

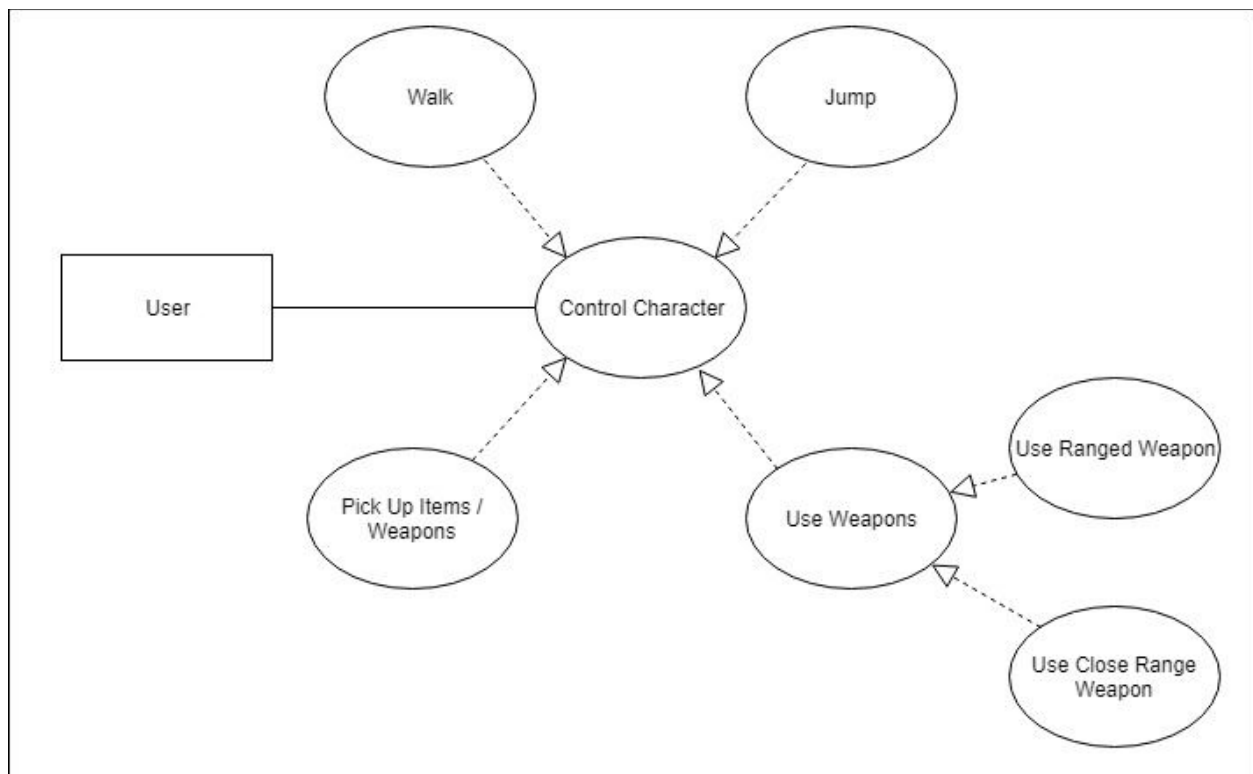


Preston Stephens
CS 383
Champion Document

Introduction

My feature is the implementation of the user's in-game character as well as the NPCs. These characters will need to be able to interact with their environment as well as with each other. The user's character should be able to navigate obstacles and fight enemies using key presses. NPCs will behave similar to the user character except with limited intelligence. The user should also be able to pick up and employ various items and weapons.

Use Case Diagram with Scenario



Name: Control Character

Summary: Use keyboard buttons to control character

Actors: User.

Preconditions: The user must have loaded a level and the level must not be paused.

Basic sequence:

Step 1: Accept keyboard input.

Step 2: Determine what action the input responds to (move, pick up item, or attack).

Step 3.1: If attacking, determine which weapon is being used

Step 3.2: If picking up an item, add the item to the item registry

Step 3.3: If moving, move the character as indicated

Exceptions:

Step 1: [Jump] or [Move] is pressed with an object in the way: ignore input.

Step 2: [Pick Up Item] is pressed when no item is available: ignore input.

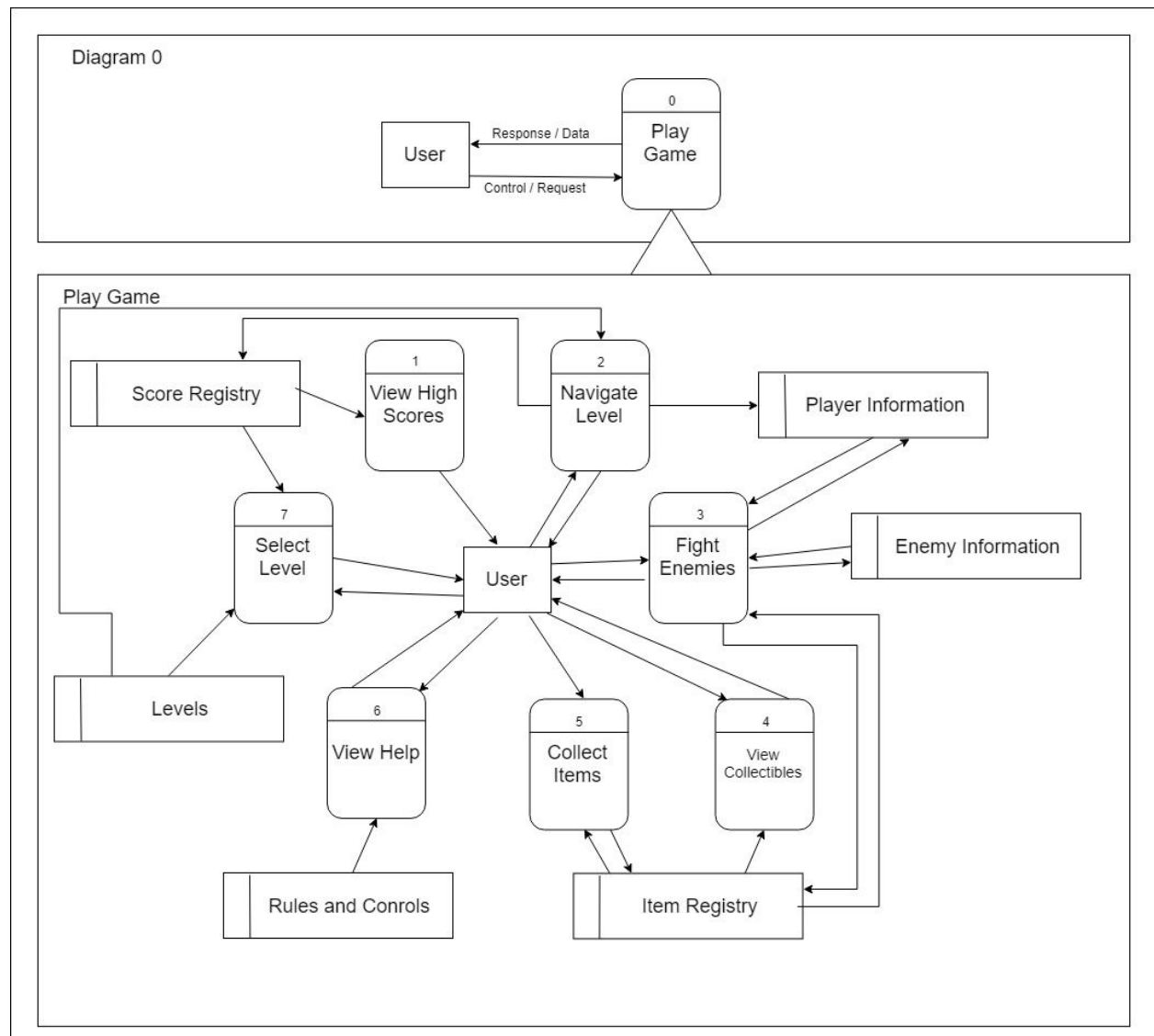
Post conditions: Character is moved to new position or performs task.

Priority: 1*

ID: C01

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Data Flow Diagrams



Process Descriptions

“Navigate Level”

- Move the character through obstacles
 - Jump onto platforms
 - Jump over obstacles and enemies
- Avoid taking damage
- Move side to side and jump to avoid enemies
- Get to the end flag to complete the level
- Try to complete the level in the shortest amount of time to get a high score

“Fight Enemies”

- Use special skills and abilities stored in “Player Information”

- Use weapons to deal damage
 - Long ranged attack
 - Short ranged attack
- Take damage when hit based on "Enemy Information"
 - Decrement variable amount of health when hit depending on the opponent's weapon and attack
 - Lose lives when killed

Acceptance Tests

- Rules to Verify
 - The player's movement is restricted by objects
 - Will not fall through floor
 - Cannot walk inside an obstacle
 - Cannot jump inside of an overhead obstacle
 - Will fall when nothing is below the player
 - Will fall after jumping when appropriate
 - Attacks deal damage
 - Weapons must deal the correct amount of damage
 - The user's player must be able to lose health
 - The NPCs must be able to lose health
 - Cannot take damage after crossing finish line
 - Items are placed into the item registry when picked up
 - The player can have more than one of the same item
 - Items are removed when used or discarded

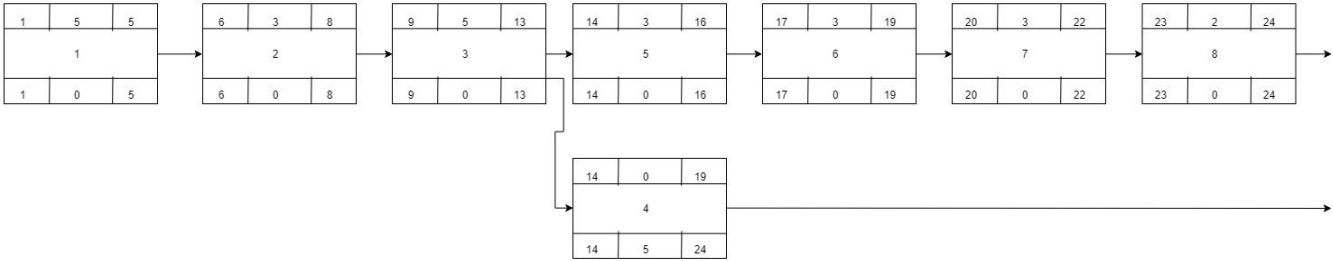
Timeline

Work Items

Task	Duration	Predecessor Task(s)
1. Attain Requirements	5	N/A
2. Basic Functional Prototype	3	1
3. User-NPC Interactions	5	2
4. Documentation	6	3
5. Animation Design	3	3

6. Visual Design	3	5
7. Unit Testing	3	6
8. System Testing	2	7

Pert Diagram



Gantt Timeline

