One-page statement

Overall plan: Our team will have weekly meetings on Discord, where we also share resources and progress. Aside from weekly meetings, when members are working on code individually, they can join the Discord voice channel. If other members are also working at the same time, they can join the channel and work together.

Once initial design and game logic are finalized, we will begin coding. Implementation will be split according to members' interests and availability, and all members will be involved in feedback to ensure we are all on the same page. So far, the git repo will be managed by Nikita, and Sarah will work on art, but all roles are subject to change.

Theme: The player controls the Grim Reaper whose goal is to collect souls and bring them to the afterlife. Grim must explore a maze to collect seven blue souls to unlock the portal to the afterlife. He can also collect special gold souls that increase his score greater than the blue souls. However, if he collects an evil red soul, his score decreases. If his score drops below zero from red souls, Grim loses. Additionally, Angels will chase Grim and if an Angel catches Grim, his score drops below zero and he loses.

Player experience: When the player opens the game desktop application, they are greeted by a main screen with the title and a "Play" button. Upon pressing "Play", the player is shown controls and the game's goal. The player can press any key to dismiss the message and is shown the initial map (to see the location of rewards, enemies, portal, etc.). Then the screen shows the start point on the boundary of the wall where the player's Grim Reaper spawns. The player uses their keyboard (WASD) to guide Grim. In order to collect souls, the player moves Grim into the soul's cell. Once a soul is collected, it disappears from the map and Grim's score changes on the game screen. If the soul is blue, the score increases by 100 and the total blue soul count increases by 1. If the soul is red, Grim's score decreases by 25. Bonus gold souls will randomly appear for 5 seconds and if collected, will increase the score by 150. If Grim and an Angel's cell locations overlap, or the score drops below 0, the player loses and the game ends. If Grim gets to the end cell after collecting all blue cells, the player wins and the game ends. When the game ends, the end state screen displays the final score, soul count, total time, a "Play Again" and "Menu" button, and a "Congratulations" or "Game Over" message. If the player presses "Play Again", instructions are not displayed and a new game is started.

Design pattern: State design pattern will be used to code the game. There will be three states: (1) menu state, (2) game state, (3) end state. When the game is started, it will be in (1) menu state. Then it enters the (2) game state when the "Start" button is pressed. Then it enters the (3)end state when the game is won or lost. It will enter either the (1) menu state if the player presses "Menu", or (2) game state if they press "Play Again". This cycles until the game is closed by the user.

Game loop: Ticks will be looped in the game loop. The program will receive user input at each tick. Then the program will update the status of objects (position, collected item etc.). Then the updated information will be rendered to the screen. The game loop will repeat until the game is won or lost.