**Practical 04**

Exercise 01:

class Employee {

private int empID;

private String empName;

private String empDesignation;

public Employee(int empID, String empName, String empDesignation) {

this.empID = empID;

this.empName = empName;

this.empDesignation = empDesignation;

}

public int getEmpID() {

return empID;

}

public void setEmpID(int empID) {

this.empID = empID;

}

public String getEmpName() {

return empName;

}

public void setEmpName(String empName) {

this.empName = empName;

}

public String getEmpDesignation() {

return empDesignation;

}

public void setEmpDesignation(String empDesignation) {

this.empDesignation = empDesignation;

}

}

public class TestEmployee {

public static void main(String[] args) {

// Create two objects for Mr. Bogdan and Ms. Bird

Employee mrBogdan = new Employee(1, "Mr. Bogdan", "Software Engineer");

Employee msBird = new Employee(2, "Ms. Bird", "Product Manager");

mrBogdan.setEmpID(101);

msBird.setEmpDesignation("Senior Product Manager");

System.out.println("Employee Details for Mr. Bogdan:");

System.out.println("Employee ID: " + mrBogdan.getEmpID());

System.out.println("Employee Name: " + mrBogdan.getEmpName());

System.out.println("Employee Designation: " + mrBogdan.getEmpDesignation());

System.out.println();

System.out.println("Employee Details for Ms. Bird:");

System.out.println("Employee ID: " + msBird.getEmpID());

System.out.println("Employee Name: " + msBird.getEmpName());

System.out.println("Employee Designation: " + msBird.getEmpDesignation());

}

}

Exercise 02:

output

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Exercise 03:

class Person {

String name;

int id;

public Person() {

}

public Person(String name, int id) {

this.name = name;

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

}

class Student extends Person {

String course;

public Student() {

}

public Student(String name, int id, String course) {

super(name, id);

this.course = course;

}

public String getCourse() {

return course;

}

public void setCourse(String course) {

this.course = course;

}

}

class Lecturer extends Person {

String programme;

public Lecturer() {

}

public Lecturer(String name, int id, String programme) {

super(name, id);

this.programme = programme;

}

public String getProgramme() {

return programme;

}

public void setProgramme(String programme) {

this.programme = programme;

}

}

public class Test {

public static void main(String[] args) {

Student student = new Student("John Doe", 12345, "Computer Science");

Lecturer lecturer = new Lecturer("Jane Doe", 67890, "Computer Science");

System.out.println("Student name: " + student.getName());

System.out.println("Student ID: " + student.getId());

System.out.println("Student course: " + student.getCourse());

System.out.println("Lecturer name: " + lecturer.getName());

System.out.println("Lecturer ID: " + lecturer.getId());

System.out.println("Lecturer programme: " + lecturer.getProgramme());

}

}

Exercise 04:

public class Animal {

}

public class Mammal extends Animal {

}

public class Reptile extends Animal {

}

public class Test {

public static void main(String[] args) {

Mammal mammal = new Mammal();

Reptile reptile = new Reptile();

System.out.println("mammal is an instance of Animal: " + (mammal instanceof Animal));

System.out.println("reptile is an instance of Animal: " + (reptile instanceof Animal));

System.out.println("mammal is an instance of Mammal: " + (mammal instanceof Mammal));

System.out.println("reptile is an instance of Reptile: " + (reptile instanceof Reptile));

}

}