TODO: Add Epic Story for items.
TODO: Expand Overlay/Whatever we call it (ui). Epic to incorporate the menu.

Key: 1 SP = 2 hrs.
Priority: 1(most important) ... 5(least importance).

Player Epic Story

As a player, I want to be able to know the goal(s) of the level, be able to move in cardinal directions. I want to be blocked by walls, pick up keys, swords and invincibility potions, unlock doors, push boulders and activate portals and floor switches. I also want to be able to kill enemies with the sword.

ID: PS1	
Name: Moving the Player	
User Story Description As a player, I would like to be able to move the player character up, down, left and right so I can complete the level.	
Acceptance Criteria	● A player is able to press on the arrow keys, and the player character will move 1 square in the corresponding direction.
Estimate: 2SP	
Priority: 1	

ID: PS2	
Name: Picking up Items	
User Story Description As a player, I would like to be able to pick up Keys and Swords to add to Inventory.	
Acceptance Criteria	● When a player character moves onto the same square as a Key or Sword, it is picked up. (See ES6, ES10).
Estimate: 3SP	
Priority: 2	

ID: PS3
Name: Pushing Boulders
User Story Description As a player I would like to be able to push Boulders so that I can move it onto certain squares.

Acceptance Criteria	● If a player moves onto a square with a boulder, the boulder is pushed 1 square in the corresponding direction of the player's movement onto it. The player takes its previous square. ● If a boulder is blocked in that direction (see ES7) then the boulder does not move, and the player does not move either.

Estimate: 4SP
Priority: 3

ID: PS4
Name: Using Swords
User Story Description As a player I would like to use the Sword in my Inventory to kill Enemies.

Acceptance Criteria	● If a player has a sword in their inventory and they press the spacebar, the player will swing their sword (see ES10). ● The sword swing will be in the direction that the player character is facing - that is, in the last direction the player tried (whether successful or not) to move in.

Estimate: 4SP
Priority: 2

ID: PS5
Name: Using Keys
User Story Description As a player I would like to use the Key in my Inventory to open the corresponding Door.

Acceptance Criteria	● A player is able to move onto the corresponding locked door with a key in order to unlock it. (See ES6).

Estimate: 2SP

Priority: 3

ID: PS6
Name: Using Invincibility Potions
User Story Description As a player I would like to pick up and use the Invincibility Potion to become invincible.

Acceptance Criteria	● If a player moves onto a square with an invincibility potion, the invincibility potion is removed from that square, and used. (See ES11).

Estimate: 3SP

Priority: 4

ID: PS7
Name: Enter Portals
User Story Description As a player I would like to enter a Portal to exit its corresponding Portal.

Acceptance Criteria	● If a player moves onto a square where a portal is, the player is teleported through the portal (see ES9). ● A player character will not enter the portal unless they move into it to prevent infinite teleportation bugs.

Estimate: 5SP

Priority: 3

ID: PS8
Name: Pick up Treasure
User Story Description As a player, I would like to be able to pick up Treasure to add to Inventory.

Acceptance Criteria	● If a player moves onto a square where treasure is present, it is picked up (see ES3).
Estimate: 2SP	
Priority: 2	

ID: PS9
Name: Using the Exit
User Story Description As a player, I would like to be able to go to the Exit to finish the level.

Acceptance Criteria	● If a player moves onto a square with an exit, the player uses the exit (see ES2).
Estimate: 2SP	
Priority: 2	

Enemy Epic Story
As an enemy I would like to move constantly by the shortest path to the player. If I move onto the player character, they die instantly. If the player is invincible, I would like to move away from the player.

ID: ENS1
Name: Move towards the Player
User Story Description As an enemy, I would like to move by the shortest path towards the player character to approach them.

Acceptance Criteria	● An enemy should travel at a constant rate using the shortest path towards the player. ● An enemy can only move in cardinal directions, not in diagonals.
Estimate: 5SP	
Priority: 2	

ID: ENS2	
Name: Killing the Player	
User Story Description As an enemy, I would like to move onto the player character to kill them.	
Acceptance Criteria	- When an enemy contacts the player character, the player character is instantly killed, and the player character's sprite is removed from its square. - When the player is killed, the level resets to its initial state.
Estimate: 2SP	
Priority: 2	

ID: ENS3	
Name: Escaping the Player	
User Story Description As an enemy, I would like to move away from the player when they are invincible to survive.	
Acceptance Criteria	When the player character obtains invincibility, the enemy should move away from the player character, travelling away from the player character.
Estimate: 2SP	
Priority: 4	

Entity Epic Story
Each entity should interact with the player character in their own unique way, and in some cases with other entities.

ID: ES1
Name: Wall Interaction
User Story Description A wall should be able to block the player's and enemy's movement on its square to prevent access into specific, predefined areas.

Acceptance Criteria	● If any entity (player, enemy, boulder) attempts to move into the square a wall is in, the entity will fail and instead remaining in the location prior to that attempted movement.

Estimate: 2SP

Priority: 1

ID: ES2

Name: Exit Interaction

User Story Description
An exit should be able to be moved onto by the player character to finish the level.

Acceptance Criteria	● If the player uses an exit (see PS9) and has completed all their goals (see OS1), the level is completed and ends. ● If the player uses an exit and not all goals have been completed, no interaction occurs, and the square is treated as a normal path. ● If an enemy moves onto the exit entity, no interaction occurs, and the square is treated as a normal path.

Estimate: 2SP

Priority: 2

ID: ES3

Name: Treasure Interaction

User Story Description
A treasure item should be able to be picked up by the player when they move over it to complete the level goal.

Acceptance Criteria	● If a treasure is 'picked up', (see PS8) the treasure is removed from that square. The treasure then is added to a "treasure counter" slot in the inventory which increments (see OS2).

Estimate: 2SP

Priority: 2

ID: ES4
Name: Locked Door Interaction
User Story Description A locked door should be able to block player's and enemy's movement through its square to require specific items before progressing.

Acceptance Criteria	- If the player character attempts to move into the square a locked door is in without its corresponding key, the player will fail and instead remaining in the location prior to that attempted movement. - If the player character attempts to move into the square a locked door is in with its corresponding key, the locked door is unlocked, and switches sprites to an unlocked door (see ES5). - If any non-player entity attempts to move into the square a locked door is in, the entity will fail and instead remaining in the location prior to that attempted movement.

Estimate: 2SP
Priority: 3

ID: ES5
Name: Unlocked Door Interaction
User Story Description An unlocked door should be able to be moved through by all entities just like a path to allow for progression.

Acceptance Criteria	If any entity attempts to move onto the square an unlocked door is in, then the entity moves onto the square, ignoring the unlocked door.

Estimate: 2SP
Priority: 3

ID: ES6
Name: Key Interaction

| **User Story Description** |
| A key should be able to unlock its corresponding door to allow for further movement in the level. |

| **Acceptance Criteria** | ● When a player character picks up a key, (see PS2) it should add the entity to the inventory. The entity should be removed from the square the player is on.
 ● If the player picks up a Key (K2) while holding a Key (K1) in the inventory, K2 is added to the inventory and removed from the square the player is on, and K1 is placed on the square the player is on and removed from inventory.
 ● If a key is used on a locked door, it becomes unlocked. (see ES4, ES5). |

| **Estimate:** 2SP |

| **Priority:** 3 |

| **ID:** ES7 |

| **Name:** Boulder Interaction |

| **User Story Description** |
| A boulder should be able to be pushed by the player and trigger floor switches so that they may progress. |

| **Acceptance Criteria** | ● When a boulder is pushed, it will move correspondingly. (see PS3).
 ● If a boulder tries to move into any entity other than a floor switch or unlocked door, it will fail and instead remain in the square prior to that movement, and the pushing entity will also fail to move.
 ● If the boulder is pushed onto a floor switch, it triggers the floor switch, and moves into the same square as the floor switch. (see ES8). |

| **Estimate:** 4SP |

| **Priority:** 3 |

| **ID:** ES8 |

| **Name:** Floor Switch Interaction |

| **User Story Description** |
| A floor switch should be able to have a boulder pushed onto it so it can trigger. |

Acceptance Criteria	● If any entity attempts to move onto the square a floor switch is in, then the entity moves onto the square, ignoring the floor switch.
	● If a boulder moves onto the square a floor switch is in, then the floor switch is triggered.
	● If a boulder moves off the square a floor switch is in, then the floor switch is untriggered.

Estimate: 3SP

Priority: 5

ID: ES9

Name: Portal Interaction

User Story Description
A portal should be able to be entered by a player character so they can be teleported to the corresponding portal.

Acceptance Criteria	● If a player character teleports through a portal, they are moved to the square the corresponding portal is on instantly.
	● Any other entity that attempts to move onto the square the portal is on will fail and instead remain in the square prior to that movement (enemies cannot use portals).
	● Portals transport the player character in both directions. Each portal can be entered and exited from.

Estimate: 5SP

Priority: 3

ID: ES10

Name: Sword Interaction

User Story Description
A sword should be able to be swung in order to kill enemies.

Acceptance Criteria	- When a player character picks up a sword, (see PS2) it should add the entity to the inventory. The entity should be removed from the square the player is on. - If the player picks up a Sword (S2) while holding a Sword (S1) in the inventory, S2 is added to the inventory and removed from the square the player is on, and S1 is placed on the square the player is on and removed from inventory. - A player should be able to attack with the sword in cardinal directions by swinging it. The attack covers 1 square adjacent to the player. (see PS4) - An enemy that is attacked by a sword is killed instantly - they are removed from the square they are on. - A sword can only be used to kill 5 enemies, before it breaks and is removed from inventory.

Estimate: 4SP

Priority: 2

ID: ES11

Name: Invincibility Potion Interaction

User Story Description An invincibility potion should be able to be used by the player character to become invincible and kill enemies.

Acceptance Criteria	- When a player character picks up an invincibility potion, it is used (see PS6). - When an invincibility potion is used, the player enters a state of 'invincibility' and cannot be killed by enemies (see ES2) for the duration (or anything else). - When the player is in a state of 'invincibility', their sprite changes colours to denote this effect. - When a player is in a state of 'invincibility', any enemy the player moves onto is killed. - The state of 'invincibility' ends after a certain set period of time.

Estimate: 3SP

Priority: 4

Game Overlay Epic Story

The overlay should display to the user the items in their inventory in the game. The overlay should also display the goal of the level. The overlay should also provide a method to reset the level, and go back to the menu.

ID: OS1	
Name: Display the Goal	
User Story Description The overlay should display the goal of the level so the user knows how to win the level.	
Acceptance Criteria	● The goal of the level contains the conditions that must be fulfilled for the player to win the level ● The goal is shown to the player through text when the level is played
Estimate: 2SP	
Priority: 3	

ID: OS2	
Name: Display the Inventory	
User Story Description The overlay should display the inventory of the player, so the player knows their items.	
Acceptance Criteria	● Each item that the player can hold (keys, swords, treasure) is shown by a small icon on the screen. ● The sword icon has a counter of how many uses are left in the specific sword. ● The treasure icon has a counter of how many of each item the player character has stored in inventory.
Estimate: 2SP	
Priority: 4	

ID: OS3	
Name: Reset the Level	
User Story Description	

The user should be able to reset the level, to try again if they deadlock themselves.	
Acceptance Criteria	● There is a button on the bottom right labelled 'restart'. ● If the user clicks on the button with the mouse, the level is reset to its initial state.
Estimate: 3SP	
Priority: 4	

ID: OS4	
Name: Return to Menu	
User Story Description The user should be able to return to the menu to select a different level.	
Acceptance Criteria	● There is a button on the bottom right labelled 'menu'. ● If the user clicks on the button with the mouse, the level ends and they are taken to the menu.
Estimate: 2SP	
Priority: 5	

Menu Epic Story
The menu should allow the user to select the level they want to play. The menu should also allow the player to exit the application.

ID: MS1	
Name: Select level	
User Story Description The user should be able to select a level, to play the level they want.	
Acceptance Criteria	● There is large, unclickable text on the menu which is labelled 'Select a Level'. ● Under the text, there is a number of buttons, which each correspond with a level, and labelled appropriately with the level id. ● When the user clicks on a button, they are taken to that level.

Estimate: 5SP

Priority: 5

ID: MS2	
Name: Exit application	
User Story Description The user should be able to exit the application to not play the game.	
Acceptance Criteria	● There is a button on the menu, under the level selection, which is labelled 'exit game'. ● If the user clicks on the button with their mouse, the game closes itself.
Estimate: 3SP	
Priority: 5	