

# UNIVERSITY OF THE WEST INDIES CAVEHILL CAMPUS

## COMP1205 Assignment

### Multiple Choice Quiz Application

**DUE : Friday November 25, 2022, 11:59 PM**

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In this assignment we are developing a program that will simulate a multiple choice quiz. You will be provided with a text file that has a specific format as seen below: **[FILE MUST BE IN THIS FORMAT]**

```
1 What is the smallest country?
2 South Africa
3 false
4 Vatican City
5 true
6 India
7 false
```

**Line 1 :** This is the question for user.

**Lines 2, 4 and 6 :** These are the three possible answers the user has to choose from.

**Lines 3, 5 and 7 :** These indicate if the above answer is correct, notice only one is correct.

Note: The text file can have any number of questions and answers in this format, all following each other, which means the next question would start from line 8.

You are to use the following **structs** in your solution:

```
struct choice {
    string ans;
    bool correct;
};
struct question {
    string quest;
    choice choices[3];
};
```

#### Notice:

The struct **choice** has two attributes **ans** and **correct**, which holds the answer to the question and whether it is correct or not, respectively.

The struct **question** also has two attributes **quest** and **choices[3]**. The **quest** attribute holds the question and the **choices** array holds the three possible options for the particular question, note that the array is of the type **choice**.

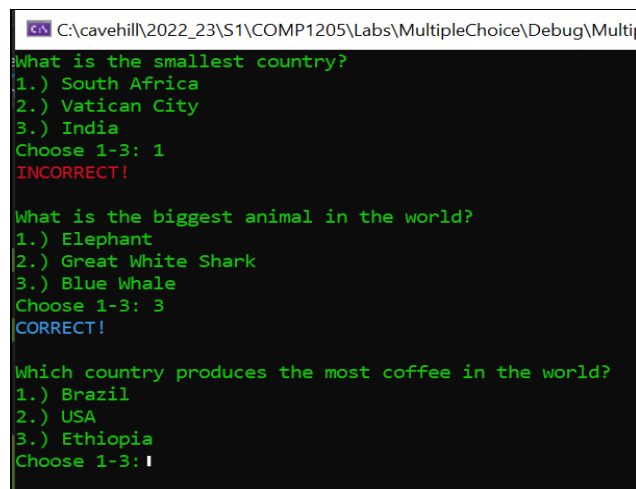
You are to use the following **vector** in your solution:

```
vector<question> quiz;
```

**Notice:**

The above vector stores the struct **question**. You are to read the provided text file and populate the above vector with the relevant information (**from the given text file the above vector will have 4 elements when it is populated**). After the vector is populated then you will loop through it and allow the user to provide their choice from the options. If their choice is correct or incorrect this will be indicated.

Below shows a screen shot of the running program with 2 answers from the user already entered:



```
C:\cavehill\2022_23\S1\COMP1205\Labs\MultipleChoice\Debug\Multip
What is the smallest country?
1.) South Africa
2.) Vatican City
3.) India
Choose 1-3: 1
INCORRECT!

What is the biggest animal in the world?
1.) Elephant
2.) Great White Shark
3.) Blue Whale
Choose 1-3: 3
CORRECT!

Which country produces the most coffee in the world?
1.) Brazil
2.) USA
3.) Ethiopia
Choose 1-3: 1
```

After the user has answered all the questions they should be presented with their test score as a percentage.

**Deliverables:**

- You are to upload **ONLY** the cpp file to the upload link that will be provided on elearning.

**Marking Scheme:**

- |  |          |
|--|----------|
| • Use of the <b>structs</b> and <b>vector</b> as mentioned above | 2 Marks  |
| • Correct population of the vector                               | 2 Marks  |
| • Correct simulation of quiz                                     | 10 Marks |
| • Proper handling of invalid entries from the user               | 2 Marks  |
| • Display of percentage quiz score                               | 2 Marks  |
| • Proper code formatting, variable names and comments            | 2 Marks  |

**THE END**