2022

Practical 08

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INDEX NUMBER: 20020309

Question 01

Code

Student.java - Notepad

File Edit Format View Help

```
public class Student {
	private String studentName;
	private String regNumber;
	private int age;
	private String address;
	private String contactNumber;

	public Student(String studentName, String regNumber, int age, String address, String contactNumber) {
		this.studentName = studentName;
		this.regNumber = regNumber;
		this.age = age;
		this.address = address;
		this.contactNumber = contactNumber;
	}

	public void showStudentDetails() {
		System.out.println("Student name is " + studentName);
		System.out.println("Registration number is " + regNumber);
		System.out.println("Age is " + age);
		System.out.println("Address is " + address);
		System.out.println("Contact number is " + contactNumber);
	}

	/**
	 * @param args
	 */
	public static void main(String[] args) {
		Student Student_A = new Student("Piyumi Withana", "R202210", 21, "No:21, Western Park,Horana",
				"0774934323");
		Student_A.showStudentDetails();

		System.out.println(" ");

		final Student Student_B = new Student("Harsha Silva", "R202211", 23, "No 73, Kubuka East, Gonapola","0715687643");
		Student_B.showStudentDetails();

	}
}
```

Output

C:\Windows\System32\cmd.exe

```
C:\Users\User\OneDrive\Desktop\20020309>javac Student.java

C:\Users\User\OneDrive\Desktop\20020309>java Student
Student name is Piyumi Withana
Registration number is R202210
Age is 21
Address is No:21, Western Park,Horana
Contact number is 0774934323

Student name is Harsha Silva
Registration number is R202211
Age is 23
Address is No 73, Kubuka East, Gonapola
Contact number is 0715687643

C:\Users\User\OneDrive\Desktop\20020309>
```

Question 02

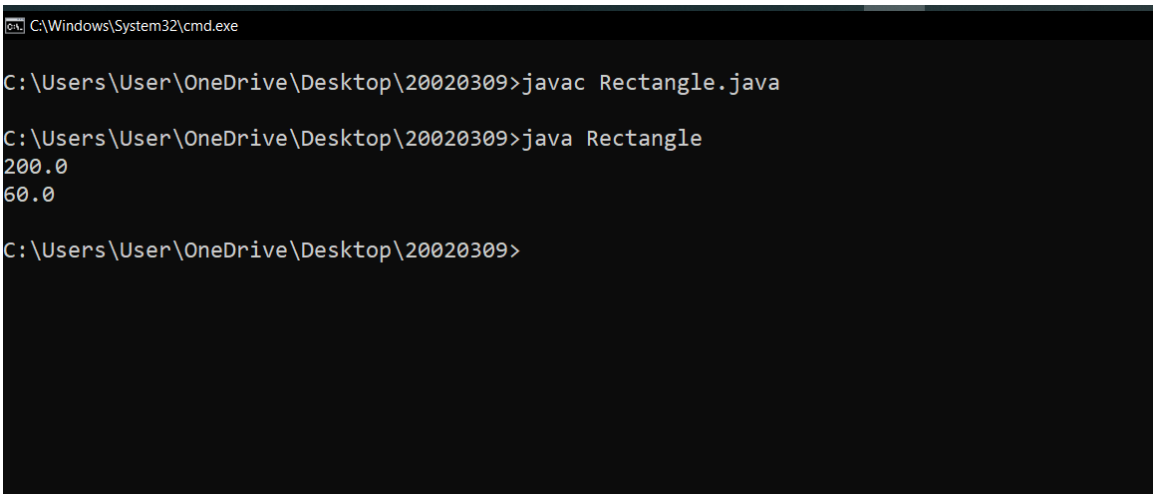
Code

Rectangle.java - Notepad

File Edit Format View Help

```
public class Rectangle {
    private int width;
    private int height;

    // constructor with two paramters
    public Rectangle(int width, int height) {
        this.width = width;
        this.height = height;
    }

    public double area() {
        return width * height;
    }

    public double perimeter() {
        return 2 * (width + height);
    }

    public static void main(String[] args) {
        Rectangle rectangle01 = new Rectangle(10, 20);
        System.out.println(rectangle01.area());
        System.out.println(rectangle01.perimeter());
    }
}
```

Output



Question 03

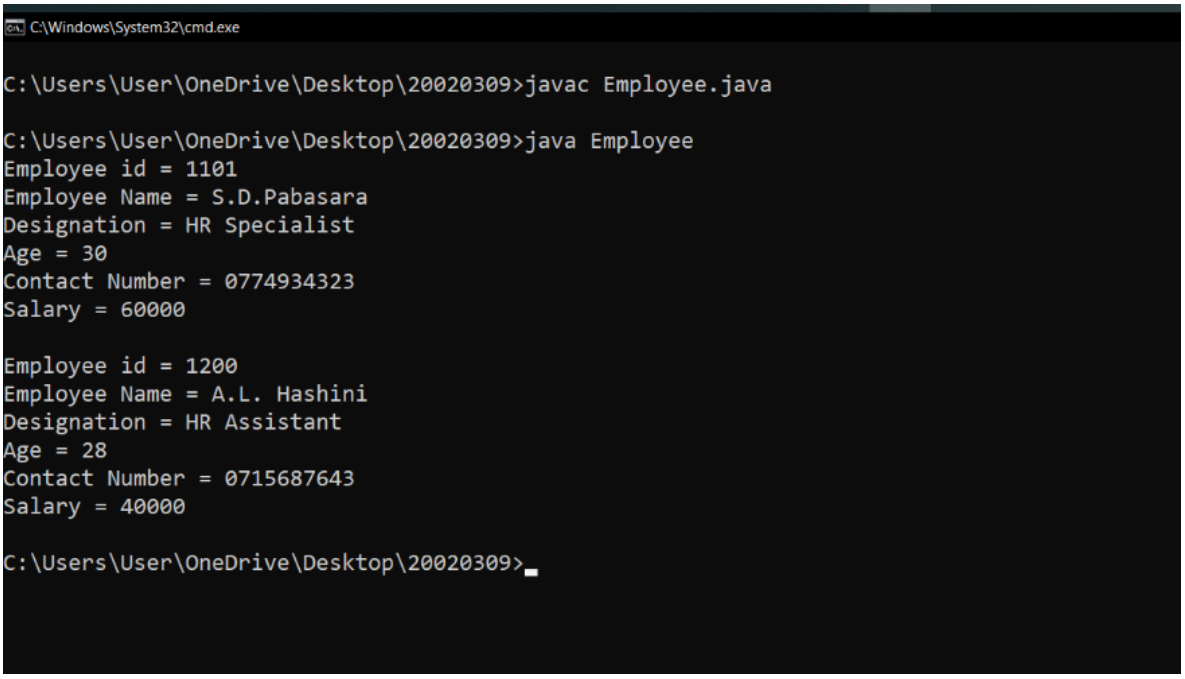
Code

Employee.java - Notepad

File Edit Format View Help

```
public class Employee {
    private int salary = 40000;
    private int employeeId;
    private String empName;
    private String designation;
    private int age;
    private String contactNumber;

    // constructor for another salary amount
    public Employee(int employeeId, String empName, String designation, int age, String contactNumber, int salary) {
        this.employeeId = employeeId;
        this.empName = empName;
        this.designation = designation;
        this.age = age;
        this.contactNumber = contactNumber;
        this.salary = salary;
    }

    // constructor for default salary amount
    public Employee(int employeeId, String empName, String designation, int age, String contactNumber) {
        this.employeeId = employeeId;
        this.empName = empName;
        this.designation = designation;
        this.age = age;
        this.contactNumber = contactNumber;
    }

    // printing employee details method
    public void showEmployeeDetails() {
        System.out.println("Employee id = " + employeeId);
        System.out.println("Employee Name = " + empName);
        System.out.println("Designation = " + designation);
        System.out.println("Age = " + age);
        System.out.println("Contact Number = " + contactNumber);
        System.out.println("Salary = " + salary);
    }

    public static void main(String[] args) {

        // creation of objects and assigning values
        Employee employeeA = new Employee(1101, "S.D.Pabasara", "HR Specialist", 30, "0774934323", 60000);
        Employee employeeB = new Employee(1200, "A.L. Hashini", "HR Assistant", 28, "0715687643");

        // printing detials using method
        employeeA.showEmployeeDetails();
        System.out.println("");
        employeeB.showEmployeeDetails();

    }

}
```

Output


C:\Windows\System32\cmd.exe
C:\Users\User\OneDrive\Desktop\20020309>javac Employee.java
C:\Users\User\OneDrive\Desktop\20020309>java Employee
Employee id = 1101
Employee Name = S.D.Pabasara
Designation = HR Specialist
Age = 30
Contact Number = 0774934323
Salary = 60000
Employee id = 1200
Employee Name = A.L. Hashini
Designation = HR Assistant
Age = 28
Contact Number = 0715687643
Salary = 40000
C:\Users\User\OneDrive\Desktop\20020309>

Question 04

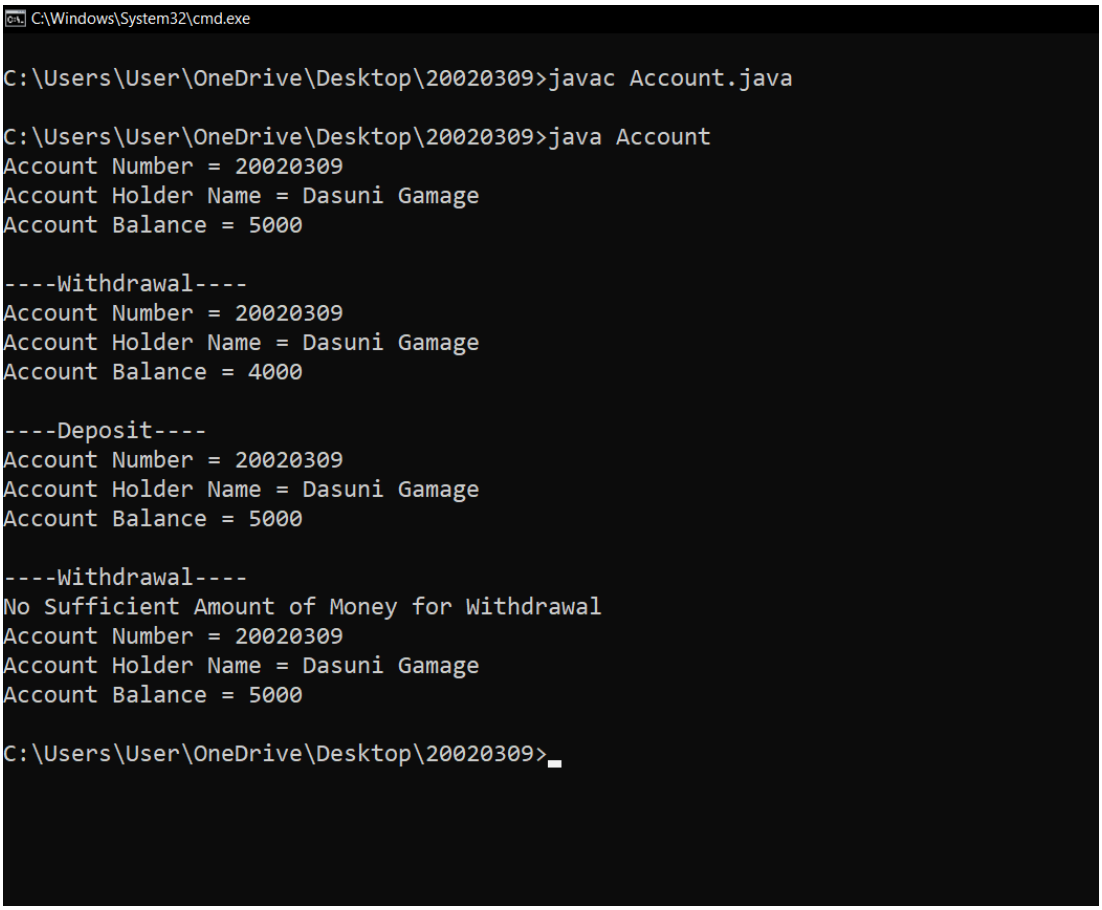
Code

Account.java - Notepad

File Edit Format View Help

```
public class Account {
    private int accNumber;
    private String accHolderName;
    private int balance;

    // constructor to get details
    public Account(int accNumber, String accHolderName, int balance) {
        this.accNumber = accNumber;
        this.accHolderName = accHolderName;
        this.balance = balance;
    }

    // prints details method
    public void showDetails() {
        System.out.println("Account Number = " + accNumber);
        System.out.println("Account Holder Name = " + accHolderName);
        System.out.println("Account Balance = " + balance);
    }

    // method for deposit
    public void deposit(int amount) {
        this.balance = balance + amount;
    }

    // method for withdrawal
    public void withdraw(int amount) {
        if (this.balance > amount) {
            this.balance = balance - amount;
        } else {
            System.out.println("No Sufficient Amount of Money for Withdrawal");
        }
    }


    public static void main(String[] args) {

        // creation of an object called Dasuni
        Account Dasuni = new Account(20020309, "Dasuni Gamage", 5000);
        Dasuni.showDetails();

        System.out.println();
        System.out.println("----Withdrawal----");
        Dasuni.withdraw(1000);
        Dasuni.showDetails();

        System.out.println();
        System.out.println("----Deposit----");
        Dasuni.deposit(1000);
        Dasuni.showDetails();

        System.out.println();
        System.out.println("----Withdrawal----");
        Dasuni.withdraw(6000);
        Dasuni.showDetails();
    }
}
```

Output


C:\Windows\System32\cmd.exe
C:\Users\User\OneDrive\Desktop\20020309>javac Account.java
C:\Users\User\OneDrive\Desktop\20020309>java Account
Account Number = 20020309
Account Holder Name = Dasuni Gamage
Account Balance = 5000
----Withdrawal----
Account Number = 20020309
Account Holder Name = Dasuni Gamage
Account Balance = 4000
----Deposit----
Account Number = 20020309
Account Holder Name = Dasuni Gamage
Account Balance = 5000
----Withdrawal----
No Sufficient Amount of Money for Withdrawal
Account Number = 20020309
Account Holder Name = Dasuni Gamage
Account Balance = 5000
C:\Users\User\OneDrive\Desktop\20020309>

Question 05

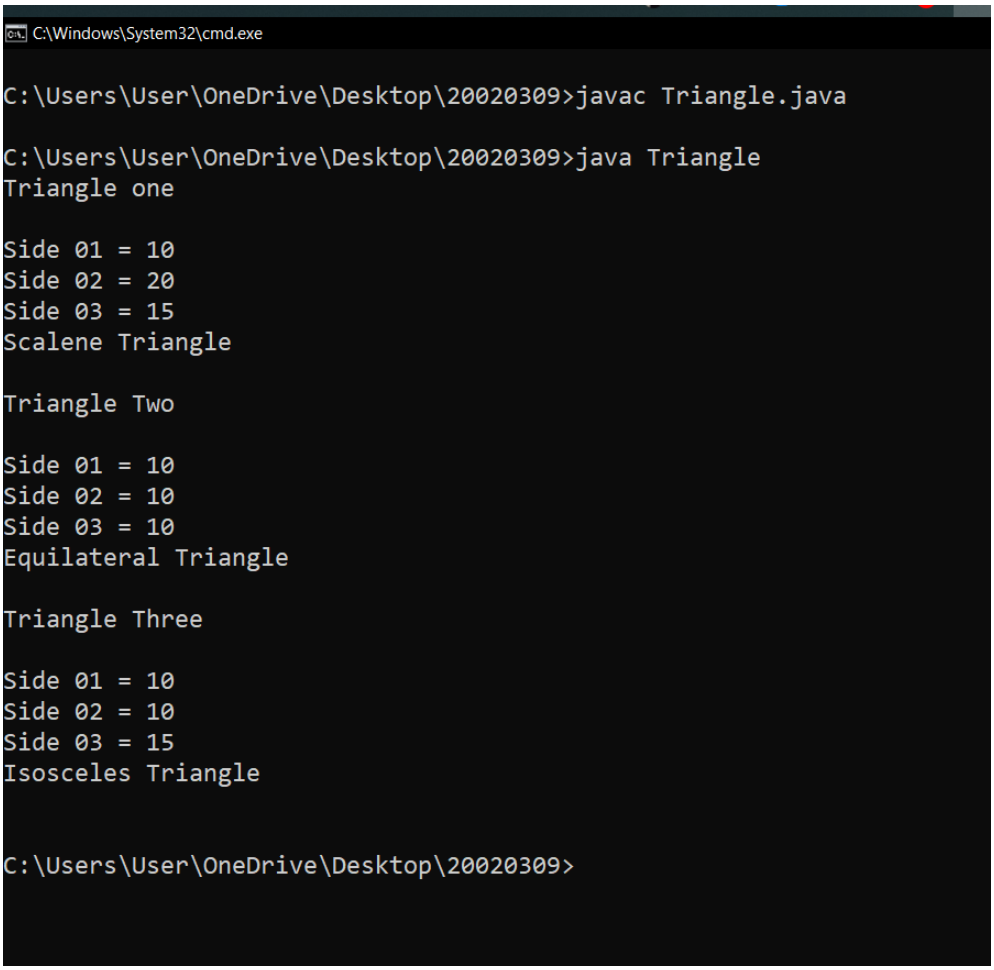
Code

Triangle.java - Notepad

File Edit Format View Help

```
public class Triangle {
    private int side1;
    private int side2;
    private int side3;

    // constructor to obtain details
    public Triangle(int side1, int side2, int side3) {
        this.side1 = side1;
        this.side2 = side2;
        this.side3 = side3;
    }

    // method to show details
    public void showDetails() {
        System.out.println("");
        System.out.println("Side 01 = " + side1);
        System.out.println("Side 02 = " + side2);
        System.out.println("Side 03 = " + side3);
    }

    // method to check tiangle type
    public void triangleType() {
        if (side1 == side2 && side2 == side3) {
            System.out.println("Equilateral Triangle");
        } else if (side1 == side2 || side2 == side3 || side1 == side3) {
            System.out.println("Isosceles Triangle");
        } else {
            System.out.println("Scalene Triangle");
        }
        System.out.println("");
    }

    public static void main(String[] args) {

        // creation of 03 triangle objects
        Triangle triangle1 = new Triangle(10, 20, 15);
        Triangle triangle2 = new Triangle(10, 10, 10);
        Triangle triangle3 = new Triangle(10, 10, 15);

        // display detials and type of triangle 01
        System.out.println("Triangle one");
        triangle1.showDetails();
        triangle1.triangleType();

        // display detials and type of triangle 02
        System.out.println("Triangle Two");
        triangle2.showDetails();
        triangle2.triangleType();

        // display detials and type of triangle 03
        System.out.println("Triangle Three");
        triangle3.showDetails();
        triangle3.triangleType();
    }

}
```

Output


C:\Windows\System32\cmd.exe
C:\Users\User\OneDrive\Desktop\20020309>javac Triangle.java
C:\Users\User\OneDrive\Desktop\20020309>java Triangle
Triangle one
Side 01 = 10
Side 02 = 20
Side 03 = 15
Scalene Triangle
Triangle Two
Side 01 = 10
Side 02 = 10
Side 03 = 10
Equilateral Triangle
Triangle Three
Side 01 = 10
Side 02 = 10
Side 03 = 15
Isosceles Triangle
C:\Users\User\OneDrive\Desktop\20020309>