Overall Plan

Game Title: Nemo Maze
Genre: Adventure

The game is an adventure 2D maze game featuring nemo the fish as the main character is driven by curiosity to explore the huge ocean. The objective is to collect all the keys to escape from each stage. Each stage is a place where its shrouded in darkness, illuminated on Only by the bean of the main character's flashlight. The main enemy will be the shark that is hunted inside the ocean, appearing when players least expect. There are also traps like plastic waste spread inside the ocean.

Game Mechanics
- Exploration is key: Navigate through the ocean with each room offering keys and challenges to go through the enemy.
- Survival Tactics: Dodging the shark and conversing your flashlight's battery are important to escape from the ocean.
- Atmosphere: Sound and limited visibility of the map creating an immersive experience.
- Reward system: The player will collect keys, but in order for the player to explore the map, which room will have a battery loot that recharges the battery of the flashlight which is super essential to complete the game.
- Timer system: Timer that keeps track of the time it takes for the player to complete the game.
- Challenges with traps: The player will be given a certain health amount, when health reaches 0 the player will lose. Traps will be generated according to the room that is being generated by the map class.

Unique Features
- Dynamic Lighting: The flashlight is an essential tool to explore through the map.
- shark AI: The shark will find the player and be able to chase the player.

Movement Mechanics
- The player will be controlled by the keyboard buttons, and the shark enemy movement is generated by the AI built in feature that will be implemented in the code.
- As mentioned, the shark movement will be generated based on the implementation of the AI pathfinding function.

Information of the game

To generate the map in 2D map surrounded by the walls, it will be made into grid format (2D array) which contains the spawn location of the main character, traps, rewards, as well as the shark. When the game starts, the main character will enter the ocean and the entrance will be closed once entered and the light will be darker. Collecting all the keys will re-open the entrance which then the main character can escape.

The game contains two types of enemies: one is a dynamic enemy which can move, chase in any four directions. Another is a static enemy like the traps which cannot move. When the main character collides with the static enemy, it will reduce the player's score and the key score which then the player has to recollect. Same with the dynamic enemy which deducts the player's health. When the health reaches <= 0 the game will consider failure (player lose).

The rewards there are two types: key and the battery. The key is to reopen the entrance of the ocean. In order to complete the game the player must collect all the keys. The special reward which is the battery, it allows the player to recharge the flashlight making the visibility of the map more clear.

The theme of the game is that the main character, Nemo, is a fish who loves the huge ocean, but while he is exploring, he gets trapped inside the ocean that is hunted by the shark. The only way for him to escape is to collect all the keys while running away from the shark that will take his life away!