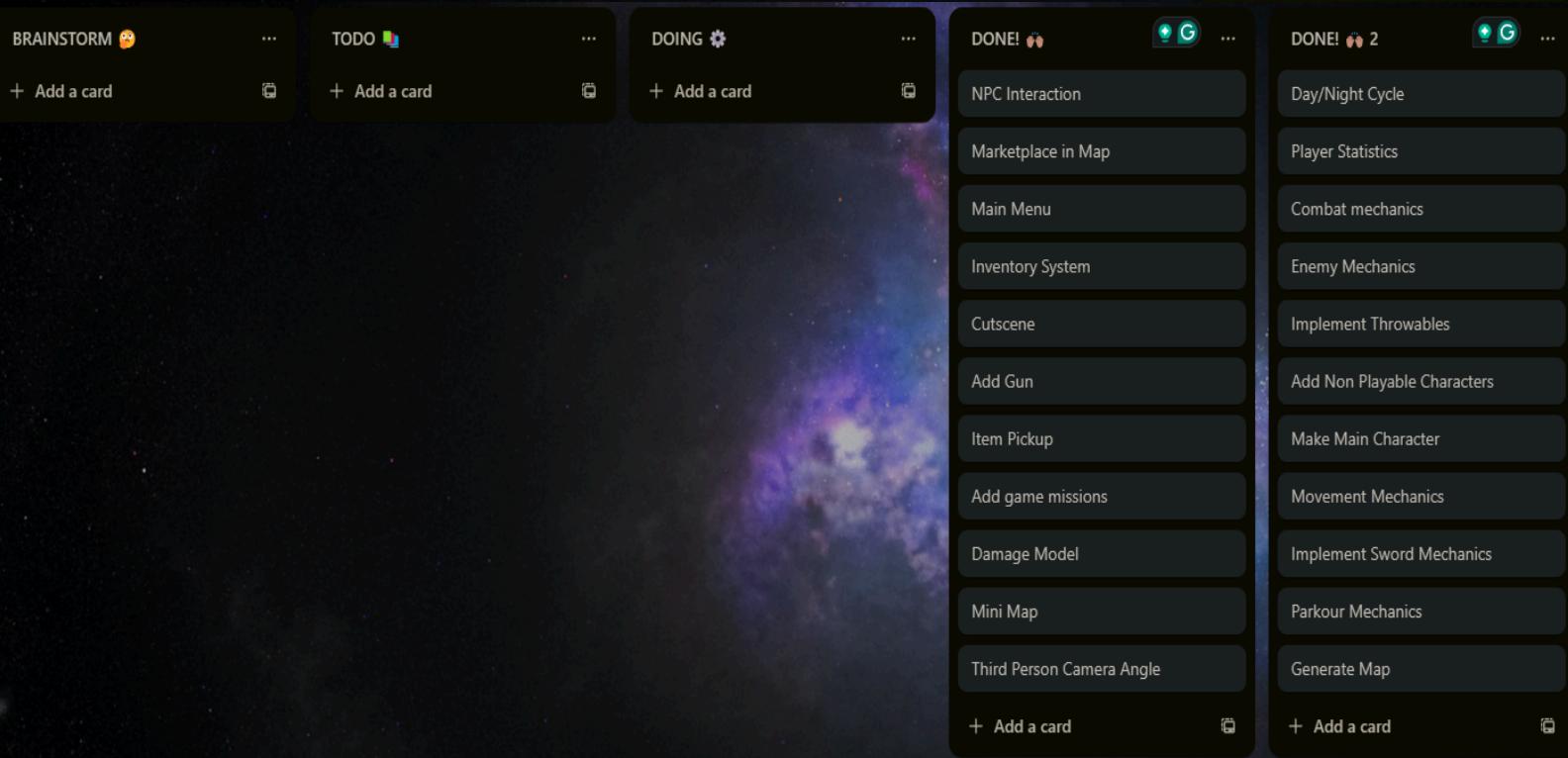
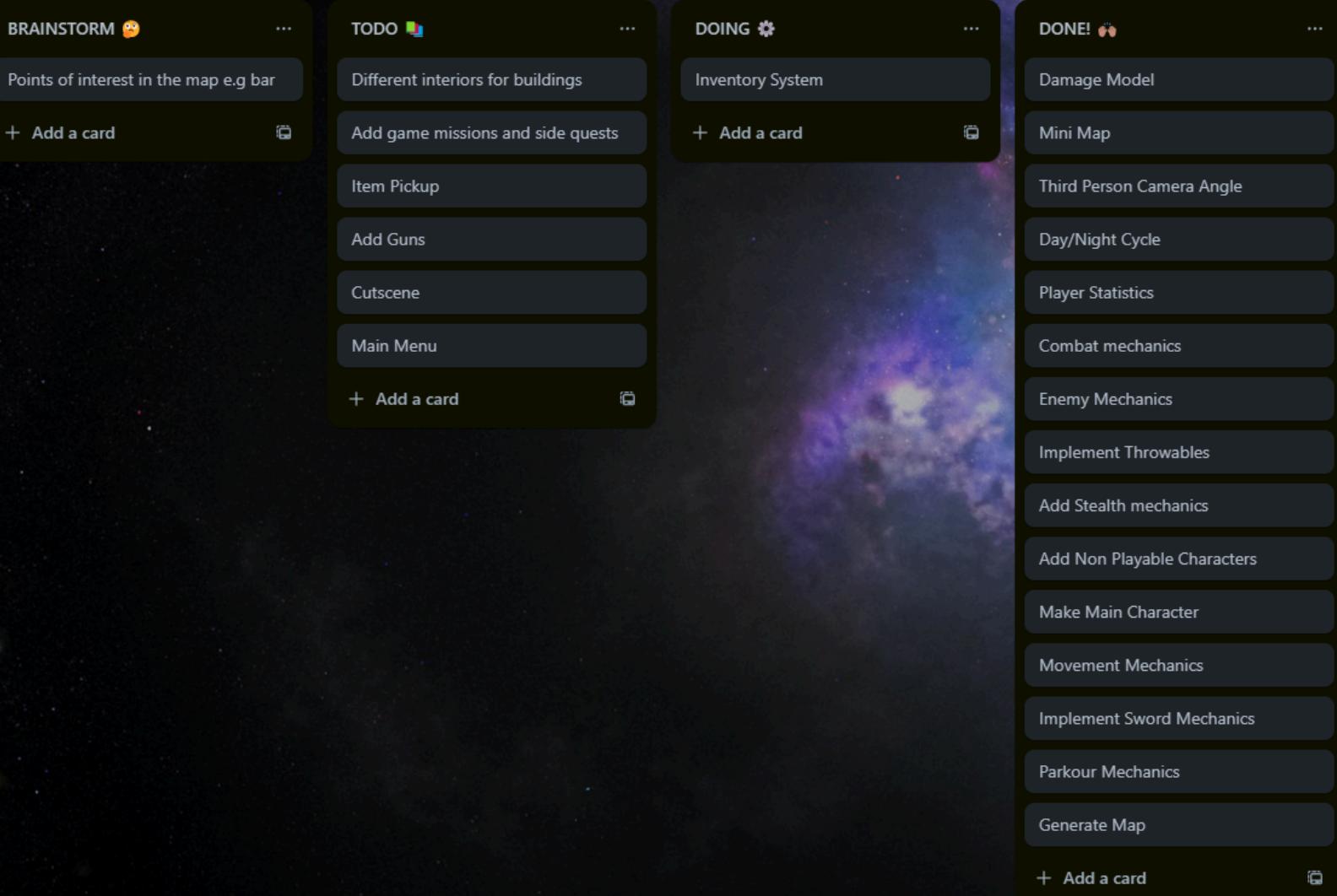
## Burn down chart

The Hoax Burndown Chart



# Trello board Screenshots





# Boundary Value Analysis for Player Movement Speed

## Identifying the Boundary Conditions:

- *Minimum Speed:*  
Determining the minimum allowable movement speed.
- *Maximum Speed:*  
Identifying the maximum speed at which the player can move without causing unintended issues.

## Defining Test Scenarios:

- *Test Case 1: Minimum Speed*

Expected Outcome: Confirm that the player can move and control the character at the minimum speed.

- *Test Case 2: Minimum Speed + 1:*

Expected Outcome: Ensure that the player can navigate the environment effectively without movement issues.

- *Test Case 3: Maximum Speed:*

Expected Outcome: Confirm that the player moves at the intended maximum speed without adverse effects.

- *Test Case 4: Maximum Speed - 1:*

Expected Outcome: Ensure that the game handles speeds above the maximum threshold gracefully (e.g., by capping the speed).

## Execute and Analyze Results:

- *Monitoring player movement behaviour, responsiveness, and any unexpected issues or glitches.*
- *Recording and analyzing the results, noting any discrepancies or areas for improvement.*

## Testing and Optimization:

- *Optimizing player movement mechanics.*
- *Considering additional factors such as acceleration, deceleration, and environmental interactions that may impact player movement.*

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## **Lesson Learnt**

### **1. Project Planning :**

We used Agile methodologies (e.g., sprints, backlog grooming) to adapt to changing priorities and enhance collaboration.

### **2. Team Communication and Collaboration:**

- We fostered a collaborative environment where team members feel comfortable sharing ideas and seeking help.
- We use version control systems (e.g., Git) to manage code changes and facilitate collaboration on shared assets.

### **3. Time Management:**

We allocated sufficient time for testing, debugging, and iteration to ensure a polished final product.

### **4. Skills Development:**

We experimented with different game mechanics, graphics, and user interfaces to broaden our technical expertise.

### **5. Documentation:**

- We conducted post-mortem reviews to identify lessons learned, successes, and areas for improvement.
  - We shared project outcomes and experiences with peers and instructors through presentations or reports.
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