WEEK 8

1. Create a class FRUIT which has data members color, taste and price. Also create a method display() which will print values of FRUIT object. Create three objects of FRUIT class and call their display() methods.
2. Create a class FRUIT which has data members color, taste and price. It has a method setDetails() which will set the values of color, taste and price. Also create a method display() which will print values of FRUIT object.
3. In previous question, set the values of using color, taste and price using Constructor.
4. Add one-argument constructor and two-argument constructor in addition to default constructor in FRUIT class.
5. Use the concept of constructor-chaining in the previous question using this().

Main.java FRUIT.java

```java
package week8_1;

public class FRUIT {  6 usages
    private String color;  4 usages
    private String taste;  4 usages
    private double price;  4 usages

    FRUIT(String color, String taste){  2 usages
        this.color = color;
        this.taste = taste;
        this.price = 0;
    }
    FRUIT(String color) { this(color,  taste: "Unknown"); }
    FRUIT(){  1 usage
        color = "Unknown";
        taste = "Unknown";
        price = 0;
    }

    public void setDetails(String color, String taste, double price){  3 usages
        this.color = color;
        this.taste = taste;
        this.price = price;
    }

    public void display(){
        System.out.println("Color : "+color);
        System.out.println("Taste : "+taste);
        System.out.println("Price : $"+price);
    }
}
```

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Main.java × FRUIT.java

```java
package week8_1;

public class Main {
    public static void main(String[] args) {
        FRUIT apple = new FRUIT( color: "Red",  taste: "Sweet");
        FRUIT banana = new FRUIT( color: "Yellow");
        FRUIT grape = new FRUIT();

        System.out.println("Apple:");
        apple.display();
        System.out.println("Banana:");
        banana.display();
        System.out.println("Grape:");
        grape.display();

        apple.setDetails( color: "Red",  taste: "Sweet",  price: 6.99);
        banana.setDetails( color: "Yellow",  taste: "Sweet",  price: 3.99);
        grape.setDetails( color: "Green",  taste: "Sour",  price: 5.99);

        System.out.println("Apple:");
        apple.display();
        System.out.println("Banana:");
        banana.display();
        System.out.println("Grape:");
        grape.display();
    }
}
```

```
Apple:
Color : Red
Taste : Sweet
Price : $0.0
Banana:
Color : Yellow
Taste : Unknown
Price : $0.0
Grape:
Color : Unknown
Taste : Unknown
Price : $0.0
```

```
Apple:
Color : Red
Taste : Sweet
Price : $6.99
Banana:
Color : Yellow
Taste : Sweet
Price : $3.99
Grape:
Color : Green
Taste : Sour
Price : $5.99
```

6. Create a class CAR with the following details:
Data members: model, color, price.
Member methods:
setDetails() – to set values of all data members using setters.
getDetails() – to get values of all data members using getters.
display() – to print all details of the car.

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Requirements:
1. Implement default constructor to initialize default values.
2. Implement a parameterized constructor (with one argument) to set only model.
3. Implement another parameterized constructor (with two arguments) to set model and color.
4. Use constructor chaining to reduce code redundancy.
5. Create three objects of CAR class using:
- Default constructor
- One-argument constructor
- Two-argument constructor
6. Set price for each object using the setDetails() method.
7. Call the display() method for each object.

Main.java CAR.java

```java
package week8_2;

public class CAR {  6 usages
    private String color;  4 usages
    private String model;  4 usages
    private double price;  4 usages

    CAR(String color, String model){  2 usages
        this.color = color;
        this.model = model;
        this.price = 0;
    }
    CAR(String color) { this(color,  model: "Unknown"); }
    CAR(){  1 usage
        color = "Unknown";
        model = "Unknown";
        price = 0;
    }

    public void setDetails(String color, String model, double price){  3 usages
        this.color = color;
        this.model = model;
        this.price = price;
    }

    public void getDetails() { display(); }

    public void display(){
        System.out.println("Color : "+color);
        System.out.println("Model : "+ model);
        System.out.println("Price : $"+price);
    }
}

```

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Main.java × CAR.java

```java
package week8_2;

public class Main {
    public static void main(String[] args) {
        CAR porsche = new CAR( color: "White", model: "911 GT3 RS");
        CAR mercedes = new CAR( color: "Navy");
        CAR ferrari = new CAR();

        System.out.println("Porsche:");
        porsche.getDetails();
        System.out.println("Mercedes:");
        mercedes.getDetails();
        System.out.println("Ferrari:");
        ferrari.getDetails();

        porsche.setDetails( color: "White", model: "911 GT3 RS", price: 100000);
        mercedes.setDetails( color: "Navy", model: "1986 S Class", price: 150000);
        ferrari.setDetails( color: "Red", model: "F40", price: 200000);

        System.out.println("Porsche:");
        porsche.display();
        System.out.println("Mercedes:");
        mercedes.display();
        System.out.println("Ferrari:");
        ferrari.display();
    }
}

```

```
Porsche:
Color : White
Model : 911 GT3 RS
Price : $0.0
Mercedes:
Color : Navy
Model : Unknown
Price : $0.0
Ferrari:
Color : Unknown
Model : Unknown
Price : $0.0
```

```
Porsche:
Color : White
Model : 911 GT3 RS
Price : $100000.0
Mercedes:
Color : Navy
Model : 1986 S Class
Price : $150000.0
Ferrari:
Color : Red
Model : F40
Price : $200000.0
```