Summative Project: Maze

Proposal: You will need a written plan describing how you plan to accomplish your task. In your proposal, please answer the following questions:

1. Describe the game you are making. Detail what you will need to learn in order to accomplish this.

For our ICS2O course summative, our group consisting of three individuals; Emilie Zhang, Helen Peng and Rebecca Li have decided to create a web game targeted towards children, specifically for those who are under Grade 6.

The maze has a simple, easy-to-understand concept, yet, it is also an adventure game filled with fun challenges; including a set of trivia questions. In a way, the maze game is very educational. First and foremost, the goal of the game is to race against the timer of 5 minutes, in order to find a way out of the maze! As the player competes against the clock, they will be answering a few questions. These questions range from geography, maths, to common knowledge and even some riddle! However, the questions are not very hard. About an elementary level of knowledge would suffice. For every question the player gets wrong, they lose a precious 20 seconds of their time left.

Usually, a maze is not so hard to solve, especially if the player gets the advantage of looking at the maze from a bird's eye view. Anyone could easily trace the right path to the exit of the maze in a time much less than five minutes.

Therefore, the creators of the game have come up with a solution: the player will only be able to see less than a 100px range around them! Everything else will be hidden. This is inspired by the old fashioned pokemon DS game, in which Ash, the main pokemon trainer goes through a maze-like cave. Ash carries around a flashlight around him, which gives him enough light only to be able to see objects near him. The rest of the cave is dark.

Finally, once the player reaches the exit of the maze, before the timer runs out of time, they will be brought to their final boss battle. In this scenario, the player will have to face off against a boss. If the battle against the Boss is won by the player, the game is over and the player wins.

After doing some research, a lot of functions that will be needed to code the game are new to us. This includes context.fill, context.beginPath, context.closePath, and learning how to move the character around using arrow keys. Nevertheless, most of the code should be familiar, including if statements and else if, as well as setting alerts for each question. At last, we have noted that the game is very much based on (x, y) coordinates. Thus, some research into that will also be needed.

2. Explain how you plan to incorporate each of the topics taught in the course?

The webgame in general should be coded in HTML language, as we have learned in the beginning of the year. This also includes the style sheet and CSS of the game, in order to make it look more visually appealing. As for the maze part, most of it would be coded in javascript. Specifically with the questions, the maze will be using a lot of functions, and if statements, else if statements and different variables.

3. Lay out the steps you will take to create your game and estimate how much time you will need for each step.

First, a lot of research must be done, since each member should be responsible for a good chunk of code. Some new code will also be used, which was not taught during this year's course, especially the coding for the maze itself. However, commentary should eventually be added for the code in order to show a good understanding of what each part means.

The coding for the game, both the Maze and the Boss Battle should take around two to three weeks. To CSS it after should take another week or so.

Inevitably, the team is expecting for some challenges to get in the way. This is why, they will get the work done as soon as possible in order to allow extra time at the end, to add features and fix bugs.

4. How do you plan to divide the work on the game amongst the members?

The work will be divided into three parts, as each of the members will specialize in one. We have decided to split the work so it best suits the personal strengths of each member.

The Homepage and overall aesthetics of the game will be coded by Helen Peng. She will be taking care of how the game looks and she will be coding the CSS of each page.

The Maze game itself will be coded by Emilie Zhang, including all of its functions, the obstacles, the timer, the questions and the maze itself. Inevitably, coding a maze like such is a challenge. There will be a lot of research and learning new javascript functions in order to accomplish the task. Furthermore, Emilie is responsible for editing and writing this Proposal report.

As the player completes the main Maze, they will be able to enter the Boss Battle, which is a mini game coded by Rebecca Li. She will be implementing the code she learned this year as well as doing some research in order to code the boss battle.

Links Useful/Used as Reference for the Coding of the Came

Character Design (Helen)

http://www.williammalone.com/articles/create-html5-canvas-javascript-game-character/1/

Maze Coding (Emilie)

https://www.codeproject.com/Articles/577080/Create-an-HTML-and-JavaScript-Maze-Game-with-a-ti

Boss Battle (Rebecca)

https://www.html5rocks.com/en/tutorials/canvas/notearsgame/

https://code.tutsplus.com/articles/html5-avoider-game-tutorial-multiple-moving-enemies--active-9956