

```
public class Product {

    private String name;
    private double price;

    // Constructor with parameters
    public Product(String name, double price)
    {
        this.name = name;
        this.price = price;
    }

    // Copy constructor

    public Product(Product PP)
    {
        this.name = PP.name;
        this.price = PP.price;
    }


    public String getName() {
        return name;
    }

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

    public double getPrice() {
        return price;
    }

    public void setPrice(double price) {
        this.price = price;
    }

    public void display()
    {
        System.out.println("The name is: " + name);
        System.out.println("The price is : " + price);
    }
}
```

```

public class ProductGroup {

    private String name;
    private Product[] PDP;
    private int nbp;

    public ProductGroup(String name, int size)
    {
        this.name = name;
        PDP = new Product[size];
        nbp =0;
    }

    //AddProduct in Composition
    public boolean addProduct(Product PP)
    {
        if(nbp < PDP.length)
        {
            PDP[nbp] = new Product(PP);
            nbp++;
            return true;
        }
        else
            return false;
    }

    public void display()
    {
        System.out.println("The name of the Group is: " + name);
        System.out.println("The products are:");

        for(int i=0; i<nbp; i++)
            PDP[i].display();
    }

}

```

```

public class PurchaseGroup {
    private String name;
    private Product[] PRP;
    private int nbp;

    public PurchaseGroup(String name, int size)
    {
        this.name = name;
        PRP = new Product[size];
        nbp =0;
    }

    //addProduct in Aggregation
    public boolean addProduct(Product PP)
    {
        if(nbp < PRP.length)
        {
            PRP[nbp] = PP;
            nbp++;
            return true;
        }
        else
            return false;
    }

    public void display()
    {
        System.out.println("The name of the Group is: " + name);
        System.out.println("The products to be ordered are:");

        for(int i=0; i<nbp; i++)
            PRP[i].display();
    }
}

```

```
public class test_productGroup {  
  
    public static void main(String[] args) {  
  
        ProductGroup PG1 = new ProductGroup("Al Marai", 1000);  
  
        Product P1 = new Product("Milk",6.5);  
        Product P2 = new Product("Juice",10);  
        Product P3 = new Product("Labnah",15);  
  
        // Composition  
        PG1.addProduct(P1);  
        PG1.addProduct(P2);  
        PG1.addProduct(P3);  
  
        PG1.display();  
  
        System.out.println("=====");  
  
        //Aggregation  
        PurchaseGroup Pur1 = new PurchaseGroup("Almarai", 100);  
  
        Pur1.addProduct(P1);  
        Pur1.addProduct(P3);  
  
        Pur1.display();  
  
    }  
  
}
```