The A-Mazing DS4 Race - Part 1-2

LAB # 08

SECTION # 04

Erroll Barker

SUBMISSION DATE:

11/09

DATE

11/09

Problem

Part 1

1. Explain the differences between the raw data and the averaged data in your graph for part A.
2. Explain the delay you used to ensure character movement is not erratic

Part 2

1. Describe how you checked if the avatar could safely move down, and go left/right.
2. Describe what was necessary to check for the player losing the game.

Analysis

Part 1 Q1: The raw data is what the controller gives depending on its row however the averaged data that we get from the controller is calculated and usable for better usage.

Part 1 Q2: calculating the sum and avg_size and dividing it by each other

```
for (k = 0; k < avg_size; k++) {
    sum += buffer[k];
}
return sum / avg_size;
```

Part 2 Q1: by using the m_avg and WALL I can determine if there is a wall below the avatar or not and if so, let the avatar go to its last position to avoid the WALL and not phase true the wall.

Part 2 Q2: it will check if Avatar can keep on moving downwards or not, if can move downwards continue if not breck and give the lose message and it does it for the right and left to see if it is boxed in or not and combines the bottom and right and left together to give true.

Design

For Part 1 of the lab designing the code was okey. To design the code, you first need to understand the given functions and their purpose, after that it was mostly just writing a calculator to do some basic averaging and assigning

For part 2 it was more difficult to design and undersign the code but after getting a general idea of what is needed and how to write it, it was not that hard. The design of the code mostly went by steps making the avatar move right left then down then deleting the last avatar and only keeping the newest one. Maze design came next and then back to the avatar so it would not go true the walls and then the lose game part

Testing

For part 1 of lab08 was easy to test and run (1) no difficulty or problems

Part 2 on the other hand was more difficult and ran in to lots of problems (my best friend the Ruber duck was a life saver) but the biggest problem was having to deal with the walls and the avatar not going true the walls and getting blocked by them(4) also the bones 10+ points was the second being problem maker

Comments

Some comments.

Screen Shots

```
0.083807RAW, 0.004578, 1.006958, 0.124092, AVG ,0.057468, 1.469755, -0.041628
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-0.394189
```
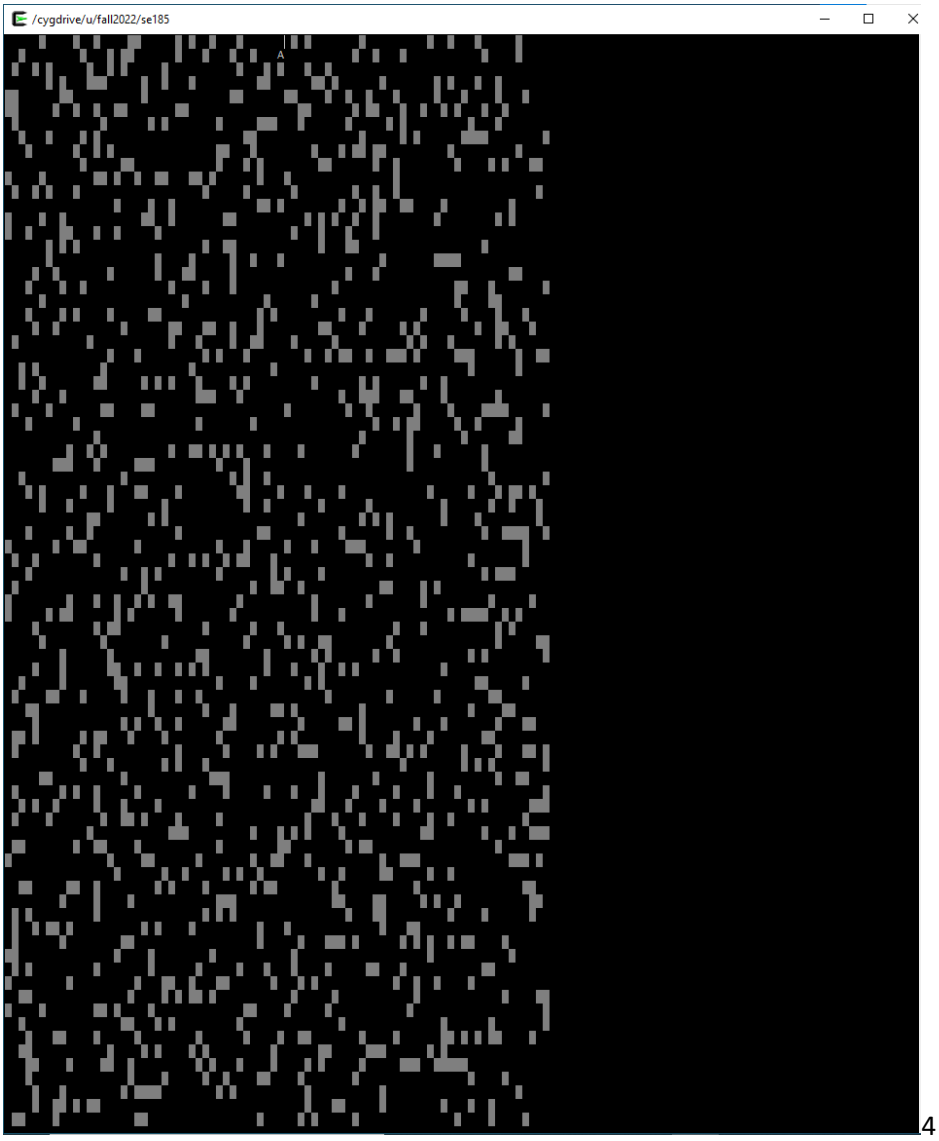

```
$  ./ds4rd-real.exe -d 054c:05c4 -D DS4_BT -t -g | ./lab08.exe 1
YOU WIN!
```
2

```
errollb@CO2048-19 /cygdrive/u/fall2022/se185
$  ./ds4rd-real.exe -d 054c:05c4 -D DS4_BT -t -g | ./lab08.exe 16
You lose, sorry!
```
3



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