**IT Systems Analysis and Design**

**Homework 1**

The purpose of this homework is to help you understand how to write methods and how methods manipulate the data of an object. You are asked to write an **Elevator** class containing various methods. Then, you will write a program that creates Elevator objects and invokes the various methods.

Write a class named **Elevator**. Add fields for the following attributes:

* an int for the current floor,
* an int for the floor that the elevator is heading to,
* a boolean to denote whether the elevator is going up or down once it reaches its destination,
* and a boolean to denote whether the elevator doors are open or closed

Add a method named **goToFloor()** that changes the floor that the elevator is heading to. Use the System.out.println() method to display a message that you are changing the value.

Add methods named **openDoors()** and **closeDoors()** that change the appropriate boolean field accordingly. Again, display a message within each method so that you can see when the methods are invoked.

Add methods named **goingUp()** and **goingDown()** that change the appropriate boolean field accordingly.

Write a class named **ElevatorProgram** that contains main().Within **main()**, instantiate two Elevator objects. Invoke the various methods of the Elevator class on these three **objects**, ensuring that all your Elevator methods work successfully.

You should submit **a report** and **source codes in a** zip file.

**Submission deadline:** 13.03.2016