WEEK-04

### Question 1

### Create a Class Mobile with the attributes listed below,

### private String manufacturer;

### private String operating\_system;

### public String color;

### private int cost;

### Define a Parameterized constructor to initialize the above instance variables.

### Define getter and setter methods for the attributes above.

### for example : setter method for manufacturer is

### void setManufacturer(String manufacturer){

### this.manufacturer= manufacturer;

### String getManufacturer0{

### return manufacturer;}

### Display the object details by overriding the toString0 method.

### For example:

### Program:

class Mobile{

//private

private String manufacturer;

private String operating\_system;

private int cost;

//public

public String color;

//parameter

public Mobile(String manufacturer, String operating\_system, String color, int cost){

this.manufacturer=manufacturer;

this.operating\_system=operating\_system;

this.color=color;

this.cost=cost;

}

//getter

public void setmanufacturer(String manufacturer){

this.manufacturer=manufacturer;

}

public String getManufacturer(){

return this.manufacturer;

}

public void setoperatingSystem(String operating\_system){

this.operating\_system=operating\_system;

}

public String getOperatingSystem(){

return this.operating\_system;

}

public void setCost(int cost){

this.cost=cost;

}

public int getCost(){

return this.cost;

}

//string

@Override

public String toString(){

return "manufacturer = "+manufacturer + "\n" +

"operating\_system = " + operating\_system + "\n" +

"color = " + color + "\n" +

"cost = " + cost;

}

}

public class prog{

public static void main(String[] args){

//create

Mobile mobile = new Mobile("Redmi", "Andriod", "Blue", 34000);

//display

System.out.println(mobile);

}

}



### Question 2

### Create a class Student with two private attributes, name and roll number. Create three objects by invoking different

### constructors available in the class Student.

### Student()

### Student(String name)

### Student(String name, int rollno)

### Input:

### No input

### Output:

### No-arg constructor is invoked

### 1 arg constructor is invoked

### 2 arg constructor is invoked

### Name —null , Roll no = O

### Name =Rajalakshmi , Roll no = O

### Name =Lakshmi , Roll no = 101

### For example:

### 

### Program:

### class Student{

### private String name;

### private int rollno;

### 

### public Student(){

### this.name=null;

### this.rollno=0;

### System.out.println("No-arg constructor is invoked");

### }

### 

### public Student(String name){

### this.name=name;

### this.rollno=0;

### System.out.println("1 arg constructor is invoked");

### }

### 

### public Student(String name, int rollno){

### this.name=name;

### this.rollno=rollno;

### System.out.println("2 arg constructor is invoked");

### }

### 

### @Override

### public String toString(){

### return "Name =" + (name==null?"null":name) + " , Roll no = " + rollno;

### }

### }

### public class TestStudent{

### public static void main(String[] args){

### Student student1=new Student();

### Student student2=new Student("Rajalakshmi");

### Student student3=new Student("Lakshmi",101);

### 

### System.out.println(student1);

### System.out.println(student2);

### System.out.println(student3);

### }

### }

### 

### Question 3

### Create a class called "Circle" with a radius attribute. You can access and modify this attribute using

### getter and setter methods. Calculate the area and circumference of the circle.

### Area of Circle = Ttr2

### Circumference = 2Ttr

### Input:

### 2

### Output:

### Area = 12.57

### Circumference -

### - 12.57

### For example:

### 

### Program:

### import java.io.\*;

### import java.util.Scanner;

### class Circle

### {

### private double radius;

### public Circle(double radius){

### // set the instance variable radius

### this.radius=radius;

### 

### }

### public void setRadius(double radius){

### // set the radius

### this.radius=radius;

### 

### 

### }

### public double getRadius() {

### // return the radius

### return this.radius;

### 

### }

### public double calculateArea() { // complete the below statement

### return Math.PI\*radius\*radius;

### 

### }

### public double calculateCircumference() {

### // complete the statement

### return 2\*Math.PI\*radius;

### }

### }

### class prog{

### public static void main(String[] args) {

### int r;

### Scanner sc= new Scanner(System.in);

### r=sc.nextInt();

### Circle c= new Circle(r);

### System.out.println("Area = "+String.format("%.2f", c.calculateArea()));

### // invoke the calculatecircumference method

### System.out.println("Circumference = "+String.format("%.2f",c.calculateCircumference()));

### 

### }

### }

### 