Practical-4.1 : 1) WAP that declares a class named Person. It should have instance variables to record name, age and salary. Use a new operator to create a Person object. Set and display its instance variables.

2) Add a constructor to the Person class developed above

Input:-

i.

```
class Person {
    String name;
    int age;
    double salary;

    public void setDetails(String name, int age, double salary) {
        this.name = name;
        this.age = age;
        this.salary = salary;
    }

    public void display() {
        System.out.println("Name: " + name);
        System.out.println("Age: " + age);
        System.out.println("Salary: $" + salary);
    }

    public static void main(String[] args) {
        Person person1 = new Person();
        person1.setDetails("John Doe", 30, 50000.0);
        person1.display();
    }
}
```

Output:-

```
Name: John Doe
Age: 30
Salary: $50000.0
```

ii.

```
class Person {
    String name;
    int age;
    double salary;

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

    public void display() {
        System.out.println("Name: " + name);
        System.out.println("Age: " + age);
        System.out.println("Salary: $" + salary);
    }

    public static void main(String[] args) {
        Person person1 = new Person("John Doe", 30, 50000.0);
        person1.display();
    }
}
```

Output:-

```
Name: John Doe
Age: 30
Salary: $50000.0
```

Practical-4.2 : The employee list for a company contains employee code, name, designation and basic pay. The employee is given HRA of 10% of the basic pay and DA of 45% of the basic pay. The total pay of the employee is calculated as Basic pay + HRA + DA. Write a class to define the details of the employee. Write a constructor that assigns the required initial values. Add a method to calculate HRA, DA and Total pay and print them out. Write another class with a main method. Create objects for three different employees and calculate the HRA, DA and total pay.

Input:-

```
class Employee {
    private String empCode;
    private String name;
    private String designation;
    private double basicPay;

    public Employee(String empCode, String name, String designation, double basicPay) {
        this.empCode = empCode;
        this.name = name;
        this.designation = designation;
        this.basicPay = basicPay;
    }

    public double calculateHRA() {
        return 0.10 * basicPay;
    }

    public double calculateDA() {
        return 0.45 * basicPay;
    }

    public double calculateTotalPay() {
        return basicPay + calculateHRA() + calculateDA();
    }

    public void displaySalaryDetails() {
        System.out.println("Employee Code: " + empCode);
        System.out.println("Name: " + name);
        System.out.println("Designation: " + designation);
        System.out.println("Basic Pay: " + basicPay);
        System.out.println("HRA (10%): " + calculateHRA());
        System.out.println("DA (45%): " + calculateDA());
```

```
        System.out.println("Total Pay: " + calculateTotalPay());
        System.out.println("------------------------------");
    }
}

public class Main {
    public static void main(String[] args) {
        Employee emp1 = new Employee("E101", "ABC", "Manager", 5000);
        Employee emp2 = new Employee("E102", "XYZ", "Developer", 4000);
        Employee emp3 = new Employee("E103", "MNC", "Analyst", 3500);

        emp1.displaySalaryDetails();
        emp2.displaySalaryDetails();
        emp3.displaySalaryDetails();
    }
}
```

Output:-

```
Employee Code: E101
Name: ABC
Designation: Manager
Basic Pay: 5000.0
HRA (10%): 500.0
DA (45%): 2250.0
Total Pay: 7750.0
------------------------------
Employee Code: E102
Name: XYZ
Designation: Developer
Basic Pay: 4000.0
HRA (10%): 400.0
DA (45%): 1800.0
Total Pay: 6200.0
------------------------------
Employee Code: E103
Name: MNC
Designation: Analyst
Basic Pay: 3500.0
HRA (10%): 350.0
DA (45%): 1575.0
Total Pay: 5425.0
------------------------------
```