

CSIT121/821 Lab Exercises

Lab 2

Deadline: 6 September 2020, 10 PM

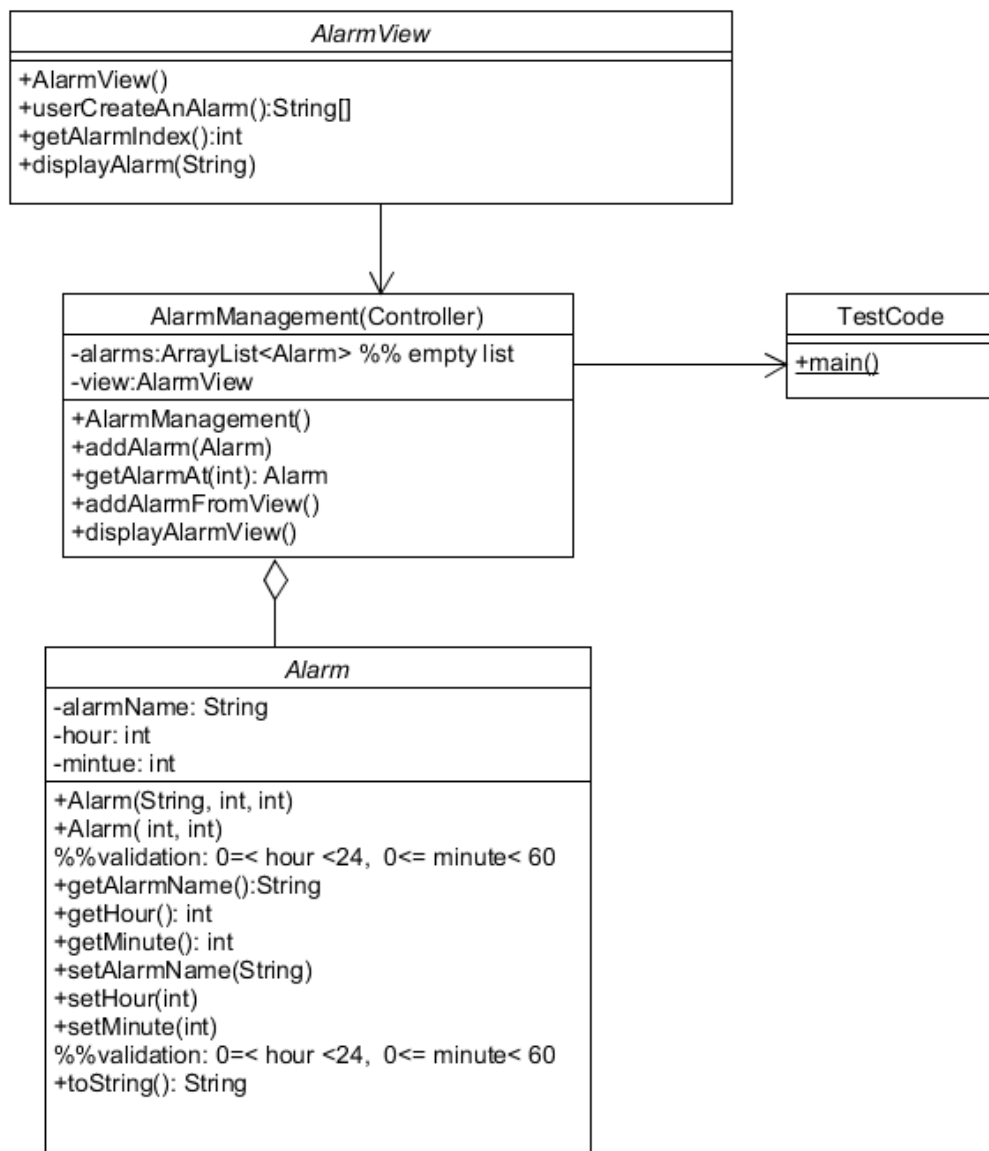
Objectives

- Class, object and Design Pattern: MVC
- Use of Inheritance

Tasks (All tasks will be marked. Five marks in total.)

Task 1: Implement and test the Alarm management system (2.5 marks)

Implement the following Alarm management system based on the UML class diagram (MVC pattern). During the implementation, you will learn how to use the MVC pattern in your future system design.

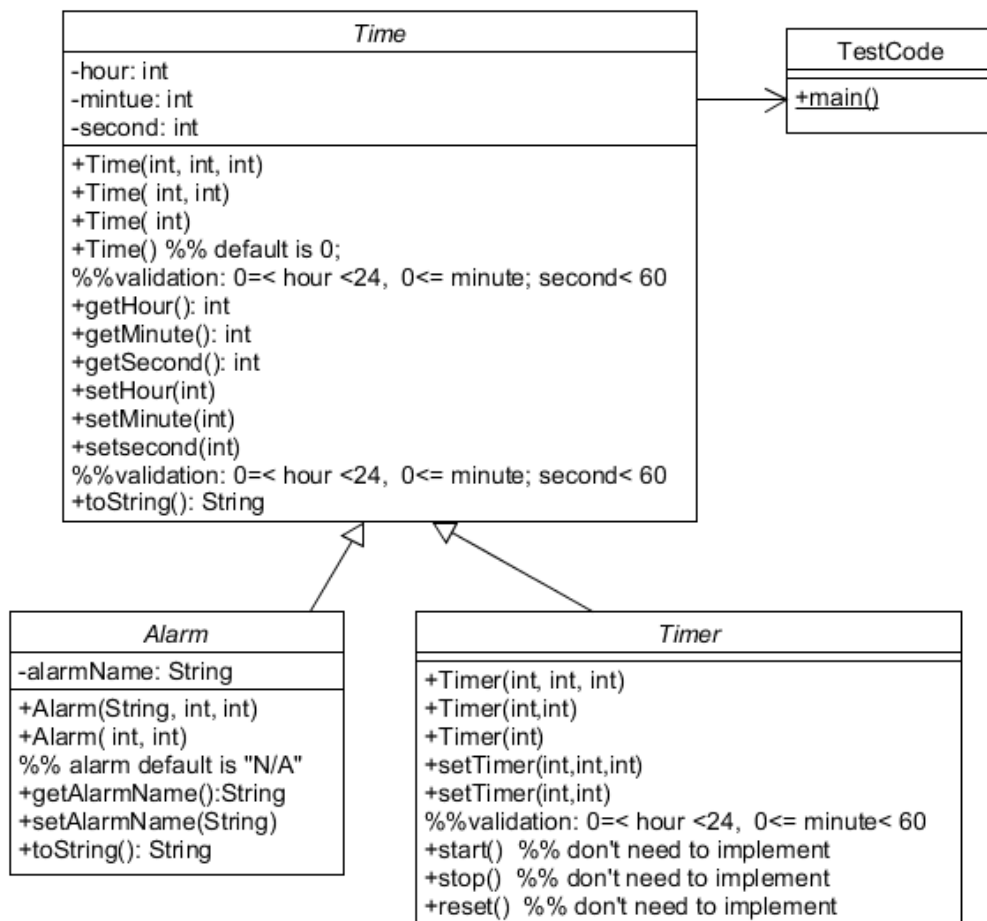


Write code following the below instructions.

1. Write code for the Alarm Class. Do not use `System.out` or `System.in` in this class excepted for debugging.
2. Write code for the AlarmView Class. Use `System.out`, `System.in`, `Scanner` class to create an UI to communicate with a user.
3. Using Alarm Class and AlarmView Class to write code for the AlarmManagement class. Do not use `System.out` or `System.in` in this class excepted for debugging.
4. Write the main method in the TestCode class to test the program. You shall write code to create the objects of all classes, and call all methods with the created objects.

Task 2: Implement and test the Time management system (2.5 marks)

Implement the following Time management system based on the UML class diagram. You will learn how to use the inheritance.



Write code following the below instructions.

1. Write code for the Time Class
2. Write code for the subclass Alarm Class. Please be reminded that you will need to write the overload constructor.
4. Write code for the subclass Timer Class. Don't need to implement `start()`, `stop()`, `reset()` method.
5. Write the main method in the TestCode class to test all function of the Alarm class and Timer Class.

Submission:

- Please submit your solution to Moodle. Email submission is not accepted.
- Please submit an **individual PDF document (lab2.pdf)** to contains all your solutions for the two tasks.
- For Task 1, please include your code, and the snapshots to show the compilation and the testing outputs of your program.
- For Task 2, please include your code, and the snapshots to show the compilation and the testing outputs of your program.

Note: Plagiarism will be reported to the school, and all involving students will receive the zero mark.