Lab-2 Assigment

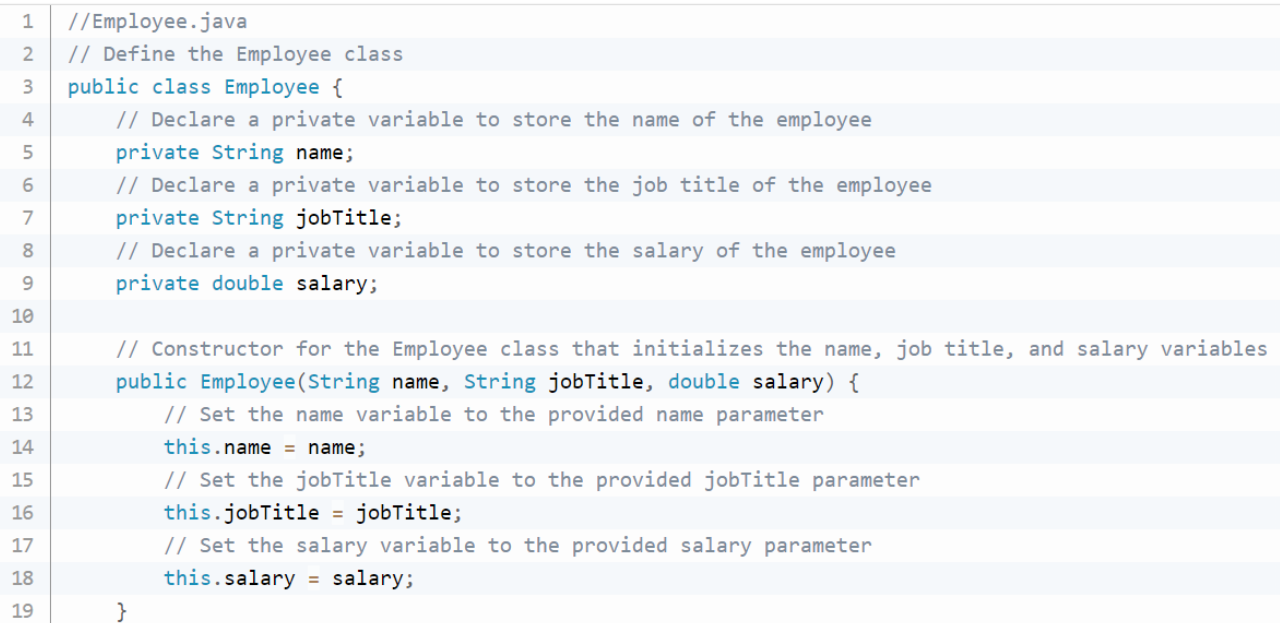
Java: Employee Management System

Java OOP: Exercise-1 with Solution

1) 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.

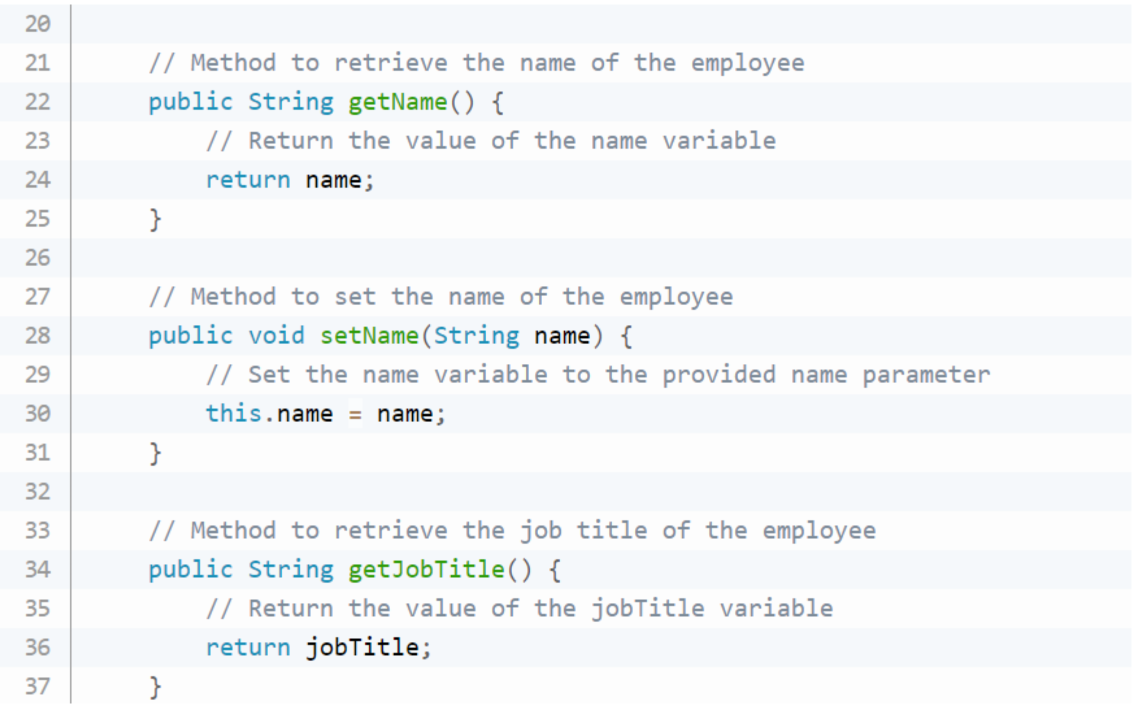
Sample Solution:

Java Code:



```java
//Employee.java
// Define the Employee class
public class Employee {
    // Declare a private variable to store the name of the employee
    private String name;
    // Declare a private variable to store the job title of the employee
    private String jobTitle;
    // Declare a private variable to store the salary of the employee
    private double salary;

    // Constructor for the Employee class that initializes the name, job title, and salary variables
    public Employee(String name, String jobTitle, double salary) {
        // Set the name variable to the provided name parameter
        this.name = name;
        // Set the jobTitle variable to the provided jobTitle parameter
        this.jobTitle = jobTitle;
        // Set the salary variable to the provided salary parameter
        this.salary = salary;
    }
```

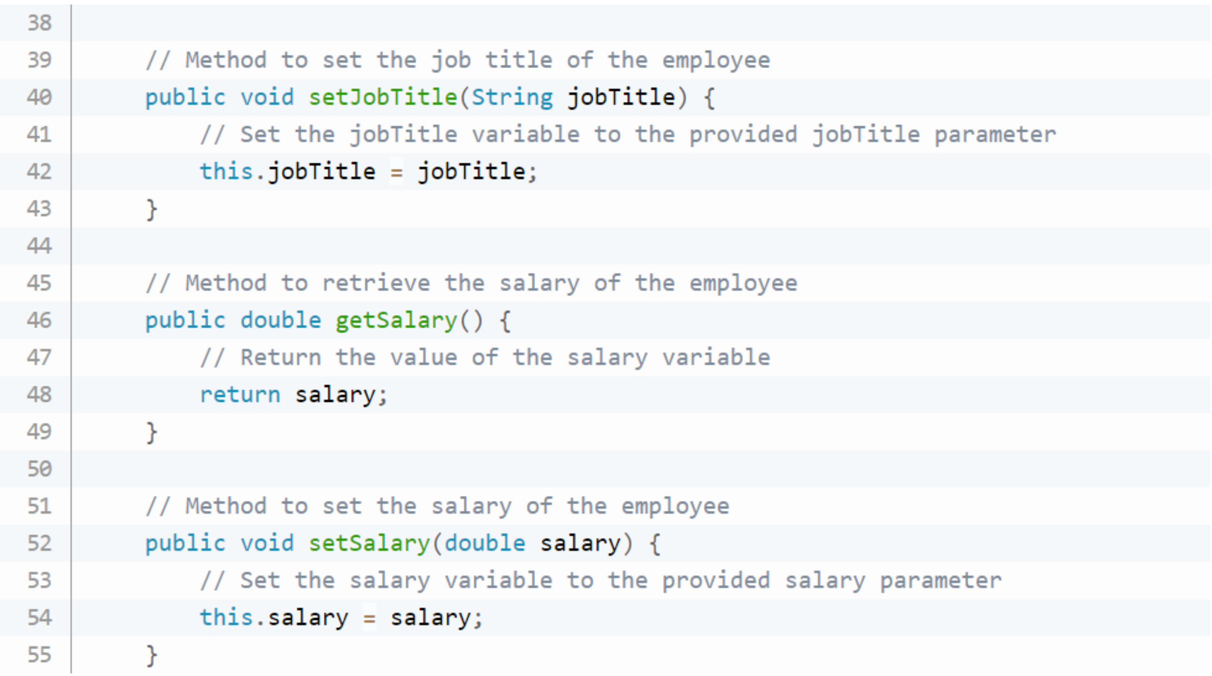


```java

    // Method to retrieve the name of the employee
    public String getName() {
        // Return the value of the name variable
        return name;
    }

    // Method to set the name of the employee
    public void setName(String name) {
        // Set the name variable to the provided name parameter
        this.name = name;
    }

    // Method to retrieve the job title of the employee
    public String getJobTitle() {
        // Return the value of the jobTitle variable
        return jobTitle;
    }
```

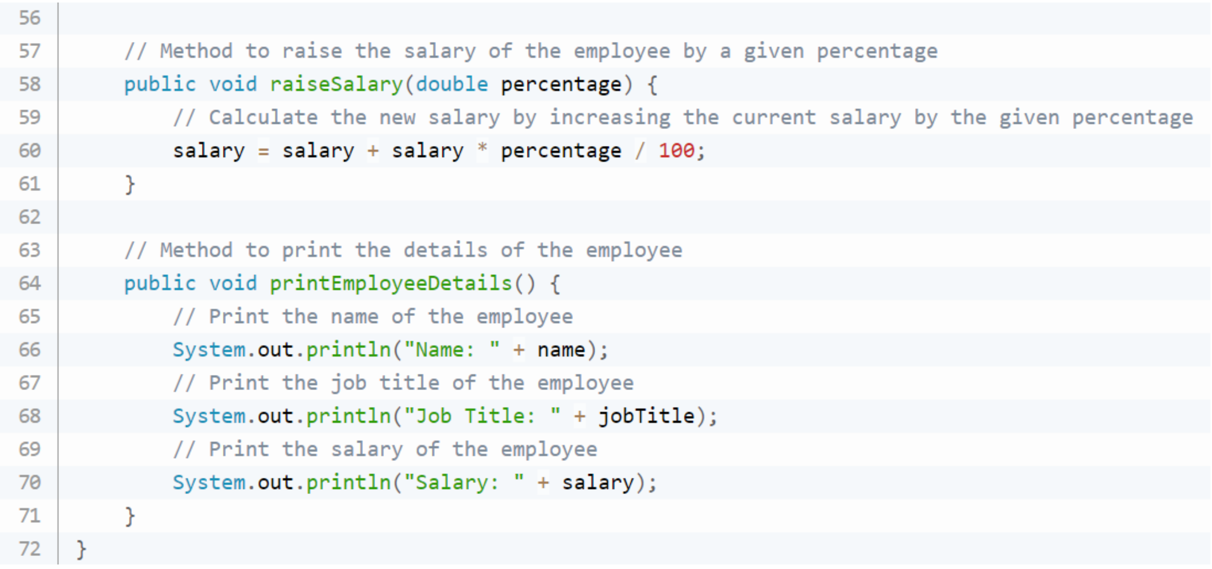


```java

    // Method to set the job title of the employee
    public void setJobTitle(String jobTitle) {
        // Set the jobTitle variable to the provided jobTitle parameter
        this.jobTitle = jobTitle;
    }

    // Method to retrieve the salary of the employee
    public double getSalary() {
        // Return the value of the salary variable
        return salary;
    }

    // Method to set the salary of the employee
    public void setSalary(double salary) {
        // Set the salary variable to the provided salary parameter
        this.salary = salary;
    }
```

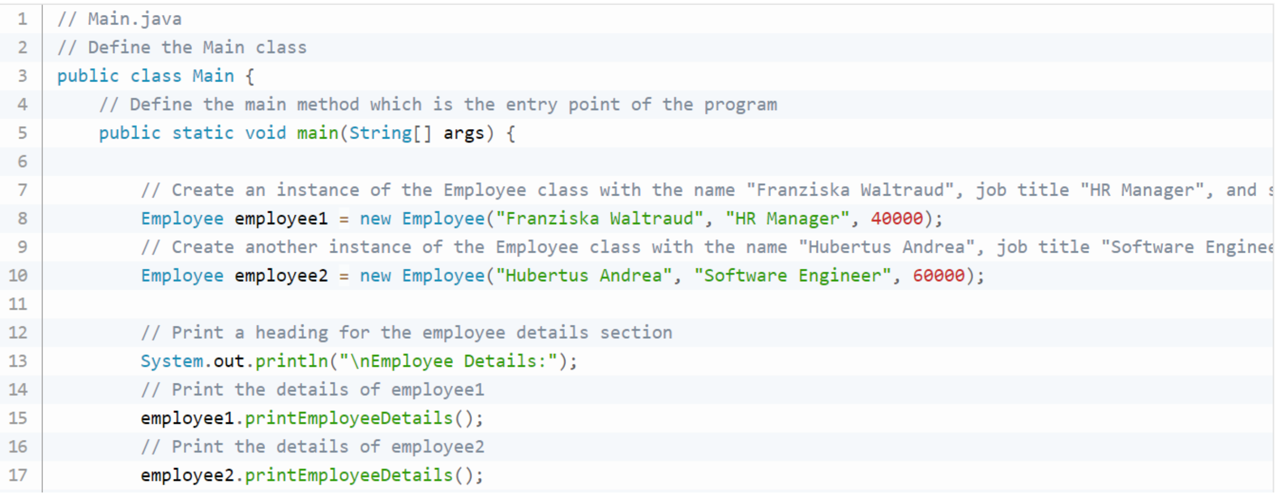


```java

    // Method to raise the salary of the employee by a given percentage
    public void raiseSalary(double percentage) {
        // Calculate the new salary by increasing the current salary by the given percentage
        salary = salary + salary * percentage / 100;
    }

    // Method to print the details of the employee
    public void printEmployeeDetails() {
        // Print the name of the employee
        System.out.println("Name: " + name);
        // Print the job title of the employee
        System.out.println("Job Title: " + jobTitle);
        // Print the salary of the employee
        System.out.println("Salary: " + salary);
    }
}
```

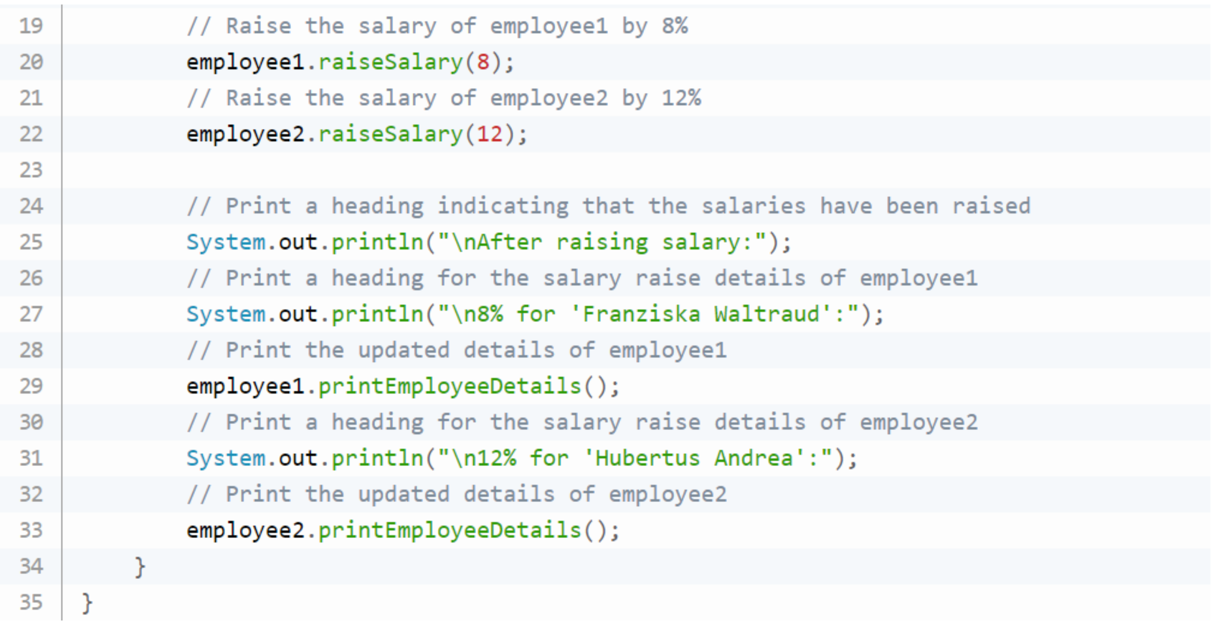
The above class has three private attributes: name, jobTitle, and salary. It has a constructor that initializes these attributes with the values passed as arguments. It also has getter and setter methods to access and modify these attributes. In addition, it provides methods for raising salaries by a certain percentage and printing employee information.



```java
// Main.java
// Define the Main class
public class Main {
    // Define the main method which is the entry point of the program
    public static void main(String[] args) {

        // Create an instance of the Employee class with the name "Franziska Waltraud", job title "HR Manager", and s
        Employee employee1 = new Employee("Franziska Waltraud", "HR Manager", 40000);
        // Create another instance of the Employee class with the name "Hubertus Andrea", job title "Software Enginee
        Employee employee2 = new Employee("Hubertus Andrea", "Software Engineer", 60000);

        // Print a heading for the employee details section
        System.out.println("\nEmployee Details:");
        // Print the details of employee1
        employee1.printEmployeeDetails();
        // Print the details of employee2
        employee2.printEmployeeDetails();
```



```java
        // Raise the salary of employee1 by 8%
        employee1.raiseSalary(8);
        // Raise the salary of employee2 by 12%
        employee2.raiseSalary(12);

        // Print a heading indicating that the salaries have been raised
        System.out.println("\nAfter raising salary:");
        // Print a heading for the salary raise details of employee1
        System.out.println("\n8% for 'Franziska Waltraud':");
        // Print the updated details of employee1
        employee1.printEmployeeDetails();
        // Print a heading for the salary raise details of employee2
        System.out.println("\n12% for 'Hubertus Andrea':");
        // Print the updated details of employee2
        employee2.printEmployeeDetails();
    }
}
```