Assessment Programming Project

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Learning Outcomes:

- Github (source control) basics
- Object orientated programming (OOP)
- Clean and readable code
- Basic us of Visual Studio Code
- Basic use of Django Python Framework or Flask

1 Problem Description

The purpose of this project is to get you familiar with Python object-orientated programming(OOP), and writing clean and readable code. The aim of this project is to implement a skill assessment course. The lecturer must be able to add multiple questions to the assessment, add corresponding solutions, course content such as course name and course code. Multiple students will take part in the assessment (exam) and each student needs to enter their first name, last name and student number. The assessment (exam) is made up of the following components:

1.1 Student Class

This class stores students demographic data and returns the first name and last name. Also, print the first name and last name.

- First name (attribute)
- Last name (attribute)
- Student number (attribute)
- Print first and last name (method)

1.2 Course Class

This class consists of course content

- Course name (attribute)
- Code code (attribute)
- Lecturer name (attribute)
- Print course name and Lecturer name (method)

1.3 Question Class

This class stores questions and corresponding solutions.

- Question (attribute)
- Solution (attribute)
- Prints questions and solution (attribute)
- Ask and evaluate (method): This method/function 1. Prints the question, accepts solution from the student and returns True if the solution is correct else False.

1.4 Assessment Class

This class consists of questions asked during an exam e.g. this can be seen as the normal exam conducted with supervision therefore solutions cannot be shown to students taking the assessment (exam).

- Questions and Solutions (array/dictionary): stores multiple questions
- Add questions (method): This method adds questions and corresponding solutions to the array/dictionary
- Administer (method): This method asks the student questions and the returns the score of how many questions are correct. Convert the score to percentages, to achieve this, you need to divide the total number of correct solutions with the total number of all questions. This is followed by multiplying everything by 100.
- Ask and evaluate (method): This method/function 1. Prints the question, accepts solution from the student and returns True if the solution is correct else False.

1.5 Student Exam Class

This class puts everything together i.e. It consists of the following object instances, Student data, Course, Lecturer nae and Questions