Module 2 : Anatomy of a Class & Interface, Annotations

Assignment

Version 1.0

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1) Look at the class module2.SuperStudy. (Download Link: https://www.edureka.co/medias/ruof9564jc/download?media_file_id=157106981)
    a. What is the problem?
    b. How can we rectify the problem?
2) Create an abstract base class Quadrilateral.
    a. Derive the following classes – Square, Rectangle and Parallelogram.
    b. The base class should have the following attributes – base (Integer), height (Integer).
    c. The base class should have the following methods – area, getter and setter methods for the attributes.
    d. The base should have default and parameterised constructors.
    e. Can a Square be modelled as a Rectangle?
3) Expand the example of AbstractSearch class to IntegerSearch and StringSearch classes.

```
public abstract class AbstractSearch {
public abstract boolean search(Object [] obj_list, Object obj);
}
```

4) Write a class to find integers from an array of integer based on the given input.
    a. Scan the whole input list to find matches.
    b. When the integer is found a listener would be informed and the listener will print a message saying the number and at what index it is found.
    c. The print message should not be hardcoded.