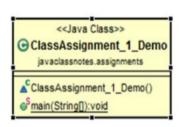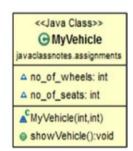1]Create a class Vehicle. The class should have two fields-no_of_seats and no_of_wheels. Create two objects-Motorcycle and Car for this class. Your output should show the descriptions for Car and Motorcycle.

```
<<Java Class>>
C ClassAssignment_1_Demo
javaclassnotes.assignments

C ClassAssignment_1_Demo()
S main(String[]):void
```

```
<<Java Class>>
C MyVehicle
javaclassnotes.assignments

△ no_of_wheels: int
△ no_of_seats: int

C MyVehicle(int,int)
○ showVehicle():void
```

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2]Create a class with a method. The method has to decide whether a given year is a leap year or not.

Note- A year is a leap year if:

•        It has an extra day i.e. 366 instead of 365.

•        It occurs in every 4 year e.g. 2008, 2012 are leap years.

•        For every 100 years a special rule applies-1900 is not a leap year but 2000 is a leap year. In those cases, we need to check whether it is divisible by 400 or not.

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3] Create a class with two functions-one recursive and one non recursive. Either of these function should be capable of calculating the factorial of a number.

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4]Suppose you have formed a cricket team. Now your team is going to play against an opponent team. You must be aware of the fact that which team will bat (or bowl) first will be decided through the toss and you need to send your captain for that. So, at first, you must elect a captain. At the same time, you must be aware that you can select one and only one captain. So, if you do not have any such captain, you will select one and send him for toss. Otherwise, you simply send the already nominated captain for the toss. Can you design this?

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

5]Create the bookshop.data, bookshop.business, bookshop.util and bookshop.interface packages, and move the existing classes within the packages that are deemed most appropriate. For the Book and Album classes, create th

e toString() method, which returns a one line description of the item. The toString() method should print this information: article_type: (isbn) - "title" by author, genre, price. For example: Book: (2345) "The Pillars of the Earth" by Ken Follet, Romance, 18€, Modify the ItemTest class, so that it also test the toString () methods added.
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*