Practical 03 Java Lab Answers (Encapsulation)

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1)	
| | ```java
public class Employee {
    private String name;
    private int age;
    private double salary;

    // Getters and Setters
    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public int getAge() {
        return age;
    }

    public void setAge(int age) {
        this.age = age;
    }

    public double getSalary() {
        return salary;
    }

    public void setSalary(double salary) {
        this.salary = salary;
    }
}

public class TestEmployee {
    public static void main(String[] args) {
        Employee e = new Employee();

        // Set values using setters
        e.setName("John ");
        e.setAge(30);
        e.setSalary(50000.0);

        // Get values using getters
        System.out.println("Name: " + e.getName());
        System.out.println("Age: " + e.getAge());
``` |

```
        System.out.println("Salary: " + e.getSalary());
    }
}

Code for encapsulated class with constructor replacing setters:
public class Employee {
    private String name;
    private int age;
    private double salary;

    // Constructor
    public Employee(String name, int age, double salary) {
        this.name = name;
        this.age = age;
        this.salary = salary;
    }

    // Getters
    public String getName() {
        return name;
    }

    public int getAge() {
        return age;
    }

    public double getSalary() {
        return salary;
    }
}

public class TestEmployee {
    public static void main(String[] args) {
        Employee e= new Employee("John Doe", 30, 50000.0);

        // Get values using getters
        System.out.println("Name: " + e.getName());
        System.out.println("Age: " + e.getAge());
        System.out.println("Salary: " + e.getSalary());
    }
}
```

Exercise 3-2: Code for Employee class with setter and getter methods:

```
public class Employee {
    private String name;
    private double basicSalary;
    private double bonus;
```

```java
    // Setter and Getter methods
    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public double getBasicSalary() {
        return basicSalary;
    }

    public void setBasicSalary(double basicSalary) {
        this.basicSalary = basicSalary;
    }

    public double getBonus() {
        return bonus;
    }

    public void setBonus(double bonus) {
        this.bonus = bonus;
    }
}

public class TestEmployee {
    public static void main(String[] args) {
        Employee employee = new Employee();

        // Set values using setters
        employee.setName("John Doe");
        employee.setBasicSalary(50000.0);
        employee.setBonus(5000.0);

        // Get values using getters
        System.out.println("Employee Name: " + employee.getName());
        System.out.println("Basic Salary: " + employee.getBasicSalary());
        System.out.println("Bonus: " + employee.getBonus());
    }
```