

CPSC1012 – Objects Worksheet

Overview

This worksheet will demonstrate your ability to create and use objects in your programs.

Instructions

Complete the following on your own. If you would like to work with a partner, that is fine as both of you are responsible for your own work. Remember this is for learning, not a challenge simply to be completed.

Purpose

The purpose of this worksheet is to ensure that you are familiar with how to create and use arrays in your programs.

Questions

1. Create the following class:

| Quiz |
|---|
| - studentName: String |
| - total: Integer |
| - mark: Integer |
| - weight: Integer |
| + StudentName: String |
| + Total: Integer |
| + Mark: Integer |
| + Weight: Integer |
| + Quiz(Mark: Integer, Total: Integer, Weight: Integer, StudentName: String) |
| + GetPercentage() : Real |

The total and weight must be provided when the Quiz is created. The `GetPercentage()` method should return the grade of the quiz as a percentage (i.e. Total is 10 and Mark is 6, then the percentage is 60).

2. Use the Quiz class to solve the following problem.

Create a program that will allow an instructor to enter the quiz marks for a class. The instructor will need to enter quizzes into the program (use a `List<T>` to hold the quizzes). Once the quizzes have all been entered, display each quiz along with its percentage in a table format. Also display the average quiz grade, and average percentage (both formatted to show 2 decimal places).

Sample Program Output

```
C:\DMIT_New_CPSC1012\Lessons\09_OOP\UnderstandingObjectsWorksheet\bin\Debug\UnderstandingObjectsWorksheet.exe
Enter quiz total: 40
Enter quiz weight: 4

Enter student name: Allan
Enter student mark: 21
Add another entry (Y/N): y
Enter student name: Ziggy
Enter student mark: 15
Add another entry (Y/N): y
Enter student name: Obi-Wan
Enter student mark: 39
Add another entry (Y/N): y
Enter student name: Sally
Enter student mark: 37
Add another entry (Y/N): n
Total      Weight
40         4

Name      Mark      Percentage
Allan     21        52.50%
Ziggy     15        37.50%
Obi-Wan   39        97.50%
Sally     37        92.50%

Average Mark: 28.00
```