MTS 3033 Object Oriented Programming

Name:

Matric ID:

Group:

Assignment #4 (Due Date 13/12/21 @ 11pm)- Group

Instruction: Written and paste your print screen on this worksheet. Write your program using Notepad and compile using Command Prompt.

1. Write a complete JAVA program that display 5 types of fruit with their price. Then ask the user to input the respective quantity and calculate the total price user needs to pay. Apply loop in your program.

   Example of Output:

Apple	Mango	Rambutan	Mangosteen	Papaya
RM10/10 pieces	RM5/kg	RM3/kg	RM5/kg	RM8/kg
15 pieces	2 kg	1.5 kg	2 kg	1 kg
RM15	RM10	RM4.50	RM10	RM8
Total	RM47.50			

   [10 Marks]

First screenshot — Command Prompt:

```
1.5
Total Price: RM4.5

Welcome
1. Apple (RM10/10pieces)
2. Mango (RM5/kg)
3. Rambutan (RM3/kg)
4. Mangosteen(RM5/kg)
5. Papaya (RM8/kg)
6. Done

4
Mangosteen(RM5/kg)
How many pieces/kilograms do you want?
2
Total Price: RM10.0

Welcome
1. Apple (RM10/10pieces)
2. Mango (RM5/kg)
3. Rambutan (RM3/kg)
4. Mangosteen(RM5/kg)
5. Papaya (RM8/kg)
6. Done

5
Papaya (RM8/kg)
How many pieces/kilograms do you want?
1
Total Price: RM8.0

Welcome
1. Apple (RM10/10pieces)
2. Mango (RM5/kg)
3. Rambutan (RM3/kg)
4. Mangosteen(RM5/kg)
5. Papaya (RM8/kg)
6. Done

6

TOTAL = RM47.5
Thank You So Much

C:\>
```
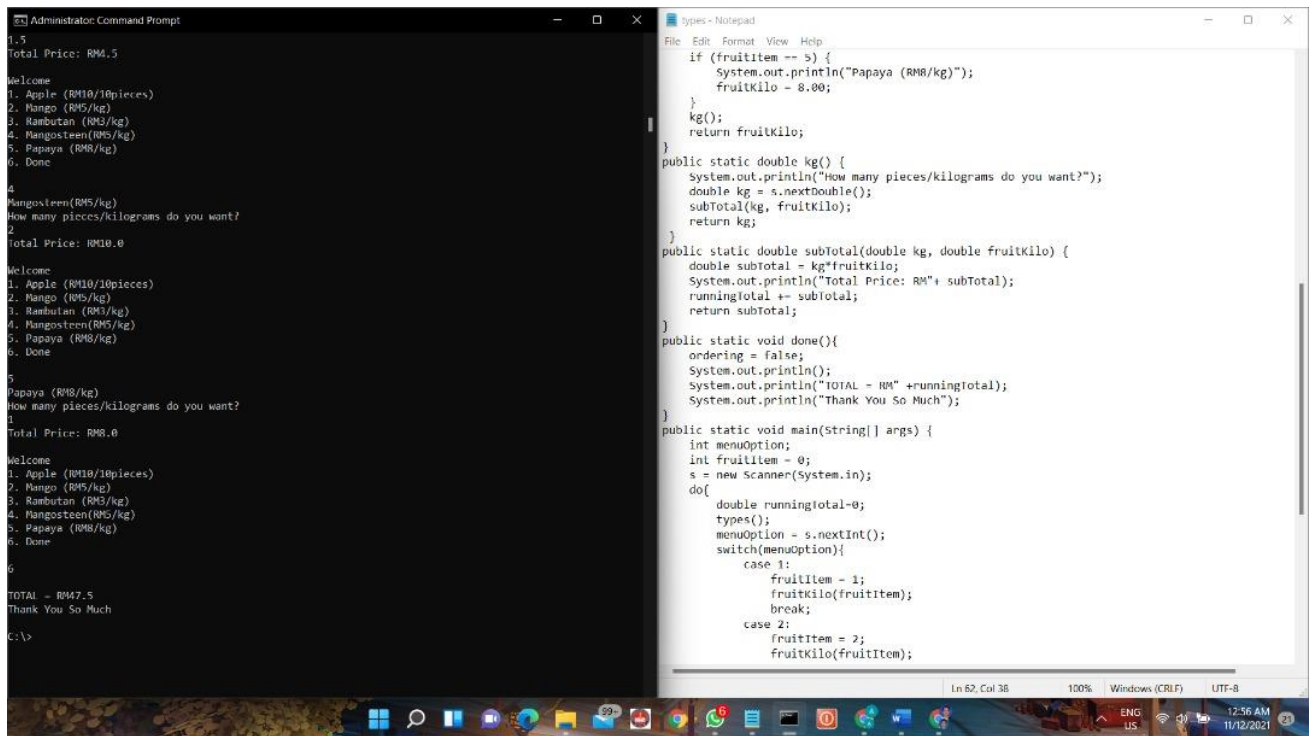
First screenshot — types - Notepad:

```java
        if (fruitItem == 5) {
            System.out.println("Papaya (RM8/kg)");
            fruitKilo = 8.00;
        }
        kg();
        return fruitKilo;
    }
    public static double kg() {
        System.out.println("How many pieces/kilograms do you want?");
        double kg = s.nextDouble();
        subTotal(kg, fruitKilo);
        return kg;
    }
    public static double subTotal(double kg, double fruitKilo) {
        double subTotal = kg*fruitKilo;
        System.out.println("Total Price: RM"+ subTotal);
        runningTotal += subTotal;
        return subTotal;
    }
    public static void done(){
        ordering = false;
        System.out.println();
        System.out.println("TOTAL = RM" +runningTotal);
        System.out.println("Thank You So Much");
    }
    public static void main(String[] args) {
        int menuOption;
        int fruitItem = 0;
        s = new Scanner(System.in);
        do{
            double runningTotal=0;
            types();
            menuOption = s.nextInt();
            switch(menuOption){
                case 1:
                    fruitItem = 1;
                    fruitKilo(fruitItem);
                    break;
                case 2:
                    fruitItem = 2;
                    fruitKilo(fruitItem);
```

```
Ln 62, Col 38    100%    Windows (CRLF)    UTF-8
```

Second screenshot — Command Prompt:

```
1.5
Total Price: RM4.5

Welcome
1. Apple (RM10/10pieces)
2. Mango (RM5/kg)
3. Rambutan (RM3/kg)
4. Mangosteen(RM5/kg)
5. Papaya (RM8/kg)
6. Done

4
Mangosteen(RM5/kg)
How many pieces/kilograms do you want?
2
Total Price: RM10.0

Welcome
1. Apple (RM10/10pieces)
2. Mango (RM5/kg)
3. Rambutan (RM3/kg)
4. Mangosteen(RM5/kg)
5. Papaya (RM8/kg)
6. Done

5
Papaya (RM8/kg)
How many pieces/kilograms do you want?
1
Total Price: RM8.0

Welcome
1. Apple (RM10/10pieces)
2. Mango (RM5/kg)
3. Rambutan (RM3/kg)
4. Mangosteen(RM5/kg)
5. Papaya (RM8/kg)
6. Done

6

TOTAL = RM47.5
Thank You So Much

C:\>
```
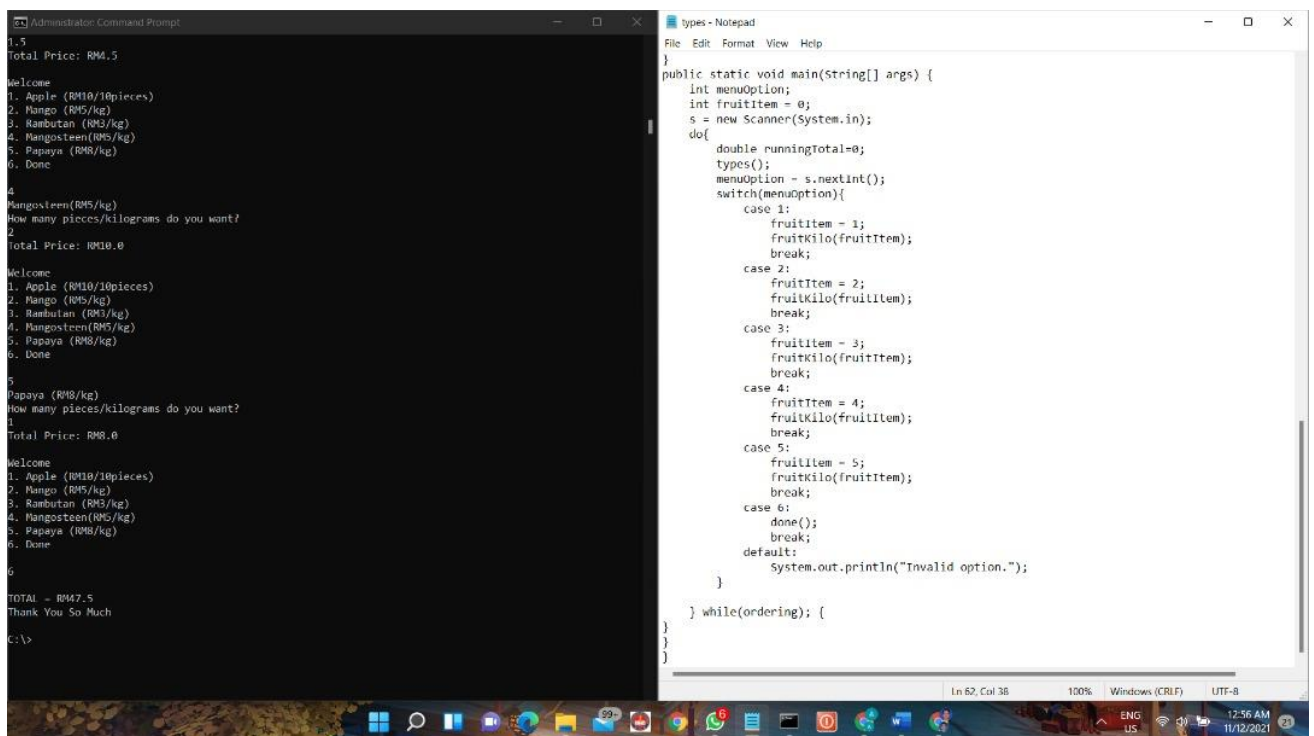
Second screenshot — types - Notepad:

```java
    }
    public static void main(String[] args) {
        int menuOption;
        int fruitItem = 0;
        s = new Scanner(System.in);
        do{
            double runningTotal=0;
            types();
            menuOption = s.nextInt();
            switch(menuOption){
                case 1:
                    fruitItem = 1;
                    fruitKilo(fruitItem);
                    break;
                case 2:
                    fruitItem = 2;
                    fruitKilo(fruitItem);
                    break;
                case 3:
                    fruitItem = 3;
                    fruitKilo(fruitItem);
                    break;
                case 4:
                    fruitItem = 4;
                    fruitKilo(fruitItem);
                    break;
                case 5:
                    fruitItem = 5;
                    fruitKilo(fruitItem);
                    break;
                case 6:
                    done();
                    break;
                default:
                    System.out.println("Invalid option.");
            }
        } while(ordering); {
}
}
}
```

```
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```

2. Write a complete JAVA program that user can randomly customized item they want to put in the gift box [limit 5 item in a box]. Each user can create only 2 box.

For example:
Create a few lists:
List 1: Chocolate Strawberry, Chocolate Milk, Chocolate Nuts
List 2: Balloon red, Balloon blue, Balloon orange, Balloon Pink
List 3: Candy 1, Candy 2, Candy 3, Candy 4, Candy 5
List 4: Card 1, Card 2, Card 3

Box 1: Chocolate Strawberry [2], Balloon orang [2]. Balloon Pink [1]

Box 2: Candy 1[1], Candy 4[1], Card 1[1]. Balloon blue[1], Balloon red[1]

[10 marks]

```
Administrator: Command Prompt                          —   □   ×

Microsoft Windows [Version 10.0.22000.348]
(c) Microsoft Corporation. All rights reserved.

C:\windows\system32>cd\

C:\>set path=C:\Program Files\Java\jdk1.8.0_202\bin

C:\>javac Gift.java

C:\>java Gift

List 1:  Chocolate Strawberry  Chocolate Milk  Chocolate Nuts
List 2:  Balloon red  Balloon blue  Balloon orange  Balloon Pink
List 3:  Candy 1  Candy 2  Candy 3  Candy 4  Candy 5
List 4:  Card 1  Card 2  Card 3

Box 1:
Enter quantity of  Chocolate Strawberry : 1
Enter quantity of  Chocolate Milk : 0
Enter quantity of  Chocolate Nuts : 0
Enter quantity of  Balloon red : 1
Enter quantity of  Balloon blue : 0
Enter quantity of  Balloon orange : 0
Enter quantity of  Balloon Pink : 1
Enter quantity of  Candy 1 : 0
Enter quantity of  Candy 2 : 0
Enter quantity of  Candy 3 : 1
Enter quantity of  Candy 4 : 0
Enter quantity of  Candy 5 : 0
Enter quantity of  Card 1 : 0
Enter quantity of  Card 2 : 1

Box 2:
Enter quantity of  Chocolate Strawberry : 0
Enter quantity of  Chocolate Milk : 0
Enter quantity of  Chocolate Nuts : 1
Enter quantity of  Balloon red : 0
Enter quantity of  Balloon blue : 1
Enter quantity of  Balloon orange : 0
Enter quantity of  Balloon Pink : 1
Enter quantity of  Candy 1 : 1
Enter quantity of  Candy 2 : 0
Enter quantity of  Candy 3 : 0
```

```
Gift - Notepad                              —   □   ×
File  Edit  Format  View  Help
import java.util.*;
public class Gift
{
    static int boxqty[] = {0,0};
public static void printList(String [] list,int index){
    System.out.print("List " + index + ": ");
    for(int i = 0;i<list.length;i++)
    {
        System.out.print(list[i]);

    }
    System.out.print('\n');
}

public static void addToBox(String [] list,ArrayList<String> box,int in
{
    if(boxqty[index] == 5)
    {
        return;
    }

    Scanner scnObj = new Scanner(System.in);
    for(int i = 0;i<list.length;i++)
    {
        if(boxqty[index] == 5)
        {
            return;
        }

        System.out.print("Enter quantity of " + list[i] + ": ");
        int num = scnObj.nextInt();
        if(num == 0)
        {
            continue;
        }
        box.add((list[i] + "[" + Integer.toString(Math.min(num,5 - boxq
        boxqty[index] += Math.min(num,5 - boxqty[index]);
    }
}

                          Ln 1, Col 1        100%   Windows (CRLF)    UTF-8
```

Administrator: Command Prompt — □ ×

```
Box 1:
Enter quantity of  Chocolate Strawberry : 1
Enter quantity of  Chocolate Milk : 0
Enter quantity of  Chocolate Nuts : 0
Enter quantity of  Balloon red : 1
Enter quantity of  Balloon blue : 0
Enter quantity of  Balloon orange : 0
Enter quantity of  Balloon Pink : 1
Enter quantity of  Candy 1 : 0
Enter quantity of  Candy 2 : 0
Enter quantity of  Candy 3 : 1
Enter quantity of  Candy 4 : 0
Enter quantity of  Candy 5 : 0
Enter quantity of  Card 1 : 0
Enter quantity of  Card 2 : 1

Box 2:
Enter quantity of  Chocolate Strawberry : 0
Enter quantity of  Chocolate Milk : 0
Enter quantity of  Chocolate Nuts : 1
Enter quantity of  Balloon red : 0
Enter quantity of  Balloon blue : 1
Enter quantity of  Balloon orange : 0
Enter quantity of  Balloon Pink : 1
Enter quantity of  Candy 1 : 1
Enter quantity of  Candy 2 : 0
Enter quantity of  Candy 3 : 0
Enter quantity of  Candy 4 : 0
Enter quantity of  Candy 5 : 1

Box 1: Chocolate Strawberry [1]  Balloon red [1]  Balloon Pink [1]  Candy 3 [1]  Car
d 2 [1]
Box 2: Chocolate Nuts [1]  Balloon blue [1]  Balloon Pink [1]  Candy 1 [1]  Candy 5
[1]
C:\>_
```
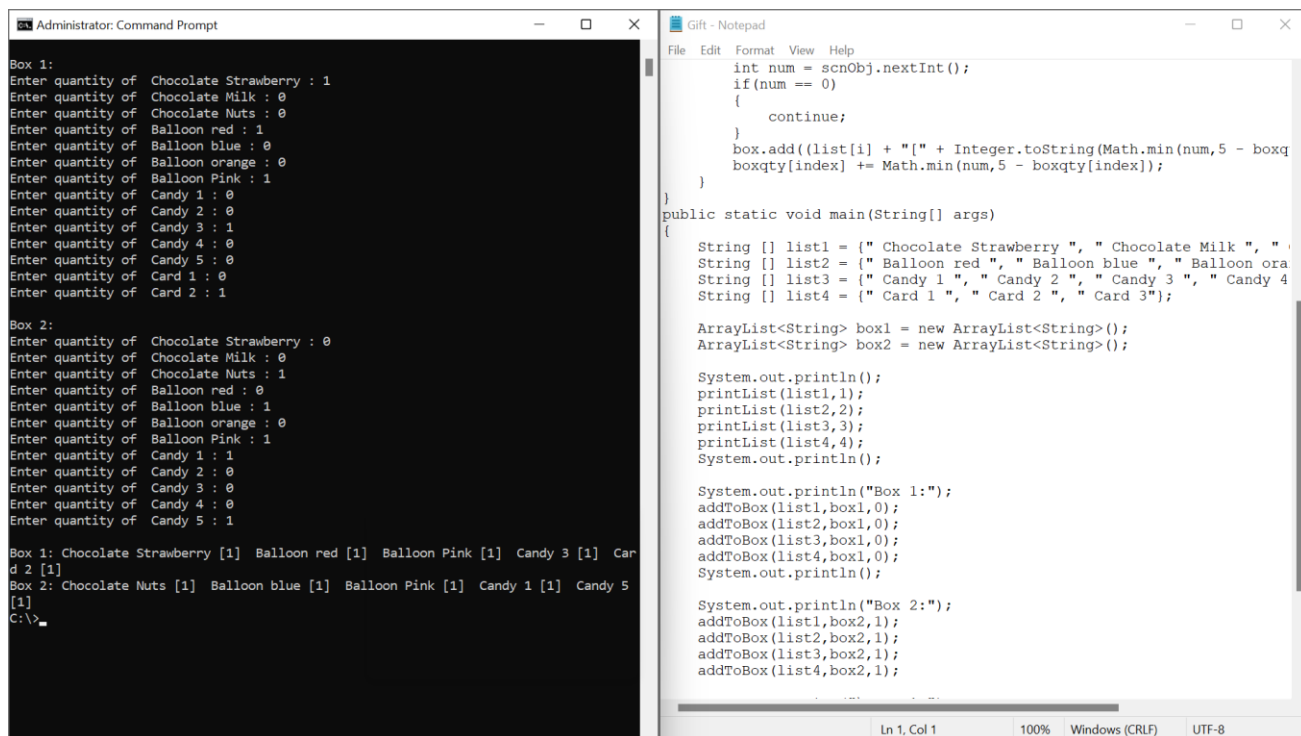
Gift - Notepad — □ ×

File Edit Format View Help

```
        int num = scnObj.nextInt();
        if(num == 0)
        {
            continue;
        }
        box.add((list[i] + "[" + Integer.toString(Math.min(num,5 - boxq
        boxqty[index] += Math.min(num,5 - boxqty[index]);
    }
}
public static void main(String[] args)
{
    String [] list1 = {" Chocolate Strawberry ", " Chocolate Milk ", " 
    String [] list2 = {" Balloon red ", " Balloon blue ", " Balloon ora
    String [] list3 = {" Candy 1 ", " Candy 2 ", " Candy 3 ", " Candy 4
    String [] list4 = {" Card 1 ", " Card 2 ", " Card 3"};

    ArrayList<String> box1 = new ArrayList<String>();
    ArrayList<String> box2 = new ArrayList<String>();

    System.out.println();
    printList(list1,1);
    printList(list2,2);
    printList(list3,3);
    printList(list4,4);
    System.out.println();

    System.out.println("Box 1:");
    addToBox(list1,box1,0);
    addToBox(list2,box1,0);
    addToBox(list3,box1,0);
    addToBox(list4,box1,0);
    System.out.println();

    System.out.println("Box 2:");
    addToBox(list1,box2,1);
    addToBox(list2,box2,1);
    addToBox(list3,box2,1);
    addToBox(list4,box2,1);
```
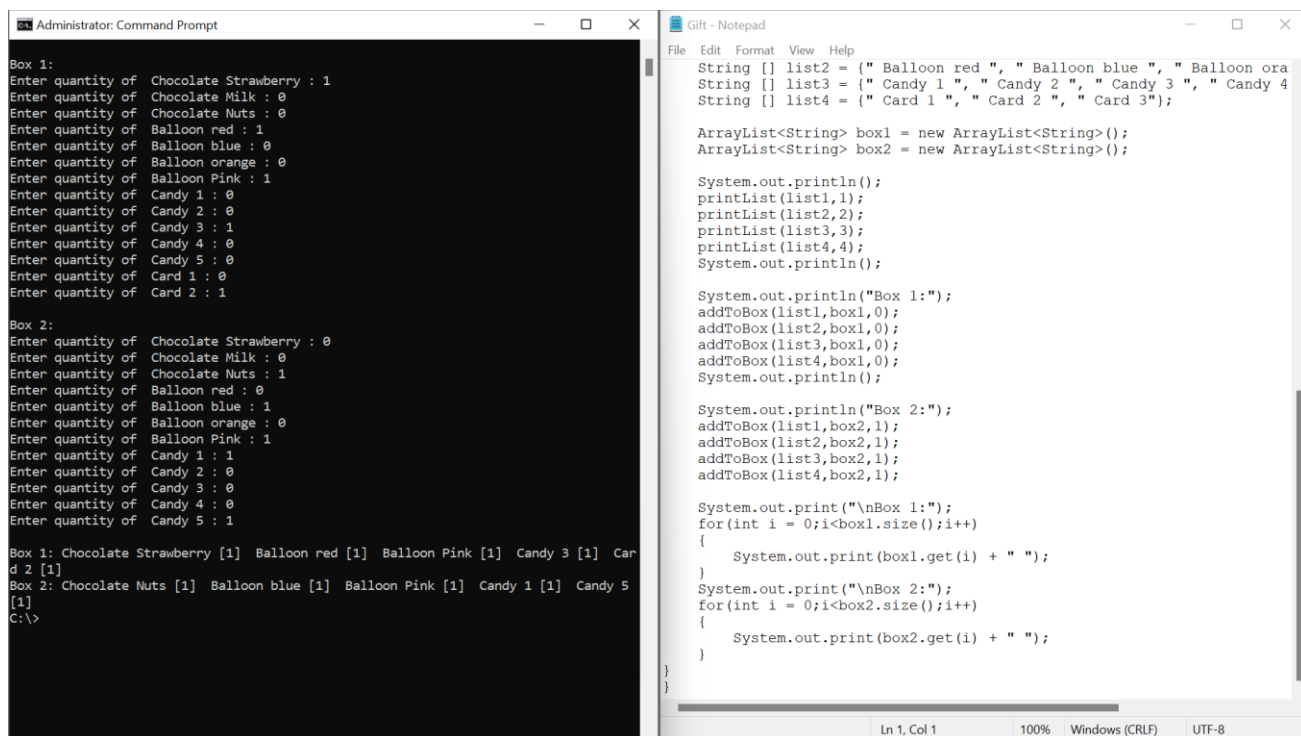
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Administrator: Command Prompt — □ ×

```
Box 1:
Enter quantity of  Chocolate Strawberry : 1
Enter quantity of  Chocolate Milk : 0
Enter quantity of  Chocolate Nuts : 0
Enter quantity of  Balloon red : 1
Enter quantity of  Balloon blue : 0
Enter quantity of  Balloon orange : 0
Enter quantity of  Balloon Pink : 1
Enter quantity of  Candy 1 : 0
Enter quantity of  Candy 2 : 0
Enter quantity of  Candy 3 : 1
Enter quantity of  Candy 4 : 0
Enter quantity of  Candy 5 : 0
Enter quantity of  Card 1 : 0
Enter quantity of  Card 2 : 1

Box 2:
Enter quantity of  Chocolate Strawberry : 0
Enter quantity of  Chocolate Milk : 0
Enter quantity of  Chocolate Nuts : 1
Enter quantity of  Balloon red : 0
Enter quantity of  Balloon blue : 1
Enter quantity of  Balloon orange : 0
Enter quantity of  Balloon Pink : 1
Enter quantity of  Candy 1 : 1
Enter quantity of  Candy 2 : 0
Enter quantity of  Candy 3 : 0
Enter quantity of  Candy 4 : 0
Enter quantity of  Candy 5 : 1

Box 1: Chocolate Strawberry [1]  Balloon red [1]  Balloon Pink [1]  Candy 3 [1]  Car
d 2 [1]
Box 2: Chocolate Nuts [1]  Balloon blue [1]  Balloon Pink [1]  Candy 1 [1]  Candy 5
[1]
C:\>
```

Gift - Notepad — □ ×

File Edit Format View Help

```
    String [] list2 = {" Balloon red ", " Balloon blue ", " Balloon ora
    String [] list3 = {" Candy 1 ", " Candy 2 ", " Candy 3 ", " Candy 4
    String [] list4 = {" Card 1 ", " Card 2 ", " Card 3"};

    ArrayList<String> box1 = new ArrayList<String>();
    ArrayList<String> box2 = new ArrayList<String>();

    System.out.println();
    printList(list1,1);
    printList(list2,2);
    printList(list3,3);
    printList(list4,4);
    System.out.println();

    System.out.println("Box 1:");
    addToBox(list1,box1,0);
    addToBox(list2,box1,0);
    addToBox(list3,box1,0);
    addToBox(list4,box1,0);
    System.out.println();

    System.out.println("Box 2:");
    addToBox(list1,box2,1);
    addToBox(list2,box2,1);
    addToBox(list3,box2,1);
    addToBox(list4,box2,1);

    System.out.print("\nBox 1:");
    for(int i = 0;i<box1.size();i++)
    {
        System.out.print(box1.get(i) + " ");
    }
    System.out.print("\nBox 2:");
    for(int i = 0;i<box2.size();i++)
    {
        System.out.print(box2.get(i) + " ");
    }
}
}
```

Ln 1, Col 1   100%   Windows (CRLF)   UTF-8