Name: Keller Lawson Mark _____/50

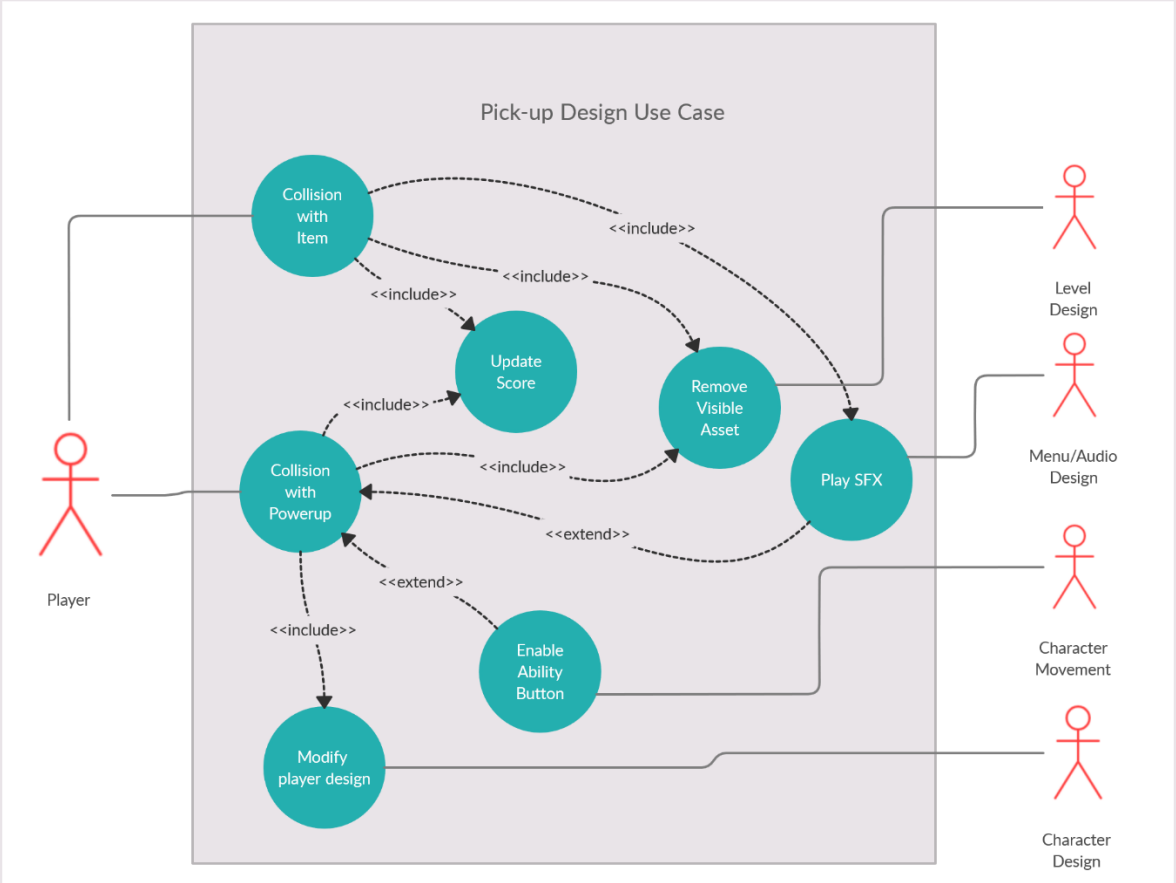
[**Instructions**: Remove everything that is not a heading below and fill in with your own diagrams, etc.]

1. Brief introduction __/3

The feature I am working on is the pick-up handler. There will be two types of pick-ups, items and powerups. Each type of item will have its own methods that need to be called and communicate with other features. For examples, if the player picks up a powerup, then my feature will have to talk to player design, player movement, and audio to change what the player looks like, enable the abilities, and play an audio effect.

2. Use case diagram with scenario __14

Use Case Diagrams



Scenarios

Name: Pick up Power-up

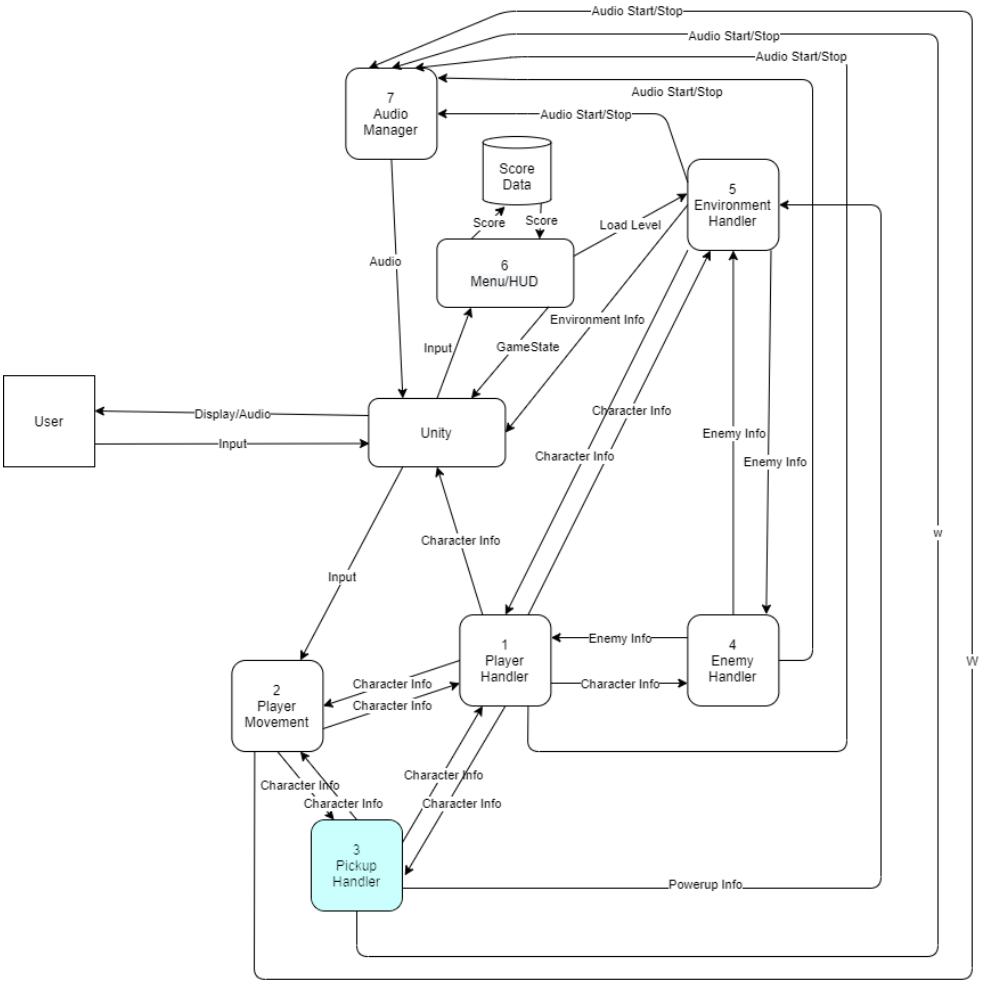
Summary: The player collides with a power-up and collects it changing the player's character.

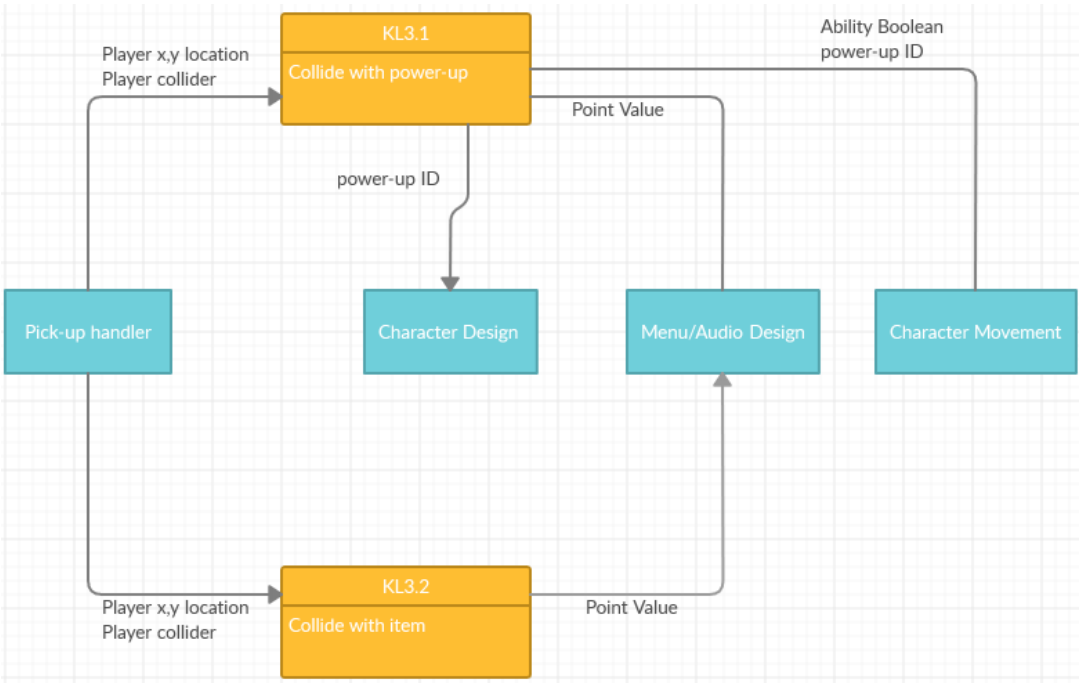
Actors: Player
Preconditions: Player is alive, power-up has spawned.
Basic sequence:
Step 1: Player collides with power-up asset.
Step 2: Sound effect plays
Step 3: Player's appearance changes.
Step 4: Player has use of new ability button
Step 5: Player can now take an additional damage counter.
Step 6: Points are added to score
Exceptions:
Step 1: Player already has the same power-up
Step 2: No changes are made to player, only points added to score.
Post conditions: Player is now able to use new ability.
Priority: 3
ID: KL3.1

Name: Pick up Item
Summary: The player collides with an item and collects it adding points to their score.
Actors: Player
Preconditions: Player is alive, item has spawned.
Basic sequence:
Step 1: Player collides with item asset.
Step 2: Sound effect plays
Step 3: Points are added to score
Exceptions:
Post conditions: Player has points added to score.
Priority: 3
ID: KL3.2
*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

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

Data Flow Diagrams


Audio Start/Stop
Audio Start/Stop
Audio Start/Stop
Audio Start/Stop
Audio Start/Stop
7
Audio
Manager
Score
Data
5
Environment
Handler
Score
Score
Load Level
Audio
6
Menu/HUD
Environment Info
Input
GameState
User
Display/Audio
Input
Unity
Character Info
Character Info
Enemy Info
Enemy Info
w
Character Info
Input
1
Player
Handler
Enemy Info
4
Enemy
Handler
W
2
Player
Movement
Character Info
Character Info
Character Info
Character Info
Character Info
Character Info
3
Pickup
Handler
Powerup Info


KL3.1
Collide with power-up
Player x,y location
Player collider
Ability Boolean
power-up ID
Point Value
power-up ID
Pick-up handler
Character Design
Menu/Audio Design
Character Movement
KL3.2
Collide with item
Player x,y location
Player collider
Point Value

Process Descriptions

Collision with Powerup:

If player collision box collides with power-up asset collision box

If player already has same power-up

Remove power-up asset from level

Increase score by power-up's point value

Else

Remove power-up asset from level

Play SFX of specific power-up

Change player appearance to match power-up

Enable ability use button

Designate ability use button to use power-up's ability

Increase player ability to take damage by 1.

Increase score by power-ups point value

End if

End if

Collision with Item:

If player collision box collides with item asset collision box

Remove power-up asset from level

Increase score by item's point value

End if

4. Acceptance Tests _____9

[Describe the inputs and outputs of the tests you will run. Ensure you cover all the boundary cases.]

Test collision with power-up:

Test collision of basic player(no previous power-up) with power-up a minimum of 25 times the following will have occurred:

- Power-up asset is no longer in game environment
- Sound effect plays
- Player's appearance changes to match player asset relating to that power-up
- Player is able to use ability
- Points added to score

Test collision of player with power-up matching new power-up a minimum of 25 times the following will have occurred:

- Power-up asset is no longer in game environment
- Player's appearance does not change
- Points added to score

Test collision of player with power-up different from new power-up a minimum of 25 times the following will have occurred:

- Power-up asset is no longer in game environment
- Sound effect plays
- Player's appearance changes to match player asset relating to new power-up
- Player is able to use new ability
- Points added to score

Test collision with Items:

Test collision of basic player(no power-up) with item a minimum of 25 times the following will have occurred:

- Item asset is no longer in game environment
- Sound effect plays
- Player's appearance does not change
- Points added to score

Test collision of player with power-up with item a minimum of 25 times the following will have occurred:

- Item asset is no longer in game environment
- Sound effect plays
- Player's appearance does not change
- Points added to score

5. Timeline _____/10

[Figure out the tasks required to complete your feature]

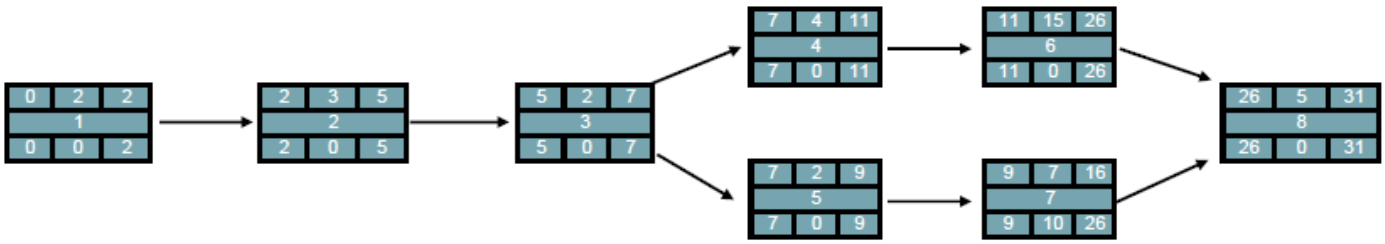
Example:

Work items

Task	Duration (Hours)	Predecessor Task(s)
1. Requirements Collection	2	-
2. Design Pick-ups	3	1
3. Report Pick-ups Design	2	2

4. Power-up Construction	4	3
5. Item Construction	2	3
6. Power-up Programming	15	4
7. Item Programming	6	5
8. Testing	5	4,5

Pert diagram



Gantt timeline