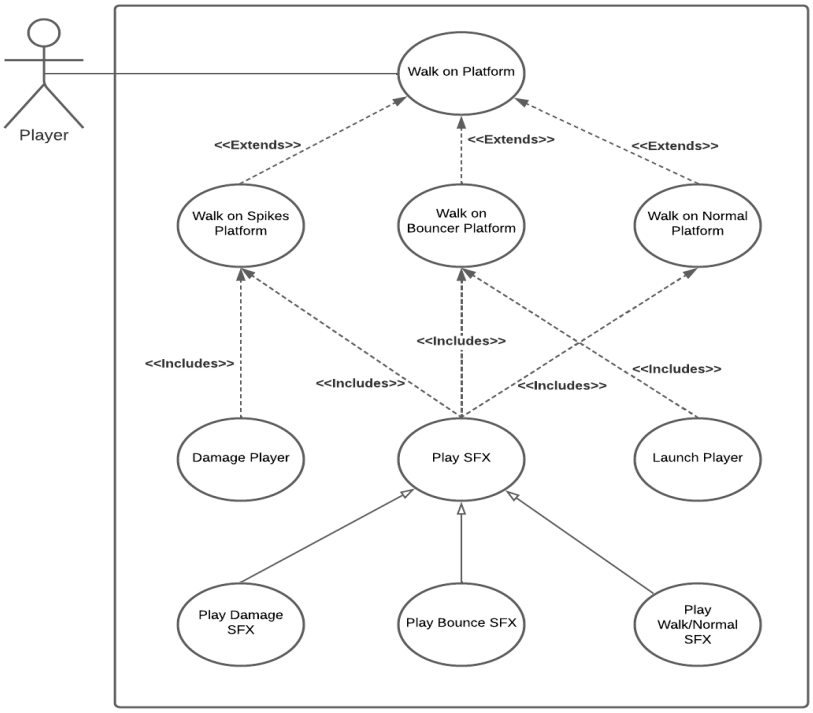
Name Chadwick Goodall Mark _____/50

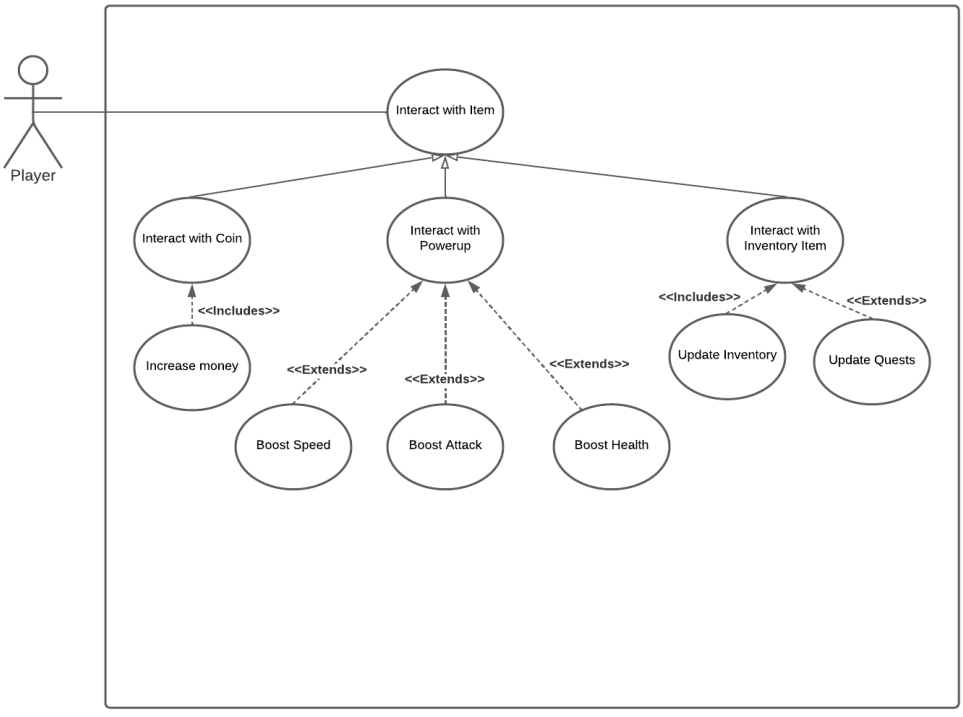
1. Brief introduction _/3

The feature I am responsible for includes the level design of the dungeon platform levels. This will include the aspects of platform sidescrolling and level traversal, enemy placement, as well as obstacles and hazards placement and interaction with the player character.

2. Use case diagram with scenario _14

Use Case Diagrams





Scenarios

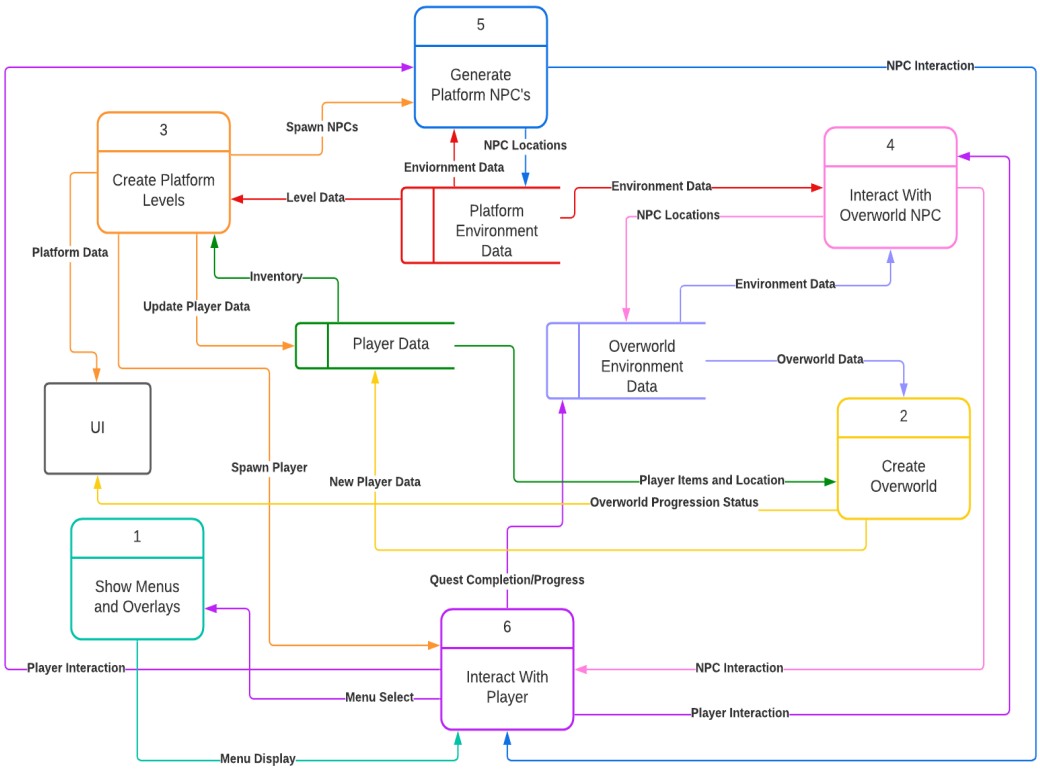
Name: Interact with spike platform
Summary: The player character walks onto a spike platform
Actors: Player.
Preconditions: Level has been initialized with a spike platform.
Basic sequence:
Step 1: Player moves.
Step 2: Player enters same worldspace of spike tile
Step 3: Damage player sound effect is played.
Step 4: Damage is applied to the player.
Exceptions:
Step 2: Platform is not a spike tile
Post conditions: Player health is decreased and updated
Priority: 2
ID: SC1.1

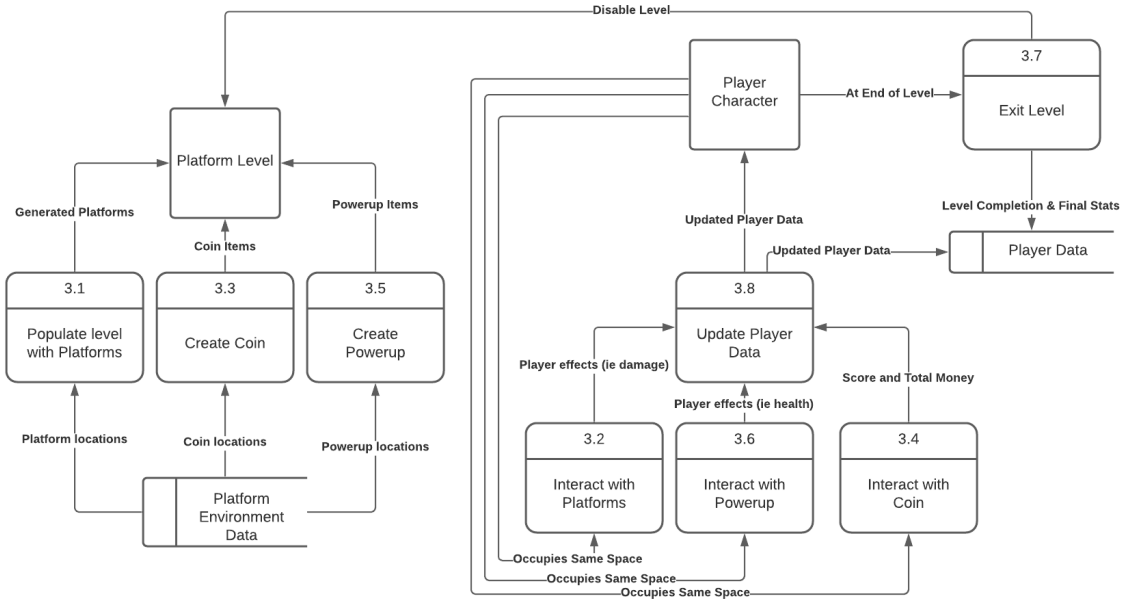
Name: Interact with inventory item.
Summary: The player character Interacts with an inventory item.
Preconditions: Level has been initialized with an inventory item inside.
Basic sequence:
Step 1: Player moves.
Step 2: Player enters same worldspace of inventory item.
Step 3: Item is added to player's inventory.
Step 4: Item is displayed in inventory UI.
Exceptions:
Step 3: Item is a key item and updates a quest objective.
Post conditions: Item is now added to player's inventory.
Priority: 2
ID: SC2.3

3. Data Flow diagram(s) from Level 0 to process description for your feature _____14

My process is process number 3, highlighted in orange.

Data Flow Diagrams





Process Descriptions

Interact with Coin:

IF collides with character:

Play money sound effect

Increase money

Set enabled false

ELSE

Run animation

Create Coin:

Initialize coin value

Place coin in platform level

Run animation

4. Acceptance Tests _____9

Tile Interaction:

The input to this test will be the spawning of a character above the tile and dropping them onto it. This will then log whether or not the correct script/function was called in response and set a flag. These responses will be recorded and saved for a number of iterations through this test. The test will be ran N times at least in an automated fashion. For spike platforms damage being done to the character will be checked and the total amount of damage should be calculated for N spike falls and compared to an expected value for a constant damage output from the spikes. For bouncy platforms, the player being launched above a certain height will be checked and counted for N number of drops. For each of these tests the expected output should be exactly N multiplied by the damage constant of the spike pit to ensure that the spikes are behaving as planned. N amount of confirmed measurements above a certain point should be recorded for N amount of drops onto bouncy platforms.

Item Interaction:

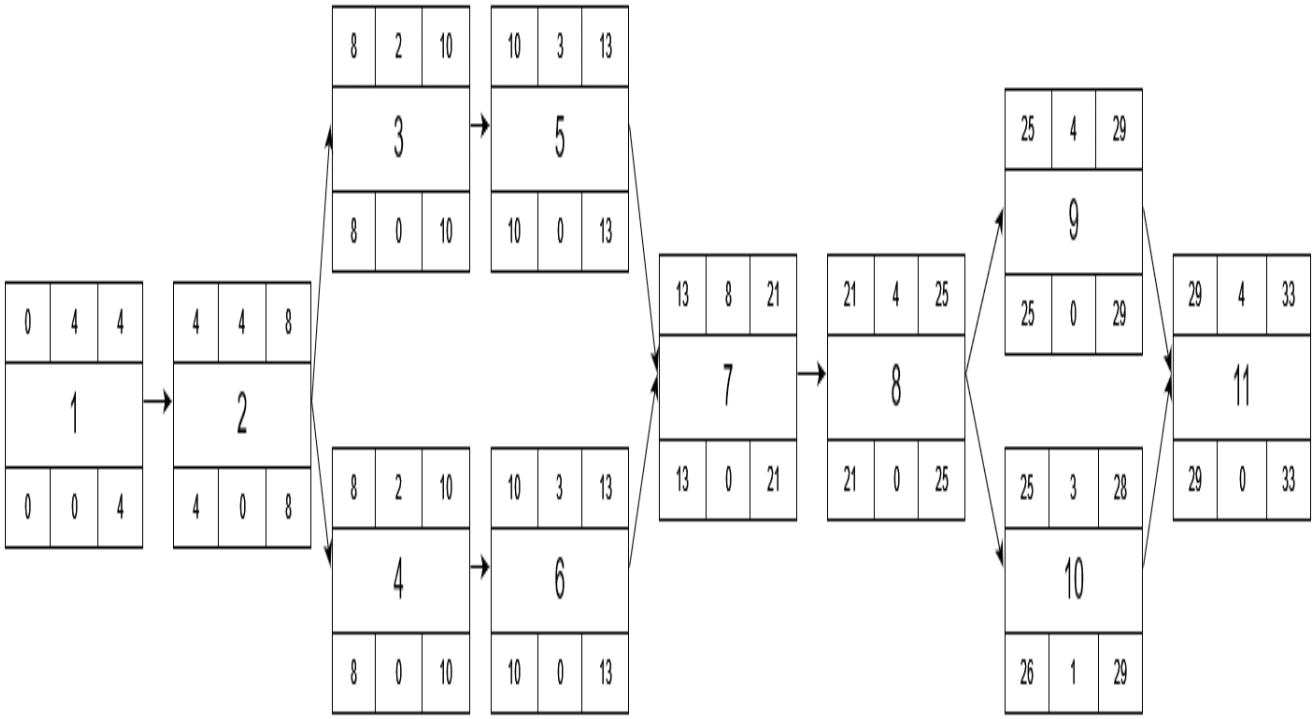
The input of this test will be spawning an item above the character and allowing it to fall on them. A flag should then be set indicating the activation/ interaction with the item. The amount of interactions will be counted and should match exactly how many items were spawned.

5. Timeline _____/10

Work items

Task	Duration (Hours)	Predecessor Task(s)
1. Platform Environment Data Structure Design	4	
2. Platform Environment Data Structure Programming	4	1
3. Item Superclass Design	2	2
5. Item Subclasses Design	3	3
4. Platform Superclass Design	2	2
6. Platform Subclasses Design	3	4
7. Level Design and Creation	8	5, 6
8. Programming	4	7
9. Documentation	4	8
10. Testing	3	8
11. Integration	4	9, 10

Pert diagram



Gantt timeline