

PRN : 22UAI003

Experiment no.5

Program :

```
import java.time.LocalDate;
import java.time.Period;
import java.util.Scanner;

class Person {
    private String name;
    private LocalDate birthDate;
    private double height;
    private double weight;
    private String address;

    public Person(String name, LocalDate birthDate, double height, double weight, String address)
    {
        this.name = name;
        this.birthDate = birthDate;
        this.height = height;
        this.weight = weight;
        this.address = address;
    }

    public int calculateAge()
    {
        LocalDate today = LocalDate.now();
        Period period = Period.between(birthDate, today);
        return period.getYears();
    }

    public String getName()
```

```
{  
    return name;  
}  
public LocalDate getBirthDate()  
{  
    return birthDate;  
}  
public double getHeight()  
{  
    return height;  
}  
public double getWeight()  
{  
    return weight;  
}  
public String getAddress()  
{  
    return address;  
}  
}
```

class Student extends Person

```
{  
    private String rollNo;  
    private double[] marks;  
  
    public Student(String name, LocalDate birthDate, double height, double weight, String address,  
String rollNo, double[] marks)  
    {  
        super(name, birthDate, height, weight, address);  
        this.rollNo = rollNo;  
    }  
}
```

```

        this.marks = marks;
    }
    public double calculateAvg()
    {
        if (marks == null || marks.length == 0)
        {
            return 0.0;
        }
        double sum = 0;
        for (double mark : marks)
        {
            sum += mark;
        }
        return sum / marks.length;
    }
    public String getRollNo()
    {
        return rollNo;
    }
    public void displayStudentDetails()
    {
        System.out.println("Student Name: " + getName());
        System.out.println("Roll No: " + rollNo);
        System.out.println("Average Marks: " + calculateAvg());
        System.out.println("Age: " + calculateAge());
    }
}

class Employee extends Person
{
    private String empld;
    private double salary;

```

```

    public Employee(String name, LocalDate birthDate, double height, double weight, String address,
String empld, double salary)
    {
        super(name, birthDate, height, weight, address);
        this.empld = empld;
        this.salary = salary;
    }
    public double calculateTax()
    {
        return salary * 0.10;
    }
    public String getEmpld()
    {
        return empld;
    }
    public void displayEmployeeDetails()
    {
        System.out.println("Employee Name: " + getName());
        System.out.println("Employee ID: " + empld);
        System.out.println("Salary: " + salary);
        System.out.println("Tax to be paid: " + calculateTax());
        System.out.println("Age: " + calculateAge());
    }
}

```

```

public class Exp5
{
    public static void main(String[] args)
    {
        Scanner scanner = new Scanner(System.in);
    }
}

```

```
System.out.println("Enter details for Student:");
```

```
System.out.print("Name: ");
```

```
String studentName = scanner.nextLine();
```

```
System.out.print("Birth Date (YYYY-MM-DD): ");
```

```
LocalDate studentBirthDate = LocalDate.parse(scanner.nextLine());
```

```
System.out.print("Height (meters): ");
```

```
double studentHeight = scanner.nextDouble();
```

```
System.out.print("Weight (kg): ");
```

```
double studentWeight = scanner.nextDouble();
```

```
scanner.nextLine();
```

```
System.out.print("Address: ");
```

```
String studentAddress = scanner.nextLine();
```

```
System.out.print("Roll No: ");
```

```
String studentRollNo = scanner.nextLine();
```

```
System.out.print("Number of Marks: ");
```

```
int numMarks = scanner.nextInt();
```

```
double[] studentMarks = new double[numMarks];
```

```
System.out.println("Enter marks:");
```

```
for (int i = 0; i < numMarks; i++)
```

```
{
```

```
    studentMarks[i] = scanner.nextDouble();
```

```
}
```

```
Student student = new Student(studentName, studentBirthDate, studentHeight, studentWeight, studentAddress, studentRollNo, studentMarks);
```

```
student.displayStudentDetails();
```

```
scanner.nextLine();
```

```
System.out.println("\nEnter details for Employee:");
```

```
System.out.print("Name: ");
```

```
String employeeName = scanner.nextLine();
```

```
System.out.print("Birth Date (YYYY-MM-DD): ");
```

```
LocalDate employeeBirthDate = LocalDate.parse(scanner.nextLine());
```

```
System.out.print("Height (meters): ");
```

```
double employeeHeight = scanner.nextDouble();
```

```
System.out.print("Weight (kg): ");
```

```
double employeeWeight = scanner.nextDouble();
```

```
scanner.nextLine();
```

```
System.out.print("Address: ");
```

```
String employeeAddress = scanner.nextLine();
```

```
System.out.print("Employee ID: ");
```

```
String employeeId = scanner.nextLine();
```

```
System.out.print("Salary: ");
```

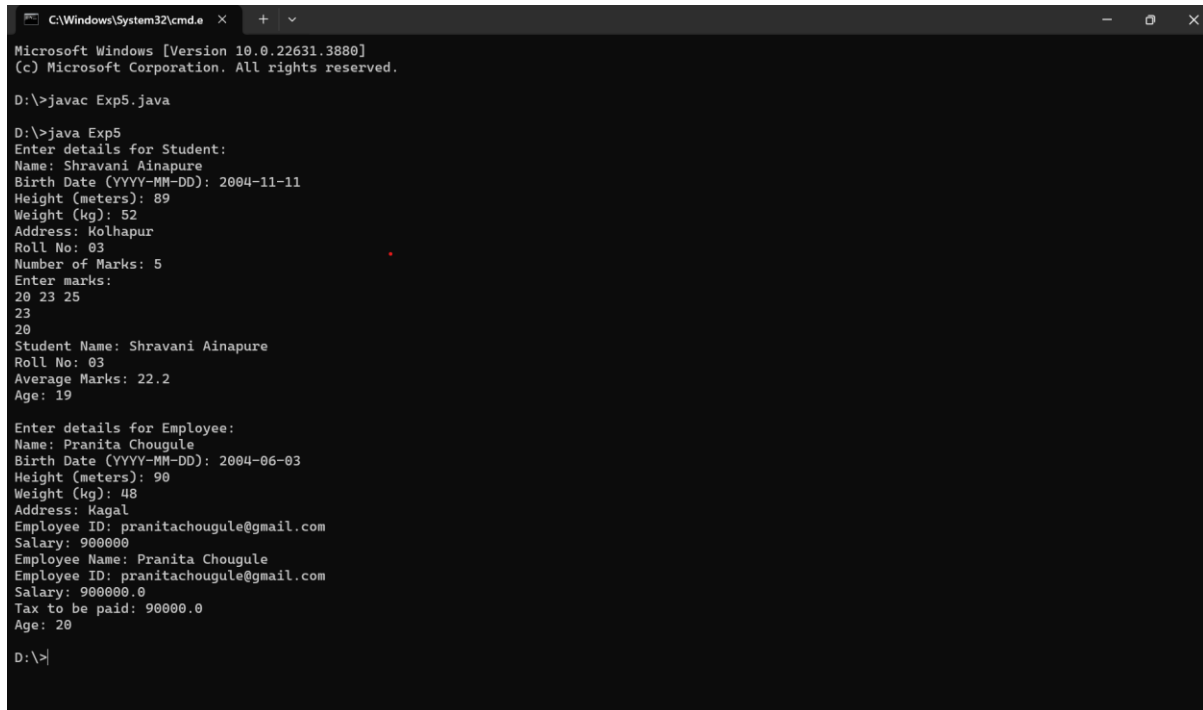
```
double employeeSalary = scanner.nextDouble();
```

```
Employee employee = new Employee(employeeName, employeeBirthDate, employeeHeight, employeeWeight, employeeAddress, employeeId, employeeSalary);
```

```
employee.displayEmployeeDetails();
```

```
        scanner.close();
    }
}
```

Output :



```
C:\Windows\System32\cmd.e x + v
Microsoft Windows [Version 10.0.22631.3880]
(c) Microsoft Corporation. All rights reserved.

D:\>javac Exp5.java

D:\>java Exp5
Enter details for Student:
Name: Shravani Ainapure
Birth Date (YYYY-MM-DD): 2004-11-11
Height (meters): 89
Weight (kg): 52
Address: Kolhapur
Roll No: 03
Number of Marks: 5
Enter marks:
20 23 25
23
20
Student Name: Shravani Ainapure
Roll No: 03
Average Marks: 22.2
Age: 19

Enter details for Employee:
Name: Pranita Chougule
Birth Date (YYYY-MM-DD): 2004-06-03
Height (meters): 90
Weight (kg): 48
Address: Nagal
Employee ID: pranitachougule@gmail.com
Salary: 900000
Employee Name: Pranita Chougule
Employee ID: pranitachougule@gmail.com
Salary: 900000.0
Tax to be paid: 90000.0
Age: 20

D:\>
```