USER STORIES
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Story Point Size: 1 SP = 2.5 Hours
Priority: 1 (Highest Priority) -> 5 (Lowest Priority)

Epic Story 1: As a gamer, I want all the functionality of the game to work so I can play and win the game.

ID	US1.1
Name	Goals of the Game

User Story Description:

As a User, I want to be able to know and achieve the goals of the game, so that i can win the game.

Acceptance Criteria:
- *There must be at least one of 4 "Goals" for the User to achieve per game:*
    - *Getting to an Exit: "Exit Goal"*
    - *Destroying all Enemies: "Enemy Goal"*
    - *Having a Boulder on all Floor Switches: "Floor Switch Goal"*
    - *Collecting all Treasure: "Treasure Goal"*

- *These Goals must be displayed clearly to the User*
- *Goals can be combined to form a Complex Goal*
- *Once all Goals are finished, the User wins the game.*
- *If an "Exit Goal" exists within a Complex Goal, it must be finished last.*

Priority	1
Size	3SP

ID	US1.2
Name	Base Game Board Generation

User Story Description:

As a User, I want the system to generate entities on the Game Board so that the games goals

are achievable.

Acceptance Criteria:
- *The Game Board must generate a "Player" entity*
- *The Game Board must generate "Wall" entities in such a way that all the "Goals" can be achieved*

Priority	1
Size	4SP

ID	US1.3
Name	Player Movement

User Story Description:

As a User, I want my Player to be able to move up, down, left and right, so I can navigate the game board.

Acceptance Criteria:
- Once a User enters a directional keystroke, the "Player" must move in that direction accordingly. (E.g User enters "right", the player must move right)
- If a User releases a directional keystroke, the "Player" must stop moving.
- If a User changes their inputted keystroke, the "Player" must move in the newly inputted direction.
- The "Player" must only be able to move to squares adjacent to the player.
- The "Player" must only be able to move into "empty" squares

Priority	2
Size	4SP

ID	US1.4
Name	Generation of Exit

User Story Description:

As a User, I want the system to generate an Exit on the Game Board so that the game is winnable.

Acceptance Criteria:
- *The "Exit" entity must be generated on an "empty" square*

● *If the Game Board contains an "Exit" entity, there must be an "empty" path the "Player" entity can take to reach the "Exit" entity*	
Priority	2
Size	2SP

ID	US1.5
Name	Player Interaction with Exit

User Story Description:

As a User, I want my Player to interact with the Exit so that when the player moves onto it I win the game

Acceptance Criteria:
- *If the "Player" entity moves onto the square with the "Exit" entity, and there are no more 'Goals' to achieve, the Game should notify the User that they have achieved their 'Goals' and the game will end.*
- *If not all the other 'Goals' were achieved, the Game should not end.*

Priority	3
Size	2SP

ID	US1.5
Name	Generation of Keys and Doors

User Story Description:

As a User, I want the system to generate "Keys" and "Doors", in a way that the game is winnable.

Acceptance Criteria:
- *The "Key" entity and "Door" entity must be generated in pairs.*
- *The "Key" entity and "Door" entity must be generated on "empty" squares.*
- *The "Key entity must be generated "closer" to the "Player" entity than the "Door" entity is to the "Player" entity*
- *There are at most 3 sets of "Key" and "Door" pairs.*

Priority	2
Size	2SP

ID	US1.6
Name	Player Interaction with Key and Doors

User Story Description:

As a User, I want my player to be able to pick up "Keys" and use them on "Doors", so i can navigate the Game Board and win.

Acceptance Criteria:
- *When the player moves onto the square with the "Key", the "Key" appears in the "Player"'s inventory and is removed from the Game Board*
- *"Doors" must have two states, 'locked' and 'unlocked'.*
- *The "Player" must not be able to move through 'locked' "Doors"*
- *Once a "Door" is 'unlocked', it behaves like an 'empty' square, and will remain unlocked for the duration of the game.*
- *If the player does not have a "Key" in their inventory they cannot unlock a "Door" and move through it.*
- *If the "Player" does have a "Key" in their inventory they can unlock a "Door" and move through it.*
- *Each "Key" must be unique to a specific "Door".*
- *When the "Player" unlocks the "Door" the "Key" is removed from their inventory.*

Priority	3
Size	6SP

ID	US1.7
Name	Generation of Boulders and Floor Switches.

User Story Description:

As a User, I want the system to generate "Boulders" and "Floor Switches", in a way that the game is winnable.

Acceptance Criteria:
- *The "Boulder" entity and "Floor Switch" entity must be generated on "empty" squares.*
- *There must be at least as many "Boulders" as "Floor Switches"*

● *The "Boulders" and "Floor Switches" must be generated in a pattern which allows all "Floor Switches" to be covered by a "Boulder".*	
● *The "Floor Switch" entity has 2 states: 'Triggered' and 'Untriggered', and is generated in the 'Untriggered' State.*	

Priority	2
Size	2SP

ID	US1.8
Name	Player Interaction with Boulders and Floor Switches

User Story Description:

As a User, I want to be able to move Boulders onto Floor Switches in a way that allows me to win the game.

Acceptance Criteria:
- *When a "Player" moves onto a square occupied by the "Boulder" Entity, the boulder should move one square in the corresponding direction (E.g the Player moving 'up' into the Boulder should move the Boulder 'up')*
- *If there is a "Boulder" or "Wall" entity where the "Boulder" was to move into, nothing happens.*
- *If a "Floor Switch" entity has a "Boulder" entity on the same square as it, then its state will change to "Triggered", for as long as the "Boulder" remains on the "Floor Switch"*
- *If all "Floor Switch" entities are "Triggered", the game should notify the Player that it has achieved its goal.*
- *After the Floor Switch Goal has been achieved and there are no more goals remaining, the User wins and the game ends*
- *If an Exit Goal remains to be achieved, there must be a viable path from "Player" can take to reach "Exit" after the Floor Switch Goal is achieved.*

Priority	3
Size	5SP

ID	US1.9
Name	Player Interaction with Treasure

User Story Description:

As a User, I want my player to be able to pick up the Treasure, so that I can achieve my goals.

Acceptance Criteria:
- The "Treasure" entity must be generated on an "empty" square.
- There must be a viable 'empty' path the "Player" can take to reach the "Treasure"
- When the "Player" moves onto the Square containing the "Treasure", the "Treasure" is removed from the Game Board and added to the inventory.
- If all "Treasure" entities are removed from the Game Board, the game should notify the User that they have achieved their 'Goal' of collecting all the "Treasure".
- If there are no more 'Goals' left for the User to achieve, the User wins and the game ends.

Priority	3
Size	5SP

ID	US1.10
Name	Player Interaction with Unlit Bomb

User Story Description:

As a User, I want my Player to be able to pick up Unlit Bombs, so i can use them to help win the game.

Acceptance Criteria:
- An "Unlit Bomb" entity must be generated on an 'empty' square.
- If a "Player" entity moves over a square containing an "Unlit Bomb" entity, it is removed from the Game Board and added to the Inventory.
- If a "Player" decides to use the "Unlit Bomb", it is placed on the GameBoard on the square where the "Player" currently is, removed from the Inventory, and becomes a "Lit Bomb".
- A "Lit Bomb" detonates after a set period of time.
- Once detonated, a "Lit Bomb" should remove any "Boulder", "Enemy" or "Player" entities on, left, right, above or below the "Lit Bomb"
- If a "Player" is removed by the "Lit Bomb", they die.

Priority	3

Size	5SP

ID	US1.11
Name	Player Interaction with Invincibility Potion

User Story Description:

As a user, I want my player to be able to pick up the Invincibility Potion, so that I can use it later help me achieve my goals.

Acceptance Criteria:
- The "Invincibility Potion" must be generated on an 'empty' square.
- If a "Player" moves over a square containing an "Invincibility Potion", the "Invincibility Potion" is removed from the Game Board and "Player" becomes 'Invincible'.
- If a "Player" is 'Invincible', "Enemy" entities will run away from the "Player"
- If a "Player" is 'Invincible' and occupies the same square as an "Enemy", the Enemy will be removed from the game.
- If a "Player" is 'Invincible' and would have been removed by a "Lit Bomb" detonation, the "Player" will not be removed.
- The "Player's" 'Invincible' Status will last a set amount of time.

Priority	3
Size	5SP

ID	US1.12
Name	Player Interaction with Sword and Enemy

User Story Description:

As a User, I want to be able to pick up and use a Sword, so that i can kill Enemies and achieve my Goals

Acceptance Criteria:
- *"Sword" and "Enemy" entities must be generated on 'empty' squares.*
- *If "Enemy" entities are generated, and a "Kill Enemy" Goal exists, at least one "Sword" entity must also be generated.*
- *If a "Player" walks onto a square that contains a "Sword", the "Sword" is removed from the Game Board and added to the "Players" Inventory*

● *The "Enemy" should actively seek to reach the square "Player" is on.* ● *If a "Player" walks onto a square that contains an "Enemy", the "Player" is killed.* ● *If a "Player" has "Sword" in inventory and walks on a square that contains an "Enemy", the "Enemy" is killed.* ● *After a "Sword" kills 5 "Enemies", it disappears from the Inventory.*	
Priority	3
Size	5SP

ID	US1.13
Name	Player Interaction with Treasure
User Story Description: As a User, I want my player to be able to pick up the Treasure, so that I can achieve my goals. Acceptance Criteria: ● The "Treasure" entity must be generated on an "empty" square. ● There must be a viable 'empty' path the "Player" can take to reach the "Treasure" ● When the "Player" moves onto the Square containing the "Treasure", the "Treasure" is removed from the Game Board and added to the inventory. ● If all "Treasure" entities are removed from the Game Board, the game should notify the User that they have achieved their 'Goal' of collecting all the "Treasure". ● If there are no more 'Goals' left for the User to achieve, the User wins and the game ends.	
Priority	3
Size	5SP

Epic Story 2: As a user, I want the game interface to be intuitive and engaging, so the game is fun and easy to use.

ID	US2.1
Name	User Interface Main Menu
User Story Description:	

As a User, when I load the Game I want to be met with a Menu of Options of different Game Modes so I can pick which one I want to play.

Acceptance Criteria:
- *Upon launch of the Game there is a "Menu" with at least 3 different game modes; 'Maze', 'Boulders', 'Enemies'*
- *When one of these options is clicked the Game Board generates the Game Mode specified*
- *There must be an option to exit the Game which will shut down the Game.*

Priority	2
Size	3SP

ID	US2.2
Name	User Pausing Game

User Story Description:

As a User, while I am playing the game I want to be able to pause the game so I can take a break from the game without losing my progress.

Acceptance Criteria:
- *During gameplay pressing 'P' must stop all movement and progression of Entities*
- *The word "PAUSED" must appear on the screen*
- *Pressing 'P' again will unpause the game*

Priority	4
Size	3SP

ID	U2.3
Name	Map Seeding

User Story Description:

As a User, I want to have to option to seed Game Board with a particular number so I can generate the same board using that number repeatedly.

Acceptance Criteria:
- *After a Game Mode has been selected the User is prompted to enter a seed number that will be used as the random number to seed the Game Boar.*

● *Every Game Board generated from the same seed number is identical* ● *When no seed number is entered a random game board is generated*	
Priority	5
Size	4SP

ID	U2.4
Name	Map Restarting
User Story Description: As a User, I want to have to option to Reset the Game Board at any time so I can retry the Puzzle if I get stuck. Acceptance Criteria: ● *At any point in Game play when the user presses "R" the Game board resets to the starting position.* ● *Any progress to the Goals is lost*	
Priority	4
Size	4SP