

CSE1322 LAB 3

Concept Summary:

1. ArrayLists and ArrayList methods
2. Classes
3. Methods
4. String methods

Objective:

In this lab, you'll create a program which allows us to administer a quiz. A user will be able to add questions, remove questions and modify questions. In addition, a user will be able to take a quiz and get a score.

Classes:

You'll be creating two classes. A Question Class and a Quiz Class.

Question class

Each object created from the Question Class will hold one question. Objects created from the Question class should have the following attributes:

1. The question text (string)
2. The question answer (string)
3. Level of difficulty (integer 1-3, 1 being easy, 3 being difficult)

All attributes should be private, and there should be getters/setters for all attributes. It should have a constructor that sets all 3 attributes.

Quiz class

The Quiz class must contain an arraylist or list of objects that should be created from the Question Class. The Quiz class should have the following methods:

1. `add_question()` Method should prompt the user for a new question, answer and difficulty, and then create a Question object with that data and add it to the arraylist/list.
2. `remove_question()` Method should present the user with a list of all the question texts, and ask which one to remove. When the user indicates the question to remove, it should remove that question from the arraylist/list.
3. `modify_question()` Method should present the user with a list of all the question texts, and ask which one to change. Then it should prompt the user for the new question text, the new question answer, and the new difficulty, and update the appropriate question in the arraylist.
4. `give_quiz()` Method should present each question to the user, accept an answer (string) for each question. It should then tell the user if they are correct or wrong (if the string the user typed in exactly matches the correct answer stored in the question object they are correct). Keep track of their score. At the end of the quiz, tell the user how many they got correct.

Driver:

Your driver program should create an instance of Quiz, then present the user with a menu.

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

Keep presenting the same menu over and over until the user quits.

Sample Output:

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

1

What is the question Text?

What is the capital of Georgia?

What is the answer?

Atlanta

How Difficult (1-3)?

1

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

1

What is the question Text?

What is the name of the mascot for KSU?

What is the answer?

Scrappy

How Difficult (1-3)?

1

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz

4. Take the quiz

5. Quit

1

What is the question Text?

How many fingers does a typical human have?

What is the answer?

6

How Difficult (1-3)?

1

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

3

Choose the question to modify?

0. What is the capital of Georgia?

1. What is the name of the mascot for KSU?
2. How many fingers does a typical human have?

2

What is the question Text?

How many fingers does a typical human have?

What is the answer?

5

How Difficult (1-3)?

1

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

1

What is the question Text?

How many students does KSU have?

What is the answer?

41,000

How Difficult (1-3)?

1

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

2

Choose the question to remove?

0. What is the capital of Georgia?
1. What is the name of the mascot for KSU?
2. How many fingers does a typical human have?
3. How many students does KSU have?

3

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

4

What is the capital of Georgia?

Atlanta

Correct

What is the name of the mascot for KSU?

Scrappy

Correct

How many fingers does a typical human have?

6

Incorrect

You got 2 out of 3

What would you like to do?

1. Add a question to the quiz
2. Remove a question from the quiz
3. Modify a question in the quiz
4. Take the quiz
5. Quit

5

Submitting your answer:

Please follow the posted submission guidelines here:

<https://ccse.kennesaw.edu/fye/submissionguidelines.php>

Ensure you submit before the deadline listed on the lab schedule for CSE1322L here:

<https://ccse.kennesaw.edu/fye/courseschedules.php>