

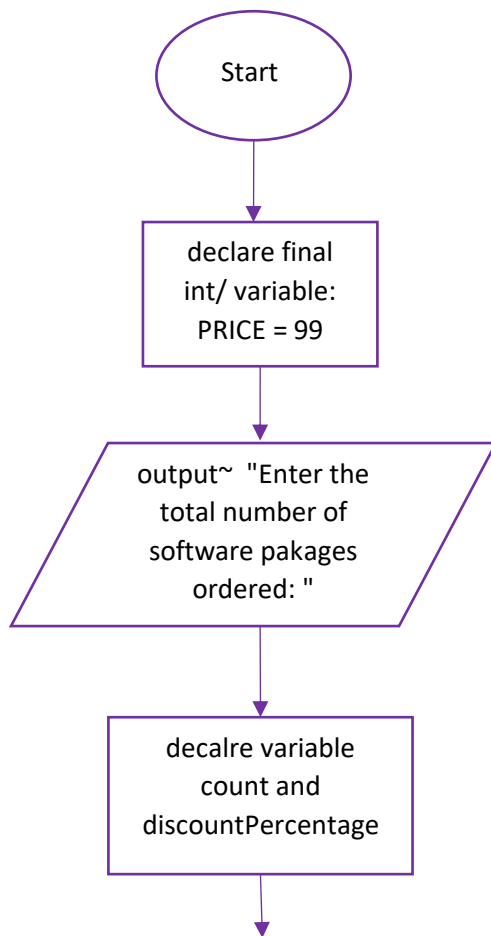
Lab Report

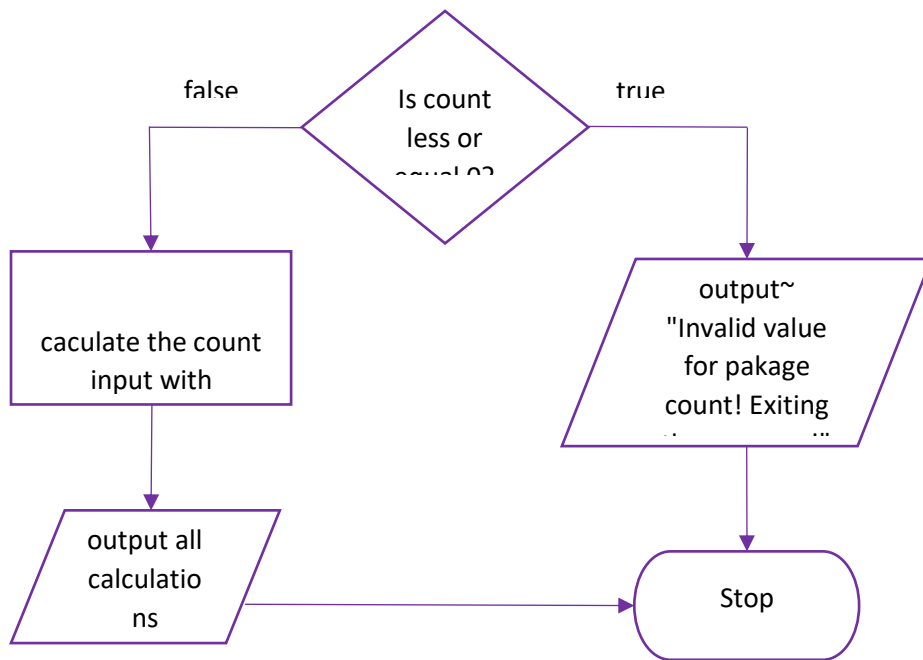
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Problem

Output a program that correctly calculates the discount of packages that were entered and shows before and after the discount for the end of the program.

Proposed Solution





Tests and Results

```

13 Scanner key = new Scanner(System.in);
14
15 System.out.println("Enter the total number of software packages ordered: ");
16 //type of input
17 int count = key.nextInt();
18
19 //percentage of discount for different orders
20 double discountPercentage = 0;
21
22 if(count <= 0)
23 {
24     // if order is negative number
25     System.out.println("Invalid value for package count! Exiting the program!");
26     System.exit(0);
27 }
28
29 // percentage calculations
30 else if (count >=10 && count <=19)
31 {
32     discountPercentage = 20;
33 }
34
35 else if (count >= 20 && count <= 29)
36 {
37     discountPercentage = 30;
38 }
39
40 else if (count >= 30 && count <= 39)
41 {
42     discountPercentage = 30;
43 }
44
45 else if (count >= 40 && count <= 49)
46 {
47     discountPercentage = 30;
48 }
49
50

```

Problems | Javadoc | Declaration | Console | Coverage

<terminated> Lab2 [Java Application] /Library/Java/JavaVirtualMachines/jdk-18.0.2.1.jdk/Contents/Home/bin/java (Sep 20, 2022, 7:59:46 AM - 7:59:49 AM) [pid: 22816]

Enter the total number of software packages ordered:
25
Total Purchase Amount before the discount is 2475.0
Total Discount = 742.5
Total Purchase Amount after the discount is 1732.5

```
13 Scanner key = new Scanner(System.in);
14
15 System.out.println("Enter the total number of software packages ordered: ");
16 //type of input
17 int count = key.nextInt();
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36 else if (count >= 20 && count <= 29)
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38     discountPercentage = 30;
39 }
40
41 else if (count >= 30 && count <= 39)
42 {
43     discountPercentage = 30;
44 }
45
46 else if (count >= 40 && count <= 49)
47 {
48
49 }
```

Problems | Javadoc | Declaration | Console | Coverage

<terminated> Lab2 [Java Application] /Library/Java/JavaVirtualMachines/jdk-18.0.2.1.jdk/Contents/Home/bin/java (Sep 20, 2022, 8:01:46 AM - 8:01:52 AM) [pid: 22837]

Enter the total number of software packages ordered:
-25
Invalid value for pakage count! Exiting the program!

If a negative number is entered, the program will exit

Problems Encountered

I had problems with the else If statements because I was putting semicolons at the end of them and it was creating a syntax error, so I removed them.

Conclusions and Discussion

After coding the program correctly and the discount math is correctly programmed, it should output a program and prompted to enter a number of packages and then the discounts, before and after, and total. Also, if negative numbers are entered, the program should exit. I think this way of doing the program was the easiest way, I don't really know any other ways.

Additional Questions

1. Can a keyword be used as the name of an identifier?

No, because they are a part of syntax

2. List any 2 keywords or reserved words.

Double, else

3. What is short-circuit evaluation? Why is it useful?

Short- circuit evaluation is like && and ||, it's helpful because it won't cause run-time error