## JAVA PRACTICE-2

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1. Write a Java program to create a class called “Person” with a name and age attribute. Create two instances of the “Person” class, set their attributes using the constructor, and print their name and age.

**package** com.Pooja;

**import**  java.util.Scanner;

**class** Lab{

String Name;

**int** age;

String Hello;

Lab(String Name,**int** age){

**this**.Name=Name;

**this**.age=age;

**this**.Hello=Hello;

}

**void** display() {

System.***out***.println("Nmae :" +Name);

System.***out***.println("Age :"+age);

}

**void** hello() {

System.***out***.println("Hello"+Name);

}

}

**public** **class** Person {

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

Lab obj=**new** Lab("Pooja",19);

obj.display();

//obj.hello();

}

}

2. Write a Java program to create a class called “Dog” with a name and breed attribute. Create two instances of the “Dog” class, set their attributes using the constructor and modify the attributes using the setter methods and print the updated values.

**package** com.Pooja;

**class** dogvarities{

String name;

String breed;

dogvarities(String name,String breed){

**this**.name=name;

**this**.breed=breed;

}

String getName() {

**return** name;

}

String setName(String name) {

**this**.name=name;

}

String geBreed() {

**return** breed;

}

String setBreed(String breed) {

**this**.breed=breed;

}

**void** display() {

System.***out***.println("Name : "+name +",Breed :"+breed);

}

}

**public** **class** Dog {

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

dogvarities obj2=**new** dogvarities("Puppy","Labrador");

dogvarities obj1=**new** dogvarities("Tommy","Beagle");

obj2.display();

obj1.display();

obj2.setName("Puppy");

obj2.setBreed("Labrador");

obj1.setName("Tommy");

obj1.setBreed("Beagle");

}

}

1. Write a Java program to create a class called “Rectangle” with width and height attributes. Calculate the area and perimeter of the rectangle.

**package** com.Pooja;

**class** rectangle {

**double** width;

**double** height;

// Constructor to initialize Rectangle object

rectangle(**double** width, **double** height) {

**this**.width = width;

**this**.height = height;

}

// Getter for width

**double** getWidth() {

**return** width;

}

// Setter for width

**void** setWidth(**double** width) {

**this**.width = width;

}

**double** getHeight() {

**return** height;

}

**void** setHeight(**double** height) {

**this**.height = height;

}

// Method to calculate area

**double** calculateArea() {

**return** width \* height;

}

// Method to calculate perimeter

**double** calculatePerimeter() {

**return** 2 \* (width + height);

}

// Method to display Rectangle information

**void** display() {

System.***out***.println("Width: " + width);

System.***out***.println("Height: " + height);

System.***out***.println("Area: " + calculateArea());

System.***out***.println("Perimeter: " + calculatePerimeter());

}

}

**public** **class** Rectangle{

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

rectangle obj = **new** rectangle(5.0, 3.0);

System.***out***.println("Initial rectangle Info:");

obj.display();

obj.setWidth(7.0);

obj.setHeight(4.0);

System.***out***.println("\nUpdated rectangle Info:");

obj.display();

}

}

4. Write a Java program to create a class called “Circle” with a radius attribute. You can access and modify this attribute. Calculate the area and circumference of the circle.

**package** com.Pooja;

**public** **class** Circle {

**private** **double** radius;

**public** Circle(**double** radius) {

**this**.radius = radius;

}

**public** **double** getRadius() {

**return** radius;

}

**public** **void** setRadius(**double** radius) {

**this**.radius = radius;

}

**public** **double** calculateArea() {

**return** Math.***PI*** \* radius \* radius;//pi\*r^2

}

**public** **double** calculateCircumference() {

**return** 2 \* Math.***PI*** \* radius;//2\*pi\*r

}

**public** **void** displayInfo() {

System.***out***.println("Radius: " + radius);

System.***out***.println("Area: " + calculateArea());

System.***out***.println("Circumference: " + calculateCircumference());

}

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

Circle circle = **new** Circle(7.0);

System.***out***.println("Initial Circle Info:");

circle.displayInfo();

circle.setRadius(10.0);

System.***out***.println("\nUpdated Circle Info:");

circle.displayInfo();

}

}

5. Write a Java program to create a class called “Book” with attributes for title, author, and ISBN, and methods to add and remove books from a collection.

**package** com.Pooja;

**import** java.util.\*;

**class** Book {

**private** String title;

**private** String author;

**private** **int** ISBN;

**public** Book(String title,String author,**int** ISBN){

**this**.title = title;

**this**.author = author;

**this**.ISBN = ISBN;

}

**public** String getTitle() {

**return** title;

}

**public** **void** setTitle(String title){

**this**.title = title;

}

**public** String getAuthor(){

**return** author;

}

**public** **void** setAuthor(String author){

**this**.author = author;

}

**public** **int** getISBN(){

**return** ISBN;

}

**public** **void** setISBN(**int** ISBN){

**this**.ISBN = ISBN;

}

}

**public** **class** Advertise {

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

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

String tit = sc.nextLine();

String auth = sc.nextLine();

**int** isbn = sc.nextInt();

Book myBook = **new** Book(tit,auth,isbn);

System.***out***.println("Title :" + myBook.getTitle());

System.***out***.println("Author :" + myBook.getAuthor());

System.***out***.println("ISBN :" + myBook.getISBN());

myBook.setTitle("Animal");

myBook.setAuthor("George");

myBook.setISBN(56);

System.***out***.println("Updated Title :" + myBook.getTitle());

System.***out***.println("Updated Author :" + myBook.getAuthor());

System.***out***.println("Updated ISBN :" + myBook.getISBN());

}

}

6. Write a Java program to create a class called “Employee” with a name, job title, and salary attributes, and methods to calculate and update salary.

**package** com.Pooja;

**public** **class** Employee {

String name;

String jobTitle;

**int** salary;

**public** Employee(String name, String jobTitle, **int** salary) {

**this**.name = name;

**this**.jobTitle = jobTitle;

**this**.salary = salary;

}

**void** setName(String name) {

**this**.name = name;

}

**void** setJobTitle(String jobTitle) {

**this**. jobTitle = jobTitle;

}

**void** setSalary(**int** salary) {

**this**.salary = salary;

}

String getName() {

**return** **this**.name;

}

String getjobTitle() {

**return** **this**.jobTitle;

}

**int** getSalary() {

**return** **this**.salary;

}

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

Employee e1 = **new** Employee("Pooja","Embedded developer",60000);

Employee e2 = **new** Employee("Mani","Software Engineer",6000);

System.***out***.println("Employee Details");

System.***out***.println(" ");

System.***out***.println("Employee1 Name: " + e1.getName());

System.***out***.println("Job of Employee1:" +e1.getjobTitle());

System.***out***.println("Salary of Employee1:"+ e1.getSalary());

System.***out***.println(" ");

System.***out***.println("Employee2 Name: " + e2.getName());

System.***out***.println("Job of Employee2:" +e2.getjobTitle());

System.***out***.println("Salary of Employee2:"+ e2.getSalary());

System.***out***.println(" ");

e1.setName("Sasi");

e2.setName("Priya");

e1.setJobTitle("Doctor");

e2.setJobTitle("Engineer");

e1.setSalary(678778);

e1.setSalary(60078);

System.***out***.println(" ");

System.***out***.println("Updated Details of an Employee");

System.***out***.println("Updated Employee1 Name: " + e1.getName());

System.***out***.println("Updated Job of Employee1:" +e1.getjobTitle());

System.***out***.println("Updated Salary of Employee1:"+ e1.getSalary());

System.***out***.println(" ");

System.***out***.println("Updated Employee2 Name: " + e2.getName());

System.***out***.println("Updated Job of Employee2:" +e2.getjobTitle());

System.***out***.println("Updated Salary of Employee2:"+ e2.getSalary());

}

}