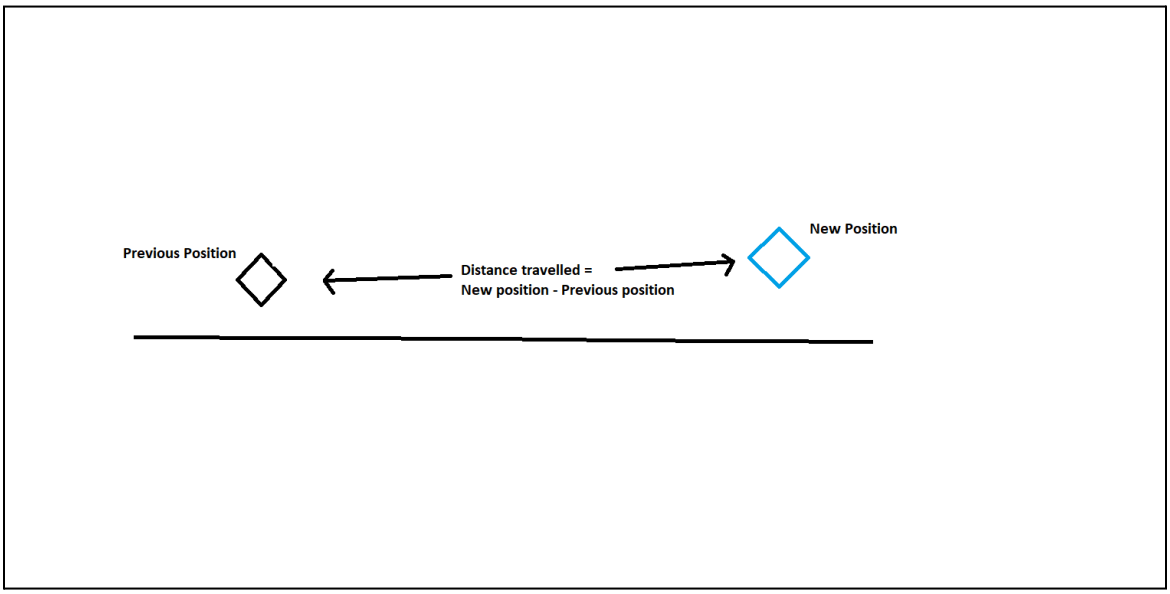
Feature Spec

Feature 1 - FIle Management

Saving Player Stats

A system for the player to save their progress in the level and go back to their saved location.

- Upon a key press the game will create a Json file and save the;
    - Players vector3 location as an array
        - Stores the three transform points of a Vector3 into an array that then is accessible and readable to be called upon later
    - Shots fired by the player
        - The shots fired variable is stored in an integer that is increased when the player presses the Fire button
    - Distance travelled by the player
        - This variable is tracked by storing the transform of the players last position when saving and adding it to the new distance travelled



Loading Player Stats

Upon pressing the Load save key;

- Loads the array float data back into array to then change the players transform position
- Calculates the amount of distance travelled from last point
- Adds that to total distance travelled variable
- Takes the Shots fired data and brings it back as integer
- Debug logs each of the three elements to the console.

Feature 2 - Streaming New Assets

Allows new audio, object and sprite assets to be loaded during runtime

For new Sprite (On Key Press);

- Loads new key png from streaming assets folder
- Converts it into a sprite
- Loads it into sprite render of key object in game

For new Audio (On Key Press);

- Takes audio wav file from streaming assets folder
- Converts data into float array
- Then converts data into 16 bit and normalises value
- Creates audio clip and loads the data into it
- Then assigns that clip to the objects audio source so music plays in game

For new Object (On Key Press);

- Loads Spike asset from bundle
    - Checks if bundle exists
    - Checks that hazard inside bundle exists
    - Instantiates the asset

Feature 3 - Optimisation

- Optimising data loading using asynchronous loading of Json data
    - Data is loaded using a coroutine on start
    - Stored inside JsonData string
    - Loaded locally using unity webrequest
- Further analysis and breakdown of this optimisation can be found in submitted **Testing Report**