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Analysis report

The one with the labyrinth

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Step 1 - Understand the problem

Rephrase the problem

The task is about making a labyrinth game. The game has no graphical representation because in the labyrinth it is pitch black. The game will allow the user to input a direction (w, a, s or d) which they will walk in. The player is only allowed to walk on the paths to the different objectives (boosts, traps and the endpoint) and cannot move through the walls of the labyrinth. The number of steps is limited to 20 from the start but the player can find boosts that give 15 extra steps. If a player falls into a trap, they will start the game from the beginning.

Understanding the words

There were not any tricky concepts in this task’s description.

Step 2 - Devising a plan

Approach of choice

In this task I chose to use pseudocode which will make it easy to write the code once its implemented to my code editor as comments.

My pseudo code:

The following string variables will be initialized:

- The player's path, which will be changed according to the input of the user
- The path from the start point to the endpoint
- The paths from the start point to the traps and boosts

Game's description and game instructions will be printed on the screen

The game will start with a specific number of steps, which in this case is 20.

Before the start of the game the player will have stepped 0 steps which will later be changed.

A condition-controlled loop that will loop as many times there are steps left.

Starting with a validation loop so that there will not give any GIGO -that the user can only continue if they input an w, a, s or d.

The user's input will be added to the player path so, it can be compared to the other paths later.

Every time a player makes a step it will be counted. As every time a player makes a step,

the number of steps left will decrease by 2

If there are no steps left the game will be end.

If the player has the same path as the win path the user has won

If the player has the same path as the trap path, the player will start their journey from the beginning

If the player has the same path as the boost path the player will continue their journey with 15 extra steps and new paths for the objectives.

If the player path does not match with any of the other paths, they hit one of the walls

The last letter will be removed from the path and a step will be taken back