Java Fundamentals

Week 01 – Assignment 01 - Lesson support program

Important: this assignment is mainly for 'getting your feet wet' in using Java. The difficulty level is not representative for the rest of the course. It is assumed you would have no problems writing this program in C# and therefore this should be mostly 'looking up' how similar things are done in Java.

This first exercise will be a small fictional program that can be used during classes to register absenteeism. It does not yet have any real-world use, although students are of course free to expand this into a more usable application.

1. Create a new command line app in Java
2. Add a class 'Student' to your project and give it fields with appropriate data types for:
    a. Name
    b. Present/Absent
3. In the main method, ask for the number of students in the group and store this in a variable.
    a. You can use System.out.println() for showing text
    b. You can use the java.util.Scanner class for reading input
4. Add a variable containing a collection of students, with the given size (you can use the array)
5. Start a loop that will allow the user to enter the names of all students, in the following format:
    a. Please enter the name of student #1 and press [ENTER]:
    b. Make sure the first student displayed is 1 and not 0
6. Store every student as a new object in the collection
7. Write back the list of students to the command line
8. Start a loop that will allow the user to register if students are present, in the following format:
    a. Is student #1 (name) present? [Y/N + ENTER]:
    b. Store the result in the student object
9. Write back the list of students with their present/absent status to the command line
10. Compare your program to the expected result below and improve where necessary. Also think of how your program can be improved by adhering more to SOLID principles.