**JAVA OOPS**

**TASK6**

**Q 1.**

**package javaTask6;**

**public class Person {**

**public Person() {**

**// TODO Auto-generated constructor stub**

**}**

**// TODO Auto-generated method stub**

**private String name;**

**private int age;**

**public Person(String name, int age) {**

**this.name = name;**

**this.age = age;**

**}**

**public String getName() {**

**return name;**

**}**

**public int getAge() {**

**return age;**

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

**Person person = new Person("Dinesh", 24);**

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

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

**}**

**public void raiseSalary(int i) {**

**// TODO Auto-generated method stub**

**}**

**public String getAnnualSalary() {**

**// TODO Auto-generated method stub**

**return null;**

**}**

**}**

**RESULT:**

**Name: Dinesh**

**Age: 24**

**Q2.**

**package javaTask6;**

**public class person1 {**

**public person1() {**

**// TODO Auto-generated constructor stub**

**}**

**// TODO Auto-generated method stub**

**private int id;**

**private String firstName;**

**private String lastName;**

**private int salary;**

**public person1(int id, String firstName, String lastName, int salary) {**

**this.id = id;**

**this.firstName = firstName;**

**this.lastName = lastName;**

**this.salary = salary;**

**}**

**public int getID() {**

**return id;**

**}**

**public String getFirstName() {**

**return firstName;**

**}**

**public String getLastName() {**

**return lastName;**

**}**

**public String getName() {**

**return firstName + " " + lastName;**

**}**

**public int getSalary() {**

**return salary;**

**}**

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

**this.salary = salary;**

**}**

**public int getAnnualSalary() {**

**return salary \* 12;**

**}**

**public int raiseSalary(int percent) {**

**salary += salary \* percent / 100;**

**return salary;**

**}**

**public String toString() {**

**return "Employee [id=" + id + ", name=" + getName() + ", salary=" + salary + "]";**

**}**

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

**person1 emp = new person1(1001, "Ram", "s", 75000);**

**System.*out*.println(emp.toString());**

**emp.raiseSalary(10);**

**System.*out*.println("After raise: " + emp.toString());**

**System.*out*.println("Annual Salary: " + emp.getAnnualSalary());**

**}**

**}**

**RESULT:**

**Employee [id=1001, name=Ram s, salary=75000]**

**After raise: Employee [id=1001, name=Ram s, salary=82500]**

**Annual Salary: 990000**

**Q3.**

**package javaTask6;**

**public class Circle {**

**public Circle() {**

**// TODO Auto-generated constructor stub**

**}**

**// TODO Auto-generated method stub**

**private double radius;**

**this.radius = 1.0;**

**public Circle(double radius) {**

**this.radius = radius;**

**}**

**public double calculateCircumference() {**

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

**}**

**public double getRadius() {**

**return radius;**

**}**

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

**this.radius = radius;**

**}**

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

**Circle circle1 = new Circle();**

**System.*out*.println("Circle 1 Radius: " + circle1.getRadius());**

**System.*out*.println("Circle 1 Circumference: " + circle1.calculateCircumference());**

**Circle circle2 = new Circle(5.0);**

**System.*out*.println("\nCircle 2 Radius: " + circle2.getRadius());**

**System.*out*.println("Circle 2 Circumference: " + circle2.calculateCircumference());**

**}**

**}**

**RESULT:**

**Circle 1 Radius: 1.0**

**Circle 1 Circumference: 6.283185307179586**

**Circle 2 Radius: 5.0**

**Circle 2 Circumference: 31.41592653589793**

**Q4.**

**package javaTask6;**

**public class Account {**

**// TODO Auto-generated constructor stub**

**// TODO Auto-generated method stub**

**private String accountNumber;**

**private String accountHolderName;**

**private double balance;**

**public Account() {**

**this.accountNumber = "00000000";**

**this.accountHolderName = "Unknown";**

**this.balance = 0.0;**

**}**

**public Account(String accountNumber, String accountHolderName) {**

**this.accountNumber = accountNumber;**

**this.accountHolderName = accountHolderName;**

**this.balance = 0.0;**

**}**

**public void deposit(double amount) {**

**if (amount > 0) {**

**balance += amount;**

**System.*out*.println("Deposited: " + amount);**

**} else {**

**System.*out*.println("Invalid deposit amount.");**

**}**

**}**

**public void withdraw(double amount) {**

**if (amount > 0 && amount <= balance) {**

**balance -= amount;**

**System.*out*.println("Withdrew: " + amount);**

**} else if (amount <= 0) {**

**System.*out*.println("Invalid withdrawal amount.");**

**} else {**

**System.*out*.println("Insufficient balance for withdrawal.");**

**}**

**}**

**public double checkBalance() {**

**return balance;**

**}**

**public String toString() {**

**return "Account [Account Number: " + accountNumber + ", Holder: " + accountHolderName + ", Balance: " + balance + "]";**

**}**

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

**Account acc1 = new Account();**

**System.*out*.println(acc1);**

**acc1.deposit(500.0);**

**System.*out*.println("Balance after deposit: " + acc1.checkBalance());**

**acc1.withdraw(200.0);**

**System.*out*.println("Balance after withdrawal: " + acc1.checkBalance());**

**acc1.withdraw(400.0);**

**Account acc2 = new Account("12345678", "Durai");**

**System.*out*.println("\n" + acc2);**

**acc2.deposit(2000.0);**

**System.*out*.println("Balance after deposit: " + acc2.checkBalance());**

**acc2.withdraw(1000.0);**

**System.*out*.println("Balance after withdrawal: " + acc2.checkBalance());**

**}**

**}**

**RESULT:**

**Account [Account Number: 00000000, Holder: Unknown, Balance: 0.0]**

**Deposited: 500.0**

**Balance after deposit: 500.0**

**Withdrew: 200.0**

**Balance after withdrawal: 300.0**

**Insufficient balance for withdrawal.**

**Account [Account Number: 12345678, Holder: Durai, Balance: 0.0]**

**Deposited: 2000.0**

**Balance after deposit: 2000.0**

**Withdrew: 1000.0**

**Balance after withdrawal: 1000.0**