

Assignment 2

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UML:



Code:

Class:

```
public class Item {
    private String brand;
    private String model;
    private String soc;
    private String Cartridge;
    private double weight, price;
    private int stock;

    Item(String brand, String model, String soc, double weight, double price, int stock) {
        this.brand = brand;
        this.model = model;
        this.soc = soc;
        this.weight = weight;
        this.price = price;
        this.stock = stock;
    }

    Item(String brand, String model, double weight, double price, int stock, String cartridge) {
        this.brand = brand;
        this.model = model;
        this.weight = weight;
        this.price = price;
        this.stock = stock;
        Cartridge = cartridge;
    }

    String getBrand() {
        return brand;
    }

    public void setBrand(String brand) {
        this.brand = brand;
    }
}
```

```
String getModel() {  
    return model;  
}  
  
public void setModel(String model) {  
    this.model = model;  
}  
  
double getWeight() {  
    return weight;  
}  
  
public void setWeight(double weight) {  
    this.weight = weight;  
}  
  
double getPrice() {  
    return price;  
}  
  
public void setPrice(double price) {  
    this.price = price;  
}  
  
int getStock() {  
    return stock;  
}  
  
public void setStock(int stock) {  
    this.stock = stock;  
}  
String getSoc() {  
    return soc;  
}
```

```

    public void setSoc(String soc) {
        this.soc = soc;
    }

    String getCartridge() {
        return Cartridge;
    }

    public void setCartridge(String cartridge) {
        Cartridge = cartridge;
    }
}

```

Main:

```

import java.util.ArrayList;
import java.util.Objects;
import java.util.Scanner;

public class Main {
    private static ArrayList<Item> items = new ArrayList<>();
    public static void main(String[] args){
        Scanner scan = new Scanner(System.in);
        items.add(0, new Item( brand: "HP", model: "Envy 15", soc: "Intel", weight: 2.2, price: 799.00, stock: 15));
        items.add(1, new Item( brand: "Dell", model: "Vostro 3559", soc: "AMD", weight: 1.8, price: 999.00, stock: 10));
        items.add(2, new Item( brand: "HP", model: "OfficeJet Pro", weight: 7.2, price: 800.00, stock: 3, cartridge: "Ink"));
        items.add(3, new Item( brand: "Canon", model: "E510", weight: 5.3, price: 300.00, stock: 6, cartridge: "Ink"));
        display();
        System.out.print("Add new item(y, n)? ");
        String add = scan.next();
        if (add.equals("y")){
            addItems();
        }
        System.out.print("Find a specific item in array(type name): ");
        String term = scan.next();
        arraySearch(term);
    }
    private static void addItems(){
        Scanner scan = new Scanner(System.in);
        System.out.print("Select item type(1 for laptop, 2 for printer): ");
        int type = scan.nextInt();
        if (type == 1){
            System.out.print("Enter item brand: ");
            String brand = scan.next();

            System.out.print("Enter item model: ");
            String model = scan.next();

            System.out.print("Enter item processor type: ");
            String soc = scan.next();

```

```

        System.out.print("Enter item weight: ");
        double weight = scan.nextDouble();

        System.out.print("Enter item price: ");
        double price = scan.nextDouble();

        System.out.print("Enter item Stock: ");
        int stock= scan.nextInt();
        items.add(new Item(brand, model, soc, weight, price, stock));
    }

    else if (type == 2){
        System.out.print("Enter item brand: ");
        String brand = scan.next();

        System.out.print("Enter item model: ");
        String model = scan.next();

        System.out.print("Enter item weight: ");
        double weight = scan.nextDouble();

        System.out.print("Enter item price: ");
        double price = scan.nextDouble();

        System.out.print("Enter item Stock: ");
        int stock= scan.nextInt();

        System.out.print("Enter item cartridge type: ");
        String cart = scan.next();
        items.add(new Item(brand, model,weight, price, stock, cart));
    }
    System.out.println("Item added to list!");
    display();
}

```

```

private static void arraySearch(String keyWord){
    for (Item aNewItem : items) {
        if (Objects.equals(aNewItem.getSoc(), keyWord)) {
            System.out.println("Found in array:");
            System.out.println("Laptop: " + "\nBrand: " + aNewItem.getBrand() + "\nModel: " +
                aNewItem.getModel() + "\nWeight: " + aNewItem.getWeight()
                + "\nStock: " + aNewItem.getStock() + "\nPrice: " + aNewItem.getPrice()
                + "\nProcessor type: " + aNewItem.getSoc() + "\n");
        }
        else if (Objects.equals(aNewItem.getCartridge(), keyWord)) {
            System.out.println("Found in array:");
            System.out.println("Printer: " + "\nBrand: " + aNewItem.getBrand() + "\nModel: " +
                aNewItem.getModel() + "\nWeight: " + aNewItem.getWeight()
                + "\nStock: " + aNewItem.getStock() + "\nPrice: " + aNewItem.getPrice()
                + "\nCartridge type: " + aNewItem.getCartridge() + "\n");
        }
    }
}

private static void display(){
    for (Item item1 : items) {

        if (item1.getCartridge() == null) {
            System.out.println("Laptop: " + "\nBrand: " + item1.getBrand() + "\nModel: " +
                item1.getModel() + "\nWeight: " + item1.getWeight()
                + "\nStock: " + item1.getStock() + "\nPrice: " + item1.getPrice()
                + "\nProcessor type: " + item1.getSoc() + "\n");
        }
        else if (item1.getSoc() == null) {
            System.out.println("Printer: " + "\nBrand: " + item1.getBrand() + "\nModel: " +
                item1.getModel() + "\nWeight: " + item1.getWeight()
                + "\nStock: " + item1.getStock() + "\nPrice: " + item1.getPrice()
                + "\nCartridge type: " + item1.getCartridge() + "\n");
        }
    }
}
}

```

Output:

```
~/IdeaProjects/Assignment 2/src javac Main.java
~/IdeaProjects/Assignment 2/src javac Main.java
~/IdeaProjects/Assignment 2/src java Main

Laptop:
Brand: HP
Model: Envy 15
Weight: 2.2
Stock: 15
Price: 799.0
Processor type: Intel

Laptop:
Brand: Dell
Model: Vostro 3559
Weight: 1.8
Stock: 10
Price: 999.0
Processor type: AMD

Printer:
Brand: HP
Model: OfficeJet Pro
Weight: 7.2
Stock: 3
Price: 800.0
Cartridge type: Ink

Printer:
Brand: Cannon
Model: E510
Weight: 5.3
Stock: 6
Price: 300.0
Cartridge type: Ink

Add new item(y, n)? y
Select item type(1 for laptop, 2 for printer): 1
Enter item brand: Huawei
Enter item model: matebook
Enter item processor type: AMD
Enter item weight: 1.3
Enter item price: 2300
Enter item Stock: 23
Item added to list!
```


Item added to list!

Laptop:

Brand: HP

Model: Envy 15

Weight: 2.2

Stock: 15

Price: 799.0

Processor type: Intel

Laptop:

Brand: Dell

Model: Vostro 3559

Weight: 1.8

Stock: 10

Price: 999.0

Processor type: AMD

Printer:

Brand: HP

Model: OfficeJet Pro

Weight: 7.2

Stock: 3

Price: 800.0

Cartridge type: Ink

Printer:

Brand: Cannon

Model: E510

Weight: 5.3

Stock: 6

Price: 300.0

Cartridge type: Ink

Laptop:

Brand: Huawei

Model: matebook

Weight: 1.3

Stock: 23

Price: 2300.0

Processor type: AMD

Find a specific item in array(type name): AMD

Found in array:

Laptop:

Brand: Dell

Model: Vostro 3559

Weight: 1.8

Stock: 10

Price: 999.0

Processor type: AMD

Found in array:

Laptop:

Brand: Huawei

Model: matebook

Weight: 1.3

Stock: 23

Price: 2300.0

Processor type: AMD