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<u>Overall Plan & Description of Our Customized Game - Group 10</u>

Plan

Our team has agreed to an agile based project management where we will incrementally develop and change our project/ideas. The team intends to meet at least twice a week over discord as we can easily discuss and develop our project given the ability to voice call, livestream our screens, and send text messages. Our first increment will be focused on developing the base requirements for our game, and subsequent increments will focus on adding the other requirements, such as enemies, menus, and additional features. Our approach to this project is that everyone in our group will be working on various features, as opposed to splitting everything up. This allows us to easily communicate our ideas/changes. If we notice our current approach is not as efficient as we'd like, we can always change and adapt.

Description

You play as an astronaut (Main character) who has crash landed on an unknown planet. (Starting point) In the distance, you see an abandoned ship (End point) that looks perfectly fine, except for the fact that it is powered down. Your objective is to traverse a maze (Board) of gaps and various terrain (Walls and barriers) and avoid extraterrestrial life (Enemies) while simultaneously collecting batteries/fuel (Type 1 regular reward) to power the rocket. While you should have enough air to collect all the batteries/fuel necessary, you can collect air tanks to stay alive. (Type 2 bonus reward) Any extra air collected will multiply to your score.

Details

- Game theme and setting: Space/Unknown Planet
- Main Character: Astronaut wearing space suit
- Enemies:
  - Moving Enemy: Walking alien
  - Punishments: Hiding alien
- Rewards:
  - Type 1 Regular Reward: Rocket battery/fuel
  - Type 2 Bonus Reward: Air tanks
  - Score is increased by collecting batteries/fuel and multiplied by a certain amount when collecting air tanks with a full/near full air supply
- Barriers: Meteors, crystals, stalagmites, and fossils (Maybe a few black holes that teleport player)
- Board:
  - The walls we have are not physical walls, rather empty space (Better visually explained in the project mockup)
  - Start at your broken down ship
  - End at the unused abandoned ship

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<u>Project Mockups</u>

- Menu should have a start game button and instructions/ruleset button
- Upon pressing rules button, a popup of the instructions should appear on the screen with the option to exit the rules after opening them
- If the player pressed start game, the game does not yet start as the player has to enter a level difficulty between 1-5. At each difficulty, the variables to be changed/more restrictive is:
    - More enemies
    - Less air tank rewards
    - Start with less air
    - Air decreases at a faster rate
    - More batteries to collect to finish the game
- At any point of the game, the player can pause and unpause the game
- Player starts at the broken ship and must travel through the maze to get to the new one
- The HUD will show the players total collected batteries (Ex. 4/6), time elapsed of play, current air supply and score.
    - The score is determined through 100 points for each battery collected and multiplied by additional points of air collected. (Ex. I currently have 3 batteries and my air supply is at 97/100. I collect an air tank and since each air tank replenishes my air by 75 points, my score is then multiplied by 72x.)
- There are multiple ways to lose the game
    - If your air supply goes below 0
    - If a walking alien touches the player
    - If you collide with a static alien, your air supply will drop by a large amount but you will not lose if you have more than 0 air
- The players air will deplete at a linear rate that will be faster at each different difficulty.
- Upon collecting all batteries and reaching the end goal, your score is then added with your air points and subtracted by your elapsed time (Encouraging the player to collect as much air as possible in the shortest amount of time)
- There will be a display of the points and all data that was manipulated to create the final score.
- (If we can do it) There will then be a scoreboard of the highest points recorded and the corresponding difficulty
- The player will then be able to exit the game or play again

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Mockup Sample Images

Main menu screen. Will potentially create game title. Will change the controls button to a Rules/Instructions button or something similar. Subject to detail changes. Player may start the game and be shown a level difficulty menu after, or read the rules/instructions of the game.

The player starts in the top left and will finish somewhere on the right side of the game. The map difficulty will slightly alter the map and potentially create more objects. As shown in the picture, all "walls" are empty space and the player cannot cross. There will be either a specific path or a portal to traverse the map. Batteries and air tanks are scattered throughout the map alongside static and dynamic enemies. Barriers will be distinguished from the map itself, collectibles, and enemies.

The game will look like this when the player presses the pause button on their keyboard. They will have the option to continue (unpause) the game or return to the main menu which will end their game and void their game stats.