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CS 126L Section 2

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Lab 07 - Game Show

1. Problem Statement

The goal of this lab is to create a game show, this game show will be in a style similar to “Do you want to be a Millionaire” where the player will receive increasing points for each subsequent question answered. This game will have 10 questions with each question having around 4 answers that the player can choose from, which will be given randomly and never twice. This game will have a main menu, and the code should be able to handle errors inputed

Requirements

1. At least 10 questions, all questions should not have the same number of answers
2. Questions should be given in random order and none of them should be given twice
3. There should be a Main Menu that has the following
    a. Play the game
    b. View the game credits
    c. Extra Credit: View High Score table, doesn’t save to disk
    d. Quit the game
4. Program should handle errors inputted by player
5. Keep track of a score

2. Planning

We determined we were going to store the questions in a similar style to the provided example. We then determined the methods we would need to implement the project. Going through these methods we planned, first was the mainMenu(), which printed the main menu and returned what the user inputted if it was a valid input. Second was askQuestion(copyQuestions) which took in a list of questions, shuffled and asked a question from that list, determined if the answer was right, then outputted a true or false for if the question was right along with the list with the question removed as a tuple. Third was a credits function that printed the credits of the program. Fourth was inputHighScore(correct) which took in the number of correct answers, then handles inputting the player’s score into the dictionary if they want to. The printHighScoreTable() converts the high score dictionary to a sorted tuple, then prints out everything in the tuple. The quit() function handles the exiting of the program. Lastly, the main() function ties all of the methods together into a cohesive program to be ran.

3. Implementation and Testing

While working on this project, it became clear that the method of deleting questions from the list of questions we had was an incorrect way to approach the problem, since it denied anyone playing the game past the first player. To fix this issue, we created a new method resetCopyQuestions() which returns a deep copy of the questions list. A deep copy is a complete replica of the questions list, as doing a copy = questions doesn't actually mean copy has it's own list, it's just referring to questions, which refers to it's list, thus any manipulations to the copy list effects the questions list, which is not what we want. When it came to testing, we did an iterative approach to this project, testing, figuring out what was wrong, then repeating till we fulfilled all of the requirements.

```
Become a Real (Fake) Ten Thousandare!!!!!!!!
Enter the number to access
1: To play the game
2: To view the High score table
3: To view the game's credits
4: To quit the game
Input: 1
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Which of the following landlocked countries is entirely contained within another country?
['A: Lesotho', 'B: Burkina Faso', 'C: Mongolia', 'D: Luxembourg', 'E: Afghanistan']
Enter letter of the answer you choose: b
Wrong

Your current score is: 0 out of 10.
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The U.S. icon 'Uncle Sam' was based on Samuel Wilson, who worked during the War of 1812 as a what?
['A: Meat inspector', 'B: Mail deliverer', 'C: Historian', 'D: Weapons Mechanic']
Enter letter of the answer you choose: d
Wrong

Your current score is: 0 out of 10.
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What letter must appear at the beginning of the registration number of any non-military  aircraft in the U.S?
['A: N', 'B: A', 'C: U', 'D: L', 'E: Z']
Enter letter of the answer you choose: a
Correct

Your current score is: 1 out of 10.
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```

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Congratulations, finished the Game Show
You get 5000 funny money!!!!

Do you want to enter high score?:(Y/N)y
Name for high score: John
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Current High Scores
John  Score = 5000

Become a Real (Fake) Ten Thousandare!!!!!!!!
Enter the number to access
1: To play the game
2: To view the High score table
3: To view the game's credits
4: To quit the game
Input:
```

4. Reflection

This project was actually pretty difficult because we were mashing togethering the driver and the class of the program. This would have been more quickly implemented using classes and an object oriented approach to the problem. Besides that, the code isn't very elegant or readable, which I would attribute to the problem above. All in all though, we were able to fulfill the requirements of this project on time.