J.P DAWAR INSTITUTE OF INFORMATION AND TECHONOLOGY, DEPARTMENT OF ICT, VNSGU

ICT- SEMESTER: 1

COURSE CODE: 101

SUBJECT NAME: JAVA WEB DEVELOPMENT

PRATICAL PROBLEMSHEET -1

SUBMISSION DATE: 3/08/2022

Question 1: Write a Java program which initialization of earning of an employee. The program should calculate the income tax to be paid by the employee as per the criteria given below.

Slab Rate IT Rate

Upto Rs. 50,000 Nil

Upto Rs.60,000 10% on additional amount

Upto Rs.1,50,000 20% on additional amount

Above Rs. 1,50,000 30% on additional amount

Result :- Income tax is ……

Question 2: Write method of date class to support the following:

a) Method for validating that the integer -representing month is between 1 & 12 and checking that the day part of the date objects is within the correct range of month.
b) Obtaining the next day from a given date.

Question 3: Create a class named 'Member' having the following members: Data members
1 - Name
2 - Age
3 - Phone number
4 - Address
5 - Salary
It also has a method named 'printSalary' which prints the salary of the members. Two classes 'Employee' and 'Manager' inherits the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.

J.P DAWAR INSTITUTE OF INFORMATION AND TECHONOLOGY, DEPARTMENT OF ICT, VNSGU

ICT- SEMESTER: 1

COURSE CODE: 101

SUBJECT NAME: JAVA WEB DEVELOPMENT

Question 4: Create a class with a method that prints "This is parent class" and its subclass with another method that prints "This is child class". Now, create an object for each of the class and call

1 - method of parent class by object of parent class
2 - method of child class by object of child class
3 - method of parent class by object of child class

Question 5: Create a class named 'Rectangle' with two data members 'length' and 'breadth' and two methods to print the area and perimeter of the rectangle respectively. Its constructor having parameters for length and breadth is used to initialize length and breadth of the rectangle. Let class 'Square' inherit the 'Rectangle' class with its constructor having a parameter for its side (suppose s) calling the constructor of its parent class as 'super(s,s)'. Print the area and perimeter of a rectangle and a square.

Question 6: Create a class named 'Shape' with a method to print "This is This is shape". Then create two other classes named 'Rectangle', 'Circle' inheriting the Shape class, both having a method to print "This is rectangular shape" and "This is circular shape" respectively. Create a subclass 'Square' of 'Rectangle' having a method to print "Square is a rectangle". Now call the method of 'Shape' and 'Rectangle' class by the object of 'Square' class.

Question 7: Create an abstract class employee, having it properties and abstract function for calculating net salary and displaying the information. Drive manager and clerk class from this abstract class and implement the abstract method net salary and override the display method.

Question 8: Write a java program to create a two threads, one prints “M.s.c(I.T)” and other prints “Welcome”.

Question 9: Create a class Student with following operations

1) create parameterized constructor to initialize the objects

2) create a function isEqual() to check whether the two objects are equal or not which returns the Boolean value and gets two objects

3) print the result in main method if objects are equals or not (take variables as your assumption)

Question 10: Write a program in java with class Employee and do the following operations on it

1) Create two constructor default and with Object as parameter to initialize class variables.

2) Create a function calculate which calculates the pf and allowances on the salary of employee

and return the all values as an object

3) Print all the employee an object associated values returned from calculate functions

Question 11: WAP in java to create Box class with parameterized constructor with an object argument

to initialize length, breadth and height also create a function volume which returns the volume

of the box and print it in main method.

Question 12: Create a student Record Management system that can perform the following operations:

- Insert Student record.
- Delete student record
- Show student record
- Search student record

The student record should contain the following items

1. Student ID

2. Name of Student
3. Contact Number of Student

J.P DAWAR INSTITUTE OF INFORMATION AND TECHONOLOGY, DEPARTMENT OF ICT, VNSGU

ICT- SEMESTER: 1

COURSE CODE: 101

SUBJECT NAME: JAVA WEB DEVELOPMENT

Question 13: Consider the example of vehicles like bicycle, car, bike……, they have common functionalities. So we make an interface and put all these common functionalities. And lets Bicycle, Bike, car ….etc implement all these functionalities in their own class in their own way.

Question 14: Write a program to print the names of students by creating a Student class. If no name is passed while creating an object of Student class, then the name should be "Unknown", otherwise the name should be equal to the String value passed while creating object of Student class (Make use of constructor).

Question15: Write a constructor in the Car class given below that initializes the *brand* class field with the string “Ford”.

Call the getBrand() method in the main method of the Sample class and store the value of the brand in a variable, and print the value.