**OOP Practice Problems**

Q1. Write a Java program that has a class Car having attributes like; CarModel, CarName, CarPrice

and CarOwner. The program should include methods to assign user defined values to the above

mentioned attributes and a display method to show the values. Your program should include

at least three Car objects and show which car has the maximum selling price.

Q2. Write a program that contains variables to hold employee data like; employeeCode,

employeeName and date Of Joining. Write a function that assigns the user defined values to

these variables. Write another function that asks the user to enter current date and then checks

if the employee tenure is more than three years or not. Call the functions in main. Now write a

runner class that declares two employee objects and check their tenure periods.

Q3. Create a class rectangle. The class has attributes length and width each of which defaults

to 1. It has member function that calculates the perimeter and the area of the rectangle. It has

set() and get() functions for both length and width. The set() function should verify

that length and width are each floating point numbers larger than 0.0 and less than 20.0.

Q4. Write a class Account having attributes emp\_id, emp\_name, amount and rate of interest. Apply

all method which have been studies in the class and show the results.

You are to design a Java program for creating and managing bank accounts. The balance of an

account is represented in cents as an integer. There are 100 cents to a dollar.

(a) Give the definition of an Account class that contains: (1) the integer data item balance, (2) a default

constructor that initializes the balance to 0, and (3) a method ***get\_balance()*** that returns the current

balance.

(b) Give the implementation of a method ***deposit()*** that takes an integer and adds it to the balance.

(c) Give the implementation of a method ***withdraw()*** that takes an integer and removes it from the

balance *if there is sufficient* money *in the account*.

(d) Give the implementation of a method ***display\_balance()*** that displays the balance in the form

dollars to cents. For example, the balance 10000 would be displayed as $100.00.

Q5. Each animal in the zoo has a name (a string) and a feeding time (an integer). Give an

implementation of a class Animal that contains: (1) these public data items; (2) a constructor that

takes a name, and sets the animal's name to it and its feeding time; (3) a method display that prints

the name and feeding time of the animal.

Q6. Consider the concept of a Date class. As date is composed of three attributes, namely day, month,

and year; so the class contains three data members. Now every date object will have these three

attributes, but each object can have different values for these three and a display() method to

show the date in proper format for example 25/12/2023.

Q7. Write a program that would print the information (name, year of joining, salary, address) of three

employees by creating a class named 'Employee'. The output should be as follows:

**Name Year of joining Salary Address**

M. Umar 2021 30000 Islamabad

Adil Khan 2010 50000 Lahore

Zubair 1999 20000 D.I.Khan

Q8. Write a program by creating an 'Employee' class having the following methods and print the final

salary.

1 - **getInfo()** which takes the salary, number of hours of work per day of employee as

parameter

2 - **AddSal()** which adds Rs. 1000 to salary of the employee if it is less than Rs. 50000.

3 - **AddWork()** which adds Rs. 500 to salary of employee if the number of hours of work per

day is more than 6 hours.