CS171 PROJECT DOCUMENT

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Project Topic: Games in processing
Project Title: Trivia_101

INTRODUCTION

My cs171 project is a simple trivia game which I decided the game strategy from the games in processing topic. I chose this topic quite early on because I felt it was within the range of my processing abilities and I had thought over it for a couple hours the night before the proposal submission deadline to ensure that if I didn't have to revise my proposal, that I would still be able to handle the task of creating such a project. I also liked the topic and the freedom of being able to choose whatever I wanted as the strategy.

WHAT DOES MY PROJECT DO?

What my project does when run is that is displays a window(applet) with a question on it. The below the question are four multiple choice answers to pick from, obviously with only one being the correct answer. There will also be a life and score counter at the top left and right corners of the window respectively, with the player starting off with three (3) lives and a score of zero (0). The player losses a life if they get a question wrong and they get a +1 in score if they get a question right. If a player gets a fourth question wrong, the game ends with the player's score being displayed on the screen. If the player also gets to the final question, they will also see the same message displaying their final score out of the total number of questions available in the project alongside the message "GAME OVER!!!".

HOW DOES MY PROJECT WORK?

I started my project by drawing the grid which would divide the answers and separate the questions from the answers. I then went on to import all the questions for the game which I had put in a text file in the data directory of the project folder into a string array. I then created separate methods for each question in which I called the corresponding question from the array (e.g., for question 6, I called the string at the 6^{th} position in the array and so on). I also added the corresponding answers for the questions in the methods for each question. I then went on to create a mouseReleased() function that takes in the number of the question on which the player is on and what section of the window the user has clicked and decides if the user has picked a right or wrong answer. If the user has picked a wrong answer, the program then calls another method which I have written than tells the user that the option they picked was wrong and subtracts one from the player's number of lives. If the player gets a question right, then the program calls a different function that does the opposite of the one from before (tells the player they're correct and adds one to the player's score). Both functions increase the value of the variable that controls the question the user is on, so the applet switches over to the next question and the whole process can repeat, depending on the user's choices. If the user exhausts their lives before the end of the quiz, another function to end the quiz is

run, if the user gets to the end of the quiz and has chosen an option, the program either runs the function that tell them if they're right or wrong and then it runs the function that ends the program.

PROJECT DEVELOPMENT AND PROBLEM SOLVING

I started my project by first creating a design and considering each individual task I would need to achieve in the coding of the project. I then went on to gather suitable questions from different sources and storing those in a text file which I then stored in the data directory. I then went on to begin coding as explained in the previous section. I first coded the "easier" blocks and methods such as the setup and each question. I then went on and built mouseReleased () function for each individual question. I then built two functions that serve the purpose informing the player whether they're right or wrong. I then built a function which ends the program if the user has exhausted their lives or if they've reached the end of the program which also displays their final score.

During development, I encountered some initial problems, the first of which came from my design phase. I realized that what I had initially planned for the method that tells the player if they're either right or wrong could not be made possible without hardcoding straight into each possible option that the user could've picked and that would've added a lot more unnecessary lines of code to my program. I also had problems when trying to make a timer for some of the functions as the delay function didn't seem to work properly for that. I also had problems with getting the questions to switch to the next question without it just overlapping onto the current question on the screen.

N.B: I omitted the first part of my proposal which says that the player would be able to pick from a number of categories because doing that would've meant a lot more questions to add to the project and a lot more lines of code and more methods which would've really made my code cumbersome.