# Champion Document

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1 BRIEF INTRODUCTION

I will be creating the overworld system. The NPC will be playing through
several levels before he reaches his final destination. The overworld system
provides the means for traveling between the different levels. I will also be
creating a miniature map within each level to show where the NPC in relation
to the end of the level.

2 USE CASE DIAGRAM WITH SCENARIO

2.1 USE CASE DIAGRAM
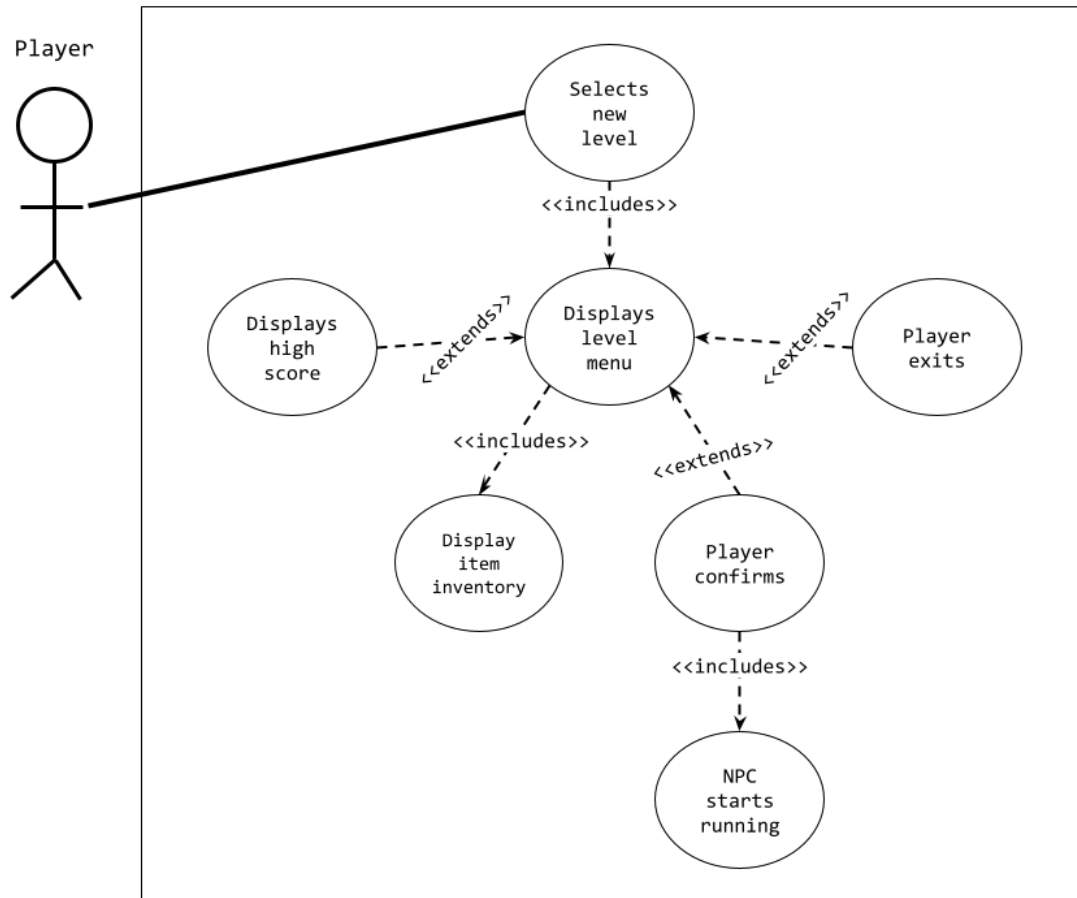
2.2 SCENARIOS

Name: Select New Level

Summary: Player chooses the next level to play.

Actor(s): The player.

Preconditions: Player loaded the game for the first time or player finished a level.

Basic Sequence:

    Step 1: Player selects the next level.

    Step 2: Level menu is displayed.

    Step 3: Displays NPC high score and inventory stats.

    Step 4: If the player presses "Exit," the level menu quits and the player is free to select a new level.

    Step 5: If the player presses "Play," the level menu quits and the NPC performs mini running animation.

Exceptions:

    Step 3: If the player has not played this level, no high score is displayed.

Post Conditions:

    1. Level is generated.

Priority: 1

ID: JP01

3 DATA FLOW DIAGRAM(S) FROM LEVEL 0 TO PROCESS DESCRIPTION FOR YOUR FEATURE
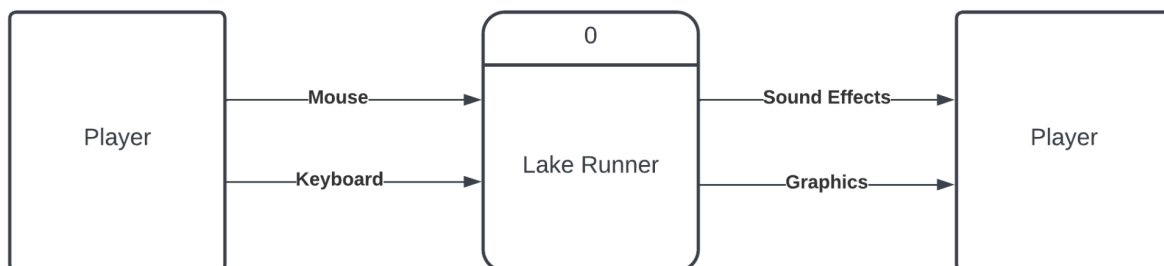
3.1 DATA FLOW DIAGRAMS

Context Diagram

Diagram 0 (Green Feature)

Process 1 — Interact with Item
- Keyboard Input →
- SFX Output →
- GFX Output →
- Update Inventory
- Update Inventory

Process 2 — Create Platform
- Mouse Input →
- SFX Output →
- GFX Output →
- Update Building Material
- Update Runner Inventory
- Update Building Material
- Kill/Block Enemy

Process 3 — Interact with Enemy NPC
- Update Runner Health
- Update Enemy Status
- Send Enemy Data
- Send Runner Inventory
- SFX Output →
- GFX Output →

Process 4 — Create Overworld
- Mouse Input →
- SFX Output →
- GFX Output →
- Send Runner Pos
- Create Level Data
- Select Level

Process 5 — Generate Level
- Create Items
- Create Runner
- Create Enemy NPCs
- Load Level Data

Process 6 — Show Menus and Overlays
- Mouse Input →
- Send Runner Stats
- Send Runner Inventory
- Send Enemy Stats
- GFX Output →

Data Stores
- Item Data
- Runner NPC Data
- Enemy NPC Data
- Terrain Data

Diagram 4

SFX Output

GFX Output

4.1

Generate
Overworld Map

Create Terrain Data

Terrain Data

Send Item Inventory

Item Data

4.3

Generate Level
Map

GFX Output

Send Level High Score

Runner NPC Data

Send Runner Pos

Player

Mouse Input

4.2

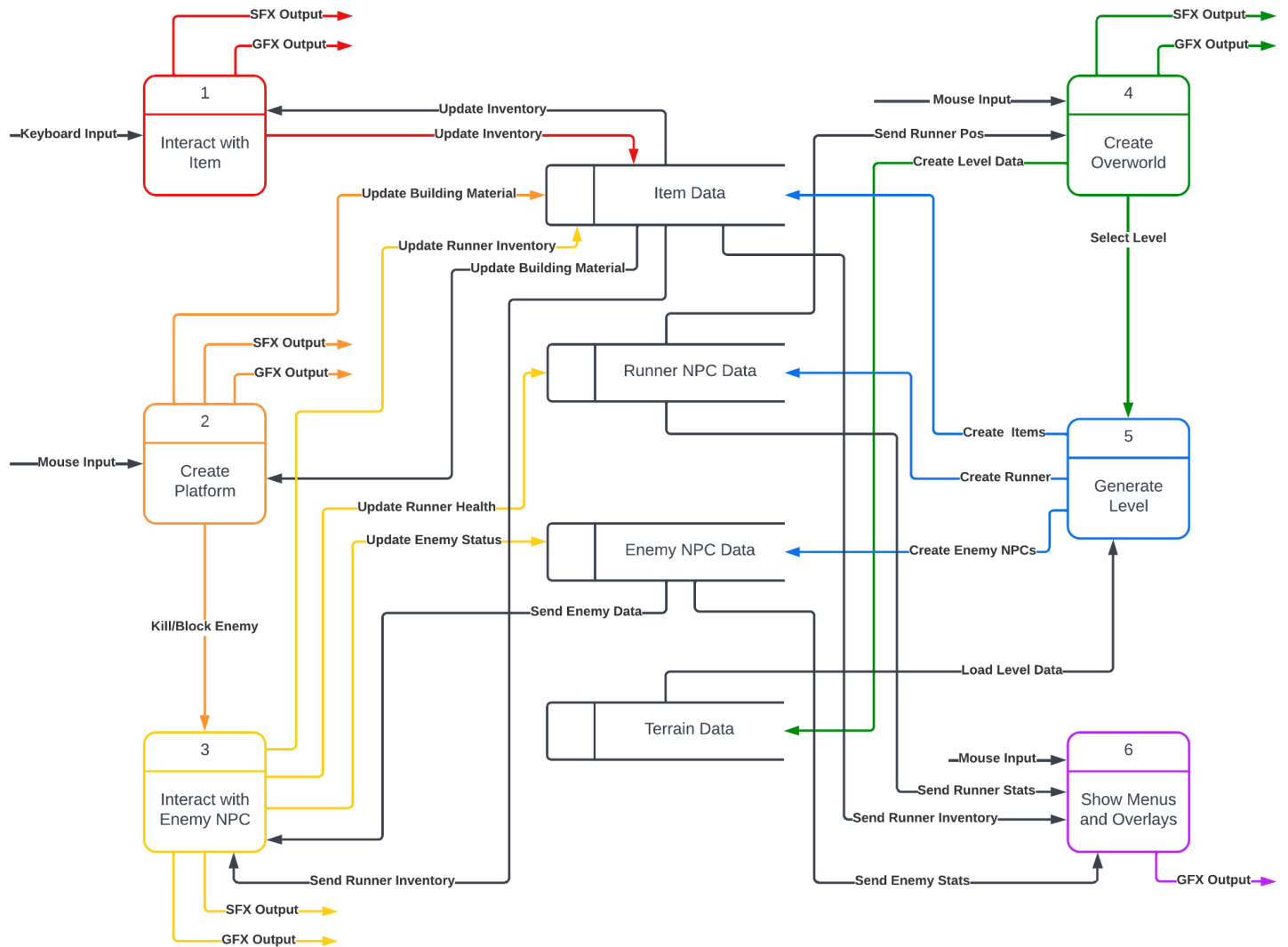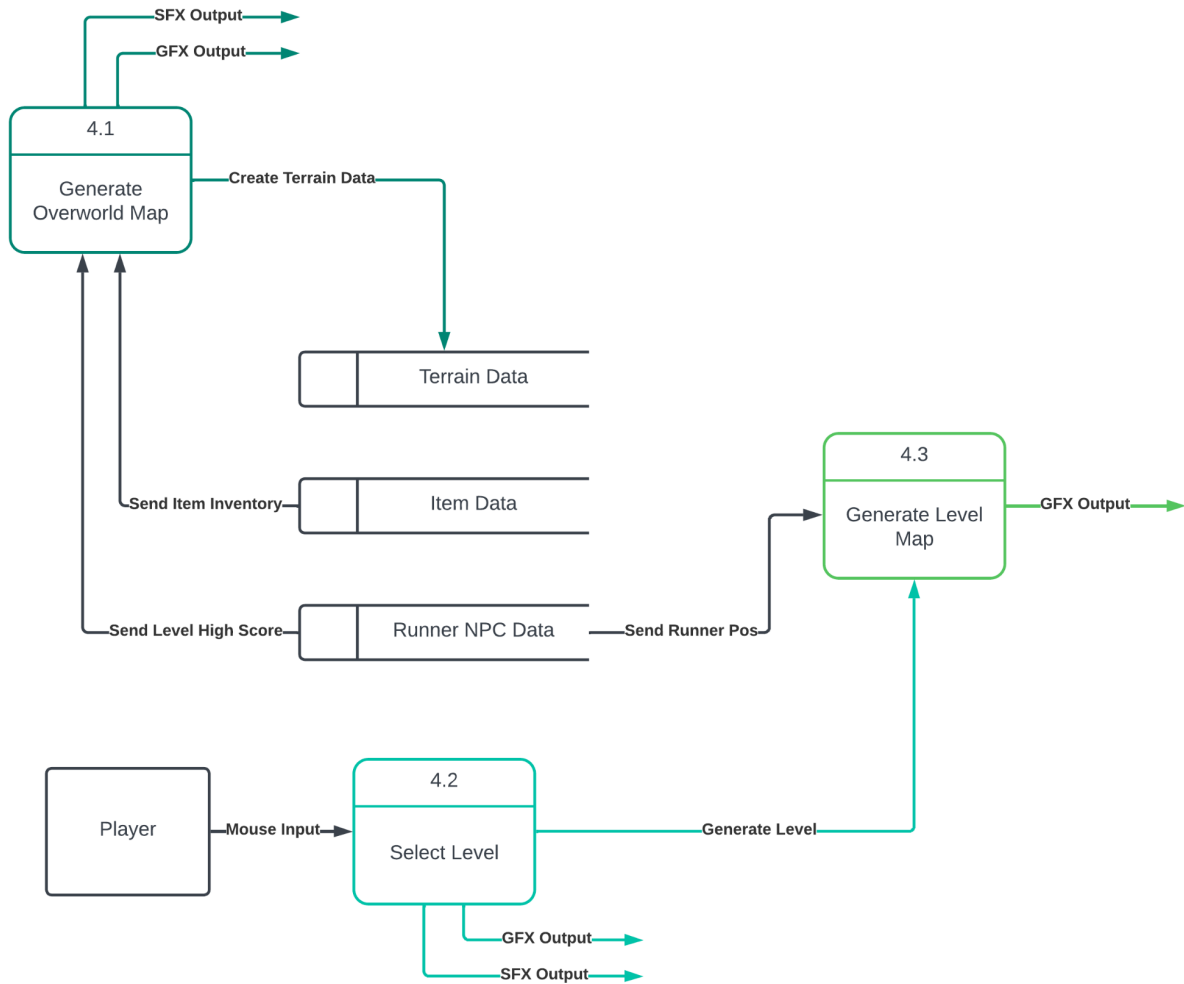Select Level

Generate Level

GFX Output

SFX Output

3.2 PROCESS DESCRIPTION

Generate Overworld Map

```
Display all levels
Display all enemy NPCs
Display NPC location
```

Select Level

```
Display level menu
     IF level == played THEN
          Display high score
```

```
            ENDIF
            Display item inventory
            IF player clicks "Play" THEN
                  Close level map
                  Play NPC running animation
                  Generate level map
            ENDIF
            IF player clicks "Exit" THEN
                  Close level map
            ENDIF
```

Generate Level Map

```
      Display start and end points
      Display item and enemy NPC locations
      Display NPC location
      IF player has died in this level before THEN
            Display last died location
      ENDIF
      IF player moves THEN
            Update NPC location
      ENDIF
      IF player picks up item THEN
            Removed specific item display
      ENDIF
```

4 ACCEPTANCE TEST

4.1 NPC Interaction with Map

Selecting and pressing "play" on a menu 100 times. Every instance should cause the NPC on the overworld map to perform a short running animation from the current lake in the direction of the destination lake.

4.2 Inter-Level Map Display

Load each level 100 times. After selecting a level and loading it, a miniature map should be displayed in one of the corners; this map should reflect the current start, destination, terrain, and enemy NPCs. Loaded items should be displayed as well.

4.3 Inter-Level Map Update w/ Item Pick Up

Pick up an item 100 times in a level. The miniature map should reflect that an item was picked up. I.e. before an item is picked up, a dot should represent its current location. After the NPC picks up the item, the dot should no longer be displayed.

4.4 Inter-Level Map Update w/ Last Died Location

Kill the NPC and load a new level 100 times. The miniature map denote the last location the NPC died with an X mark.

5 TIMELINE

5.1 WORK DIAGRAM

Tasks	Duration (hrs)	Dependent On Task(s)
A) Set up Unity	1	--
B) Requirements collection	5	--
C) Create map design	7	A,B
D) NPC interaction with map	5	C
E) NPC SFX	1	D
F) Level selection	2	C
G) Level selection menu	4	F
H) Test level selection	3	G
I) Overworld SFX	1	C
J) Create inter-level map	7	C
K) Reflect NPC location in inter-level map	6	J
L) Test NPC location in inter-level map	5	K

5.2 PERT DIAGRAM

12	5	17
	[D] NPC interaction with map	
24	12	29

17	1	18
	[E] NPC SFX	
29	12	30

0	1	1
	[A] Set up Unity	
4	4	5

5	7	12
	[C] Create map design	
5	0	12

0	5	5
	[B] Requirements collection	
0	0	5

12	2	14
	[F] Level selection	
21	9	23

14	4	18
	[G] Level selection Menu	
23	9	27

18	3	21
	[H] Test Level selection	
27	9	30

12	1	13
	[I] Overworld SFX	
29	17	30

12	7	19
	[J] Create inter-level map design	
12	0	19

19	6	25
	[K] Reflect NPC location in inter-level map	
19	0	25

25	5	30
	[L] Test NPC location in inter-level map	
25	0	30

5.3 GANTT CHART