

**King Saud University**  
**College of Computer and Information Systems, Department of Computer Science**  
**CSC 111: Java Programming-I, Semester I - 2013**  
**Lab 9**

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**Exercise 1:**

Question 1:

Define the class Car as shown in the UML Class diagram. Then Implement a main to test your class. The main should create three cars and change their colors 2,4,1 times respectively and print them.

The method `getNumberOfColorChanges()` returns how many times the method `setColor()` was called.

Car
-model:String -year:int -color:String -numberofcolorchanges:int
+Setmodel(String):void +Getmodel(): String +Setyear(int):void +Getyear():int +SetColor( String):void +Getcolor():String +Getnumberofcolorchanges():int +print():void

**Exercise 2:**

Create a class called Employee that includes three pieces of information as instance variables

Firstname(String), Lastname(String), Monthllysalary(double)

Class should have following methods:

Provide the setter and getter for all the variables. If the monthly salary is not positive, set it to 0.0.

Write the test application named employee test that demonstrate class employee's capabilities. Create two employee object and display each objects yearly salary. Then give each employee a 10 % raise and display each Employee's yearly salary again.

Employee
-Firstname:String -Lastname:String -Monthllysalary:double
+ setFirstName(String):void +getFirstName():String + setLastName(String):void +getLastName():String + setMonthllysalary(double):void +getMonthllysalary():double

### Exercise 3:

2. Create a class Employee with following attributes EmployeeID, Salary,basics,HRA and TA. The Employee class has following methods.

Create getter and setter for each attributes and a method called total salary. In the main method create two objects for the class Employee and set different id and salary to each and every employees.

Display each and every Employee id and totalsalary.

The total salary is the sum of basic, HRA and TA.

Input the values through keyboard

Employee
-EmployeeID:int -Salary:int -basic:int -HRA:int -TA:int
+SetEmployeeId(int):void +GetEmployeeID():int +SetBasic(int):void +GetBasic():int +SetHRA(int):void +GetHRA():int +SetTA(int):void +GetTA():int +totalSalary():int