Lab exercises – 6

Date : 18.09.2020

Level – I (10 marks)

1. Define a class called **Time** that has data fields: **seconds**, **minutes** and **hour** of type integer. **Time** should have **setSecond(), setMinute(), setHr()** and constructors (default), **toString()** that will print the details of **Time** instance.
   Modify this **Time** class such that IllegalArgumentException is thrown if the **set** methods gets arguments less than zero and greater than 59.
   When initialising second, minute, hour using set methods ensure that the argument passed is not less than zero and not greater than 59, throw IllegalArgumentException in the method.

Note : IllegalArgumentException is thrown in order to indicate that a method has been passed an illegal or inappropriate argument

2. Create a class called **Invoice** that a Grocery store might use to represent an invoice for an item sold at the store. An **Invoice** should include four pieces of information as instance variables—a **part number** (type integer), a **part description** (type String), **quantity of the item** being purchased (type integer) and a **price per item** (double). Provide methods constructor with four arguments.
   Write a test application to create an instance and validate the input obtained using Scanner object. Ensure that **part number** is value greater than 0, **part description** is not null string, **quantity of the item and price per item** is value greater than 0.

Note : The InputMismatchException is thrown when attempting to retrieve a value using the Scanner class that doesn't match the expected pattern or type.

Level-2 (5 marks)

3. Create an array of **Invoice** and throw **ArrayIndexOutOfBoundsException** when it accesses the array of **Invoice** to print the details using **toString** method in **Invoice** class.

Level -3 (5 marks)

4. Modify the question 2 (**Invoice**) to throw the custom exception that throws an exception with message **"partnumber not found"** if the partnumber is null.