# 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
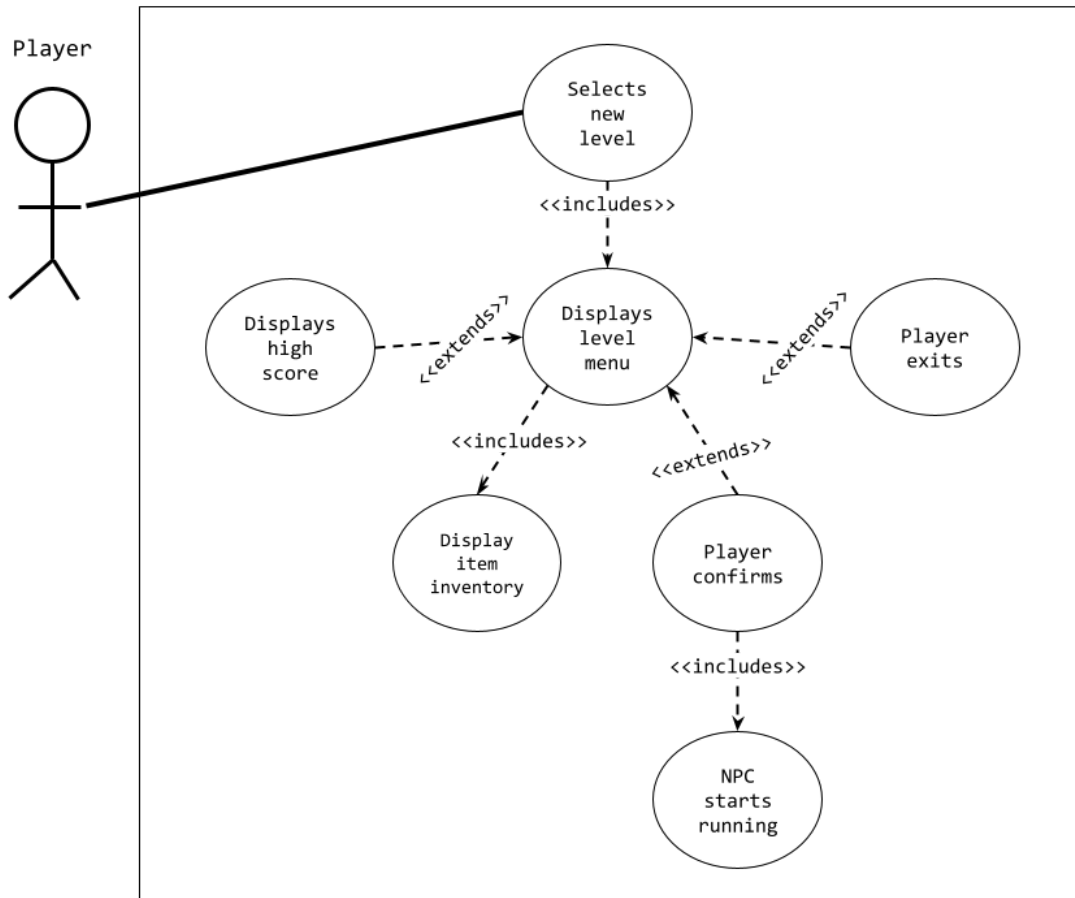
2.2 SCENARIOS

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:

1. Player selects the next level.
2. Level menu is displayed.
3. Displays NPC high score and inventory stats.
4. If the player presses "Exit," the level menu quits and the player is free to select a new level.
5. If the player presses "Play," the level menu quits and the NPC performs mini running animation.

Exceptions:

1. 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 → 1 Interact with Item
- SFX Output
- GFX Output
- Update Inventory
- Update Inventory

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

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

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

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

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

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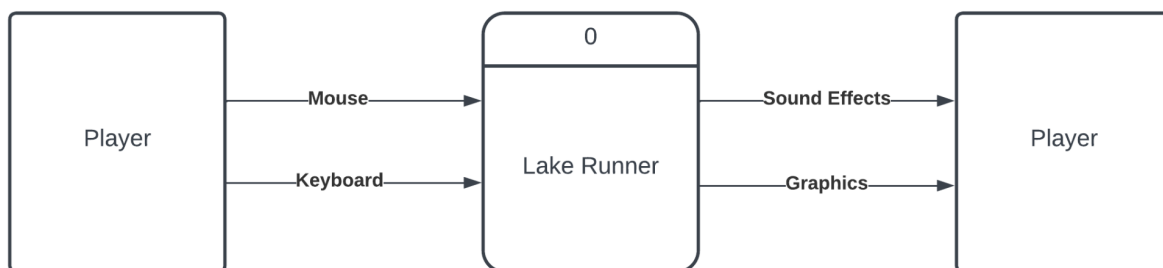- Runner NPC Data
- Enemy NPC Data
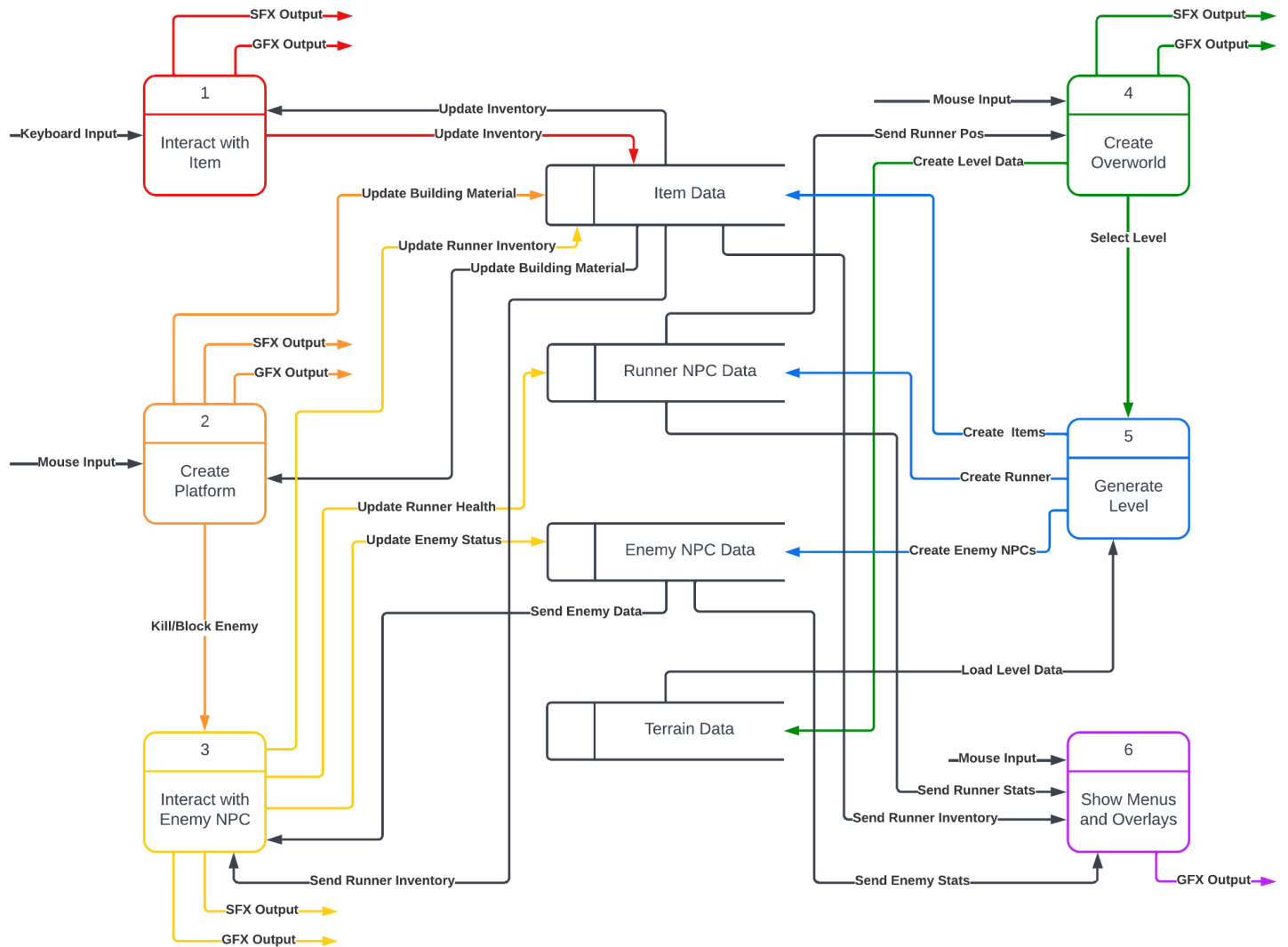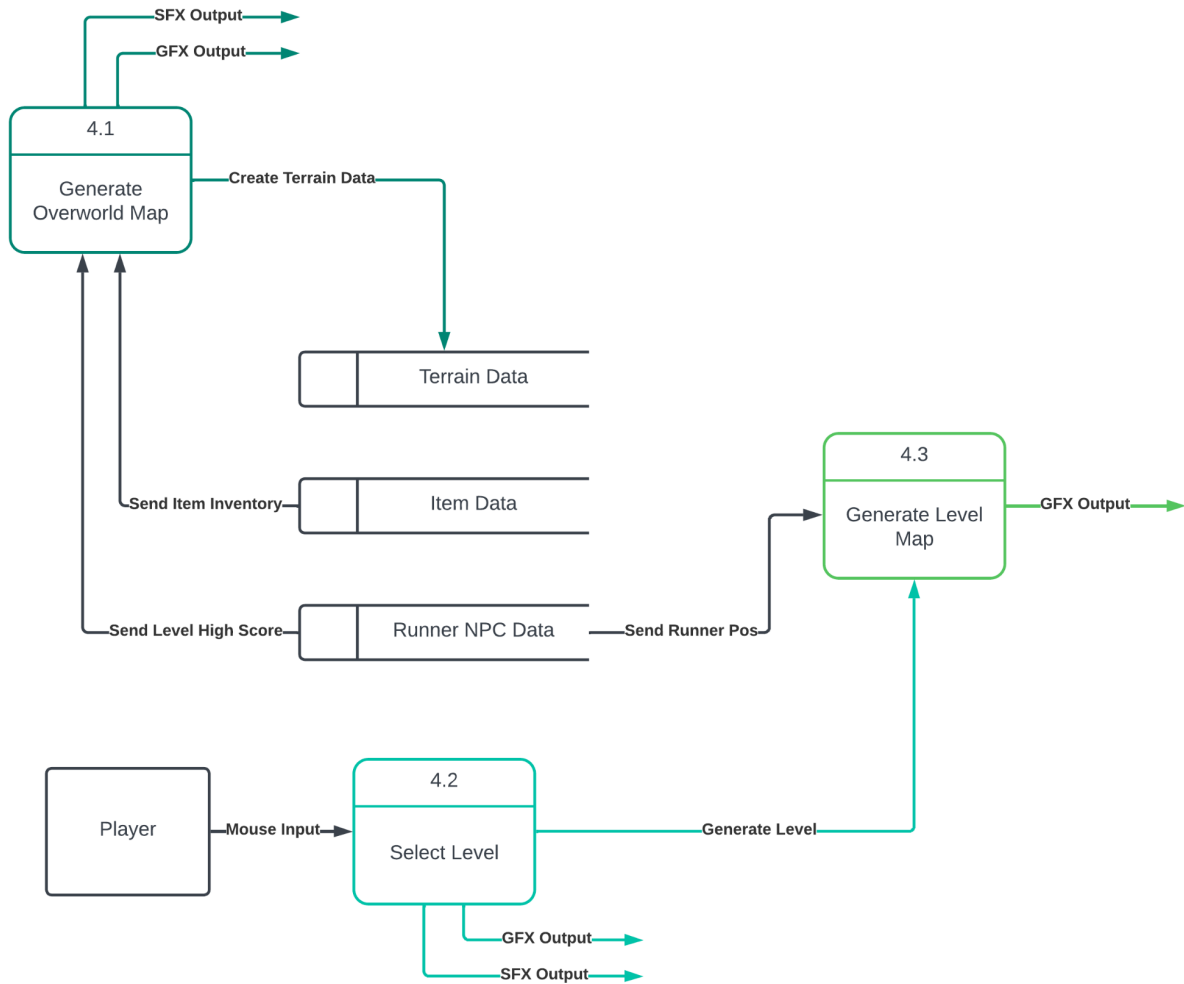- Terrain Data
- Send Enemy Data

Diagram 4

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

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

TASK	HOUR...																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A																														
B																														
C					A,B																									
D												C																		
E														D																
F												C																		
G														F																
H																			G											
I												C																		
J												C																		
K																			J											
L																									K					