

Name____Kaleb Browning_____

Mark _____/50

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

1. Brief introduction __/3

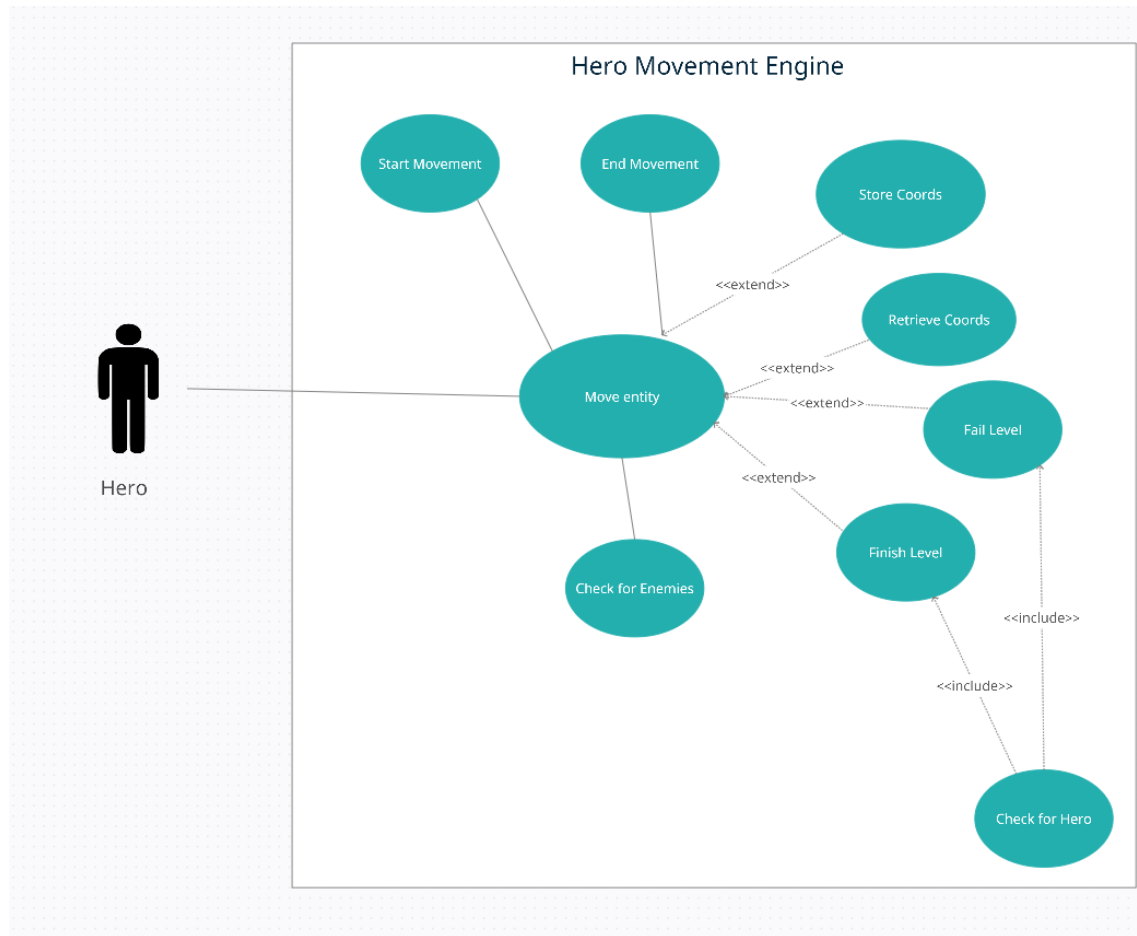
This document outlines the features of hero and enemy movement within the game.

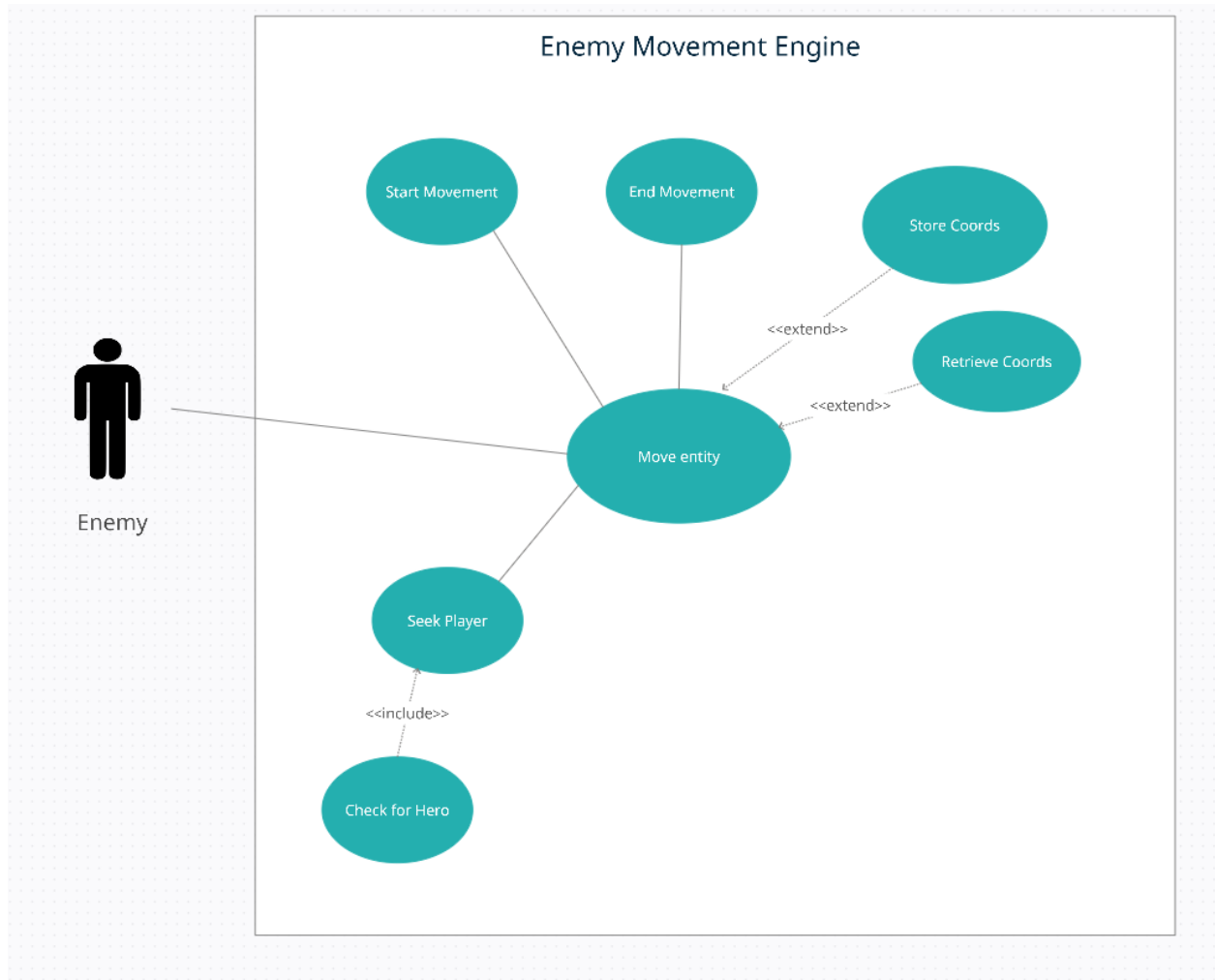
Once the player has placed their tiles and presses start, the hero must move automatically between tiles, and upon the hero entering the tiles, enemies must “flock” to the hero, engaging in combat. This feature will handle the hero movement between tiles and the enemy movement towards the hero.

Additionally, this feature must also not allow the hero to move outside a tile until all threats within said tile are eliminated.

2. Use case diagram with scenario _14

Use Case Diagrams





Scenarios

Name: Hero Begins movement

Summary: The hero begins to move between tiles. This happens at the beginning of the level and after each instance of combat

Actors: Hero, Player

Preconditions: There are no enemies in the current tile

Basic sequence:

Step 1: Movement engine retrieves enemy location information

Step 2: If no information is returned, movement is initialized

Step 3: Destination coordinates are requested

Step 4: The hero sprite is moved from the current coords to the destination coords

Exceptions:

Step 2: Enemy location data is returned

Step 2.1: Enemy movement initialized

Step 2.2: Combat initiated

Step 2.3: Combat finished

Post conditions: The hero moves between tiles

Priority: 1

ID: K01

Name: Hero Stops Movement

Summary: Hero is moving, but must stop to engage in combat

Actors: Hero, Enemies

Preconditions: There are enemies in the current tile

Basic sequence:

Step 1: Movement engine retrieves enemy location information

Step 2: If data is returned, movement is halted

Step 3: Combat and Enemy Movement are called

Exceptions:

Step 2: No enemy location is returned

****See Scenario K01**

Post conditions: Hero stops moving between tiles to fight enemies

Priority: 1

ID: K02

Name: Enemies Start Movement

Summary: Enemies move to hero to engage in combat

Actors: Enemies, Hero

Preconditions: The hero is in the same tiles as the enemies

Basic sequence:

Step 1: Hero enters tile, setting a flag

Step 2: Enemies check for flag, and begin movement once a flag is set

Step 3: Enemies move toward hero

Step 4: Enemies stop once hero within attack range

Exceptions:

Step 3: Another enemy blocks the way

Step 4: Enemy uses another path

Step 5: Enemy moves within the tile until they are within attack range

Post conditions: Enemies move into range and are ready for combat to begin

Priority: 1

ID: K03

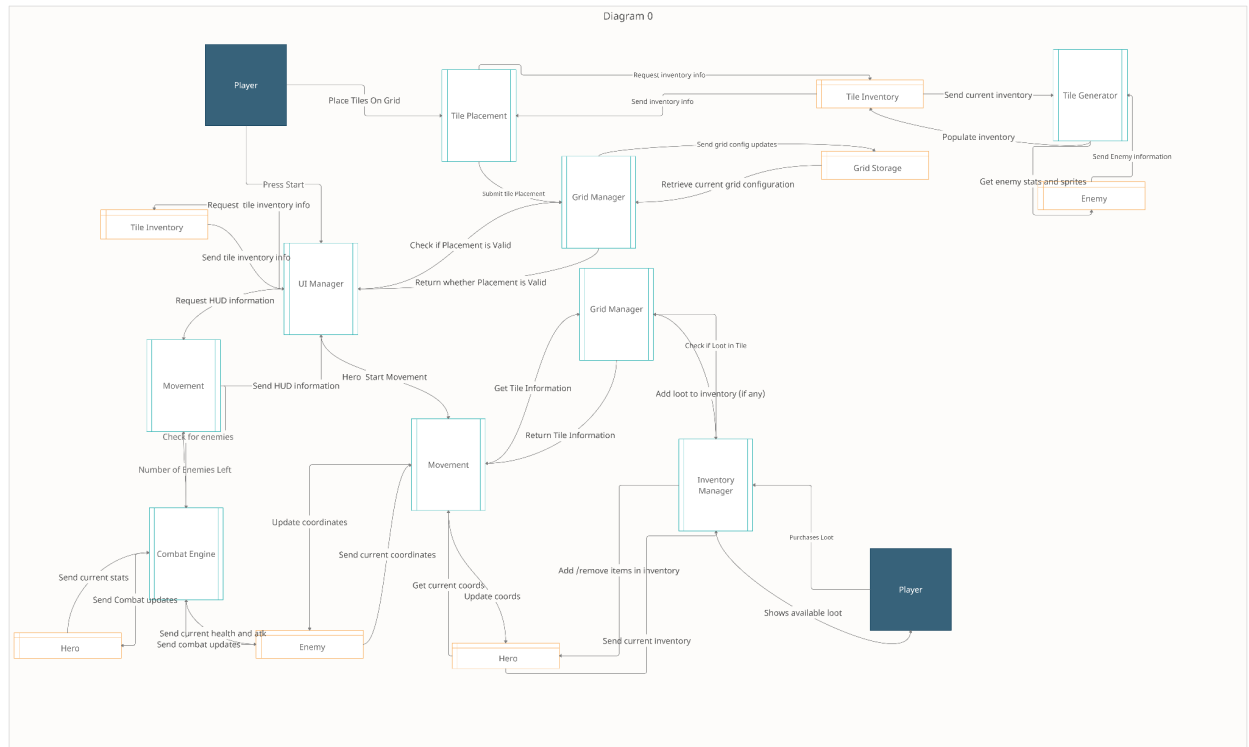
*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

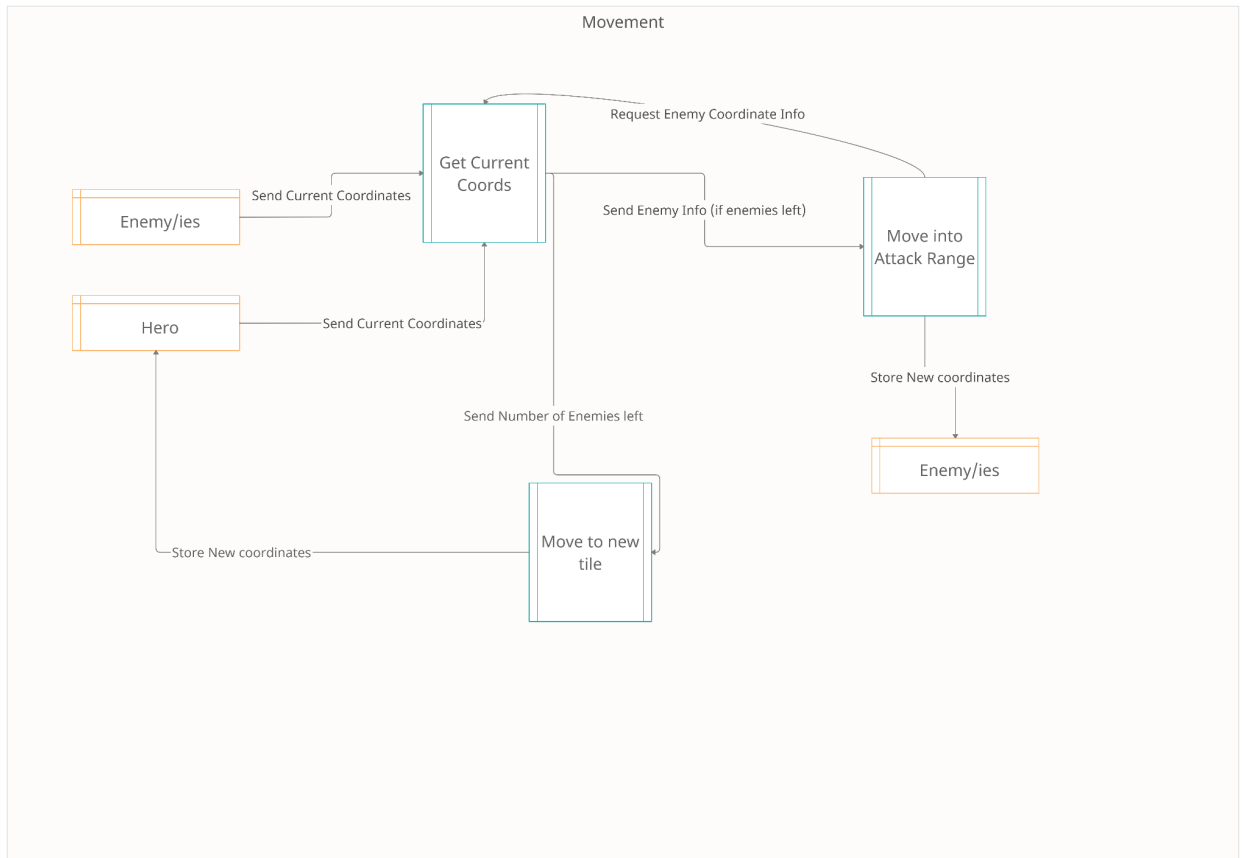
3. Data Flow diagram(s) from Level 0 to process description for your feature 14

[Get the Level 0 from your team. Highlight the path to your feature]

Example:

Data Flow Diagrams





Process Descriptions

GetCurrentCoordinates():

store current hero coordinates

if enemy exists:

for each enemy:

store current x and y

else:

enemy_coordinates = NULL

If enemy_coordinates != NULL:

MoveIntoAttackRange()

else:

MoveToNewTile()

MoveIntoAttackRange():

for each enemy:

move enemy towards enemy

while other entity blocking:

check to left and right

if open spot to left or right:

move there
break
stop within predetermined attack range

MoveToNewTile():
 CheckForLoot()
 GetNextTileCoordinates()
 move player to next tile
 store coordinates within new tile

4. Acceptance Tests _____9

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

Run Within tile with many, many enemies, indestructible hero

inputs: various tiles with varying large numbers of random enemies

outputs:

- number of enemies left in tile
- number of enemies that shared that same coordinates at the same time
-

5. Timeline _____/10

[Figure out the tasks required to complete your feature]

Example:

Work items

Task	Duration (PWks)	Predecessor Task(s)
1. Requirements Collection	5	-
2. NPC Design	6	1
3. Data Collection Design	6	1
4. Documentation	5	2, 3
5. Programming	6	4
6. Testing	5	5

7. Send to Prod	3	6
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Gantt Timeline

