

Practical 03 - Encapsulation

Develop a code for the following scenario.

“An encapsulated class contains three variables to store Name, Age and Salary of the employee. Develop getters and setters to set and get values . Develop a test class to test your code.”

Now modify the same code by trying to replace the setters using a constructor.

Code for the last example has been discussed during the class. We need the following Output. (Use Netbeans code generation option where necessary)

Employee Name: xxxxx (Use setter to set and getter to retrieve)

Basic Salary: xxxxx (Use setter to set and getter to retrieve)

Bonus: xxxxx (You may use the constructor to pass this value)

Bonus Amount: X (Develop a separate method to calculate Bonus amount. Bonus amount is the total of Bonus and Basic Salary)

E.g.

Employee Name: Bogdan

Basic Salary: 50000

Bonus: 10000

Bonus Amount: 60000

Answers

```
public class Employee {  
  
    private String name;  
  
    private int age;  
  
    private double basicSalary;
```

Practical 03 - Encapsulation

```
public Employee(String name, int age, double basicSalary) {  
    this.name = name;  
    this.age = age;  
    this.basicSalary = basicSalary;  
}  
  
// Getter and setter methods for name  
public String getName() {  
    return name;  
}  
  
public void setName(String name) {  
    this.name = name;  
}  
  
// Getter and setter methods for age  
public int getAge() {  
    return age;  
}  
  
public void setAge(int age) {  
    this.age = age;  
}  
  
// Getter and setter methods for basicSalary  
public double getBasicSalary() {  
    return basicSalary;  
}
```

Practical 03 - Encapsulation

```
public void setBasicSalary(double basicSalary) {  
    this.basicSalary = basicSalary;  
}  
  
// Method to calculate bonus amount  
public double calculateBonusAmount(double bonus) {  
    return basicSalary + bonus;  
}  
}  
  
public class TestEmployee {  
    public static void main(String[] args) {  
        // Create an Employee object using the constructor  
        Employee employee = new Employee("Bogdan", 30, 50000);  
  
        // Use setter and getter methods  
        employee.setName("Bogdan");  
        employee.setAge(30);  
        employee.setBasicSalary(50000);  
  
        // Print employee details using getter methods  
        System.out.println("Employee Name: " + employee.getName());  
        System.out.println("Basic Salary: " + employee.getBasicSalary());  
    }  
}
```

Practical 03 - Encapsulation

```
// Pass bonus using the constructor and calculate bonus amount  
double bonus = 10000;  
  
System.out.println("Bonus: " + bonus);  
  
double bonusAmount = employee.calculateBonusAmount(bonus);  
  
System.out.println("Bonus Amount: " + bonusAmount);  
  
}  
}
```

OUTPUT

Employee Name: Bogdan

Basic Salary: 50000

Bonus: 10000

Bonus Amount: 60000