**Software Sales Calculator Program**

Write a program that returns the discount of the quantity of packages purchased and it will calculate the total cost of the purchase. ***The package itself retails for $99.00***. The user will enter their name and enter the number of software packages they wish to purchase. The program will compute the amount of discount the user will receive and the total cost of the purchase with the discount. It will also display the amount in savings and the total amount without savings. The output will be similar to the following:

*Jeremy has a discount amount of 10% for ordering 10 units.*

*The total amount of the order with the discount is $891.00*

*With the total discount savings of $99.00*

*From the normal price of $990.00*

**ALGORITHM**

1. Ask user name
2. Ask user for quantity of packages purchased
3. Calc the *amount of discount*, if applicable, from the quantity purchased

|  |  |
| --- | --- |
| **Quantity** | **Discount** |
| 10 – 19 | 10% |
| 20 – 49 | 20% |
| 50 – 99 | 30% |
| 100+ | 40% |

1. Calc the *Order Amount* total cost without discount:

**Order Quantity \* Package Retail**

1. Calc the total *Discount*:

**Order Amount \* Amount of Discount**

1. Calc *Purchase Total*, with discount:

**Order Amount - Discount**

1. Calc amount of *savings*:

**Purchase Total – Order Amount**

1. Display name
2. Display amount of discount and the quantity of packages purchased
3. Display the total cost of the purchase with savings
4. Display the amount saved with discount
5. Display the normal price of the purchase, without the discount

**VARIABLES**

userName = ""

numberOfPackages = 0

amountOfDiscount = 0.0

purchaseTotal = 0.0

packageCost = 99.00 **constant**

orderAmount = 0.0

**FORMULAS**

orderAmount = packageCost \* numberOfPackages

-Calculates the order amount without discount.

discount = orderAmount \* amountOfDiscount

-Calculates the amount of the discount.

purchaseTotal = orderAmount – discount

-Calculates the sale price.

savings = orderAmount – purchaseTotal

-Calculate savings.

**TEST DATA – 5 complete data sets**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Input**  ***userName*** | **Input**  ***numberOfPackages*** | **Calc**  ***amountOfDiscount*** | **Calc**  ***orderAmount***  (packageCost \* numberOfPackages) | **Calc**  ***discount***  (orderAmount \* amountOfDiscount) | **Calc**  ***purchaseTotal***  (orderAmount - discount) | **Calc**  ***Savings***  (orderAmount – purchaseTotal) | **Display/Output**  ***userName, amountOfDiscount, numberOfPackages***  ***purchaseTotal***  ***savings***  ***orderAmount*** |
| Jeremy | 45 | 20% | $99.00 \* 45 = **$4455.00** | $4455.00 \* 0.2 = **$891.00** | $4455.00 - $891.00 = **$3564.00** | $4455.00 - $3564.00 = **$891.00** | Jeremy has a discount amount of 20% for ordering 45 units.  The total amount of the order with the discount is $3,564.00  With the total discount savings of $891.00  From the normal price of $4,455.00 |
| Jessie | 80 | 30% | $99.00 \* 80 = **$7920** | $7920.00 \* 0.3 = **$2376.00** | $7920.00 - $2376.00 = **$5540.00** | $7920.00 - $5540.00 = **$2376.00** | Jessie has a discount amount of 30% for ordering 80 units.  The total amount of the order with the discount is $5,544.00  With the total discount savings of $2,376.00  From the normal price of $7,920.00 |
| Derrick | 131 | 40% | $99.00 \* 131 = **$12969** | $12969 \* 0.4 = **$5187.60** | $12969.00 - $5187.60 = **$7781.40** | $12969.00 - $7781.40 = **$5187.60** | Derrick has a discount amount of 40% for ordering 131 units.  The total amount of the order with the discount is $7,781.40  With the total discount savings of $5,187.60  From the normal price of $12,969.00 |
| Tommy | 8 | 0% | $99.00 \* 8 = **$792** | $792 \* 0.0 = **$0** | $792.00 - $0.00 = **$792.00** | $792.00 - $792.00 = **$0.00** | Tommy has a discount amount of 0% for ordering 8 units.  The total amount of the order with the discount is $792.00  With the total discount savings of $0.00  From the normal price of $792.00 |
| Jamie | 19 | 10% | $99.00 \* 19 = **$1881** | $1881 \* 0.1 = **$188.10** | $1881.00 - $188.10 = **$1692.90** | $1881.00 - $1692.90 = **$188.10** | Jamie has a discount amount of 10% for ordering 19 units.  The total amount of the order with the discount is $1,692.90  With the total discount savings of $188.10  From the normal price of $1,881.00 |

**FLOWCHART**



**TEST DATA EXECUTION RESULTS**

#################################### TEST 1 ##################################

Please enter your name:

Jeremy

Please enter the number of software packages you would like to purchase as a number value. i.e 3 for three:

45

Jeremy has a discount amount of 20% for ordering 45 units.

The total amount of the order with the discount is $3,564.00

With the total discount savings of $891.00

From the normal price of $4,455.00

#################################### TEST 2 ##################################

Please enter your name:

Jessie

Please enter the number of software packages you would like to purchase as a number value. i.e 3 for three:

80

Jessie has a discount amount of 30% for ordering 80 units.

The total amount of the order with the discount is $5,544.00

With the total discount savings of $2,376.00

From the normal price of $7,920.00

#################################### TEST 3 ##################################

Please enter your name:

Derrick

Please enter the number of software packages you would like to purchase as a number value. i.e 3 for three:

131

Derrick has a discount amount of 40% for ordering 131 units.

The total amount of the order with the discount is $7,781.40

With the total discount savings of $5,187.60

From the normal price of $12,969.00

#################################### TEST 4 ##################################

Please enter your name:

Tommy

Please enter the number of software packages you would like to purchase as a number value. i.e 3 for three:

8

Tommy has a discount amount of 0% for ordering 8 units.

The total amount of the order with the discount is $792.00

With the total discount savings of $0.00

From the normal price of $792.00

#################################### TEST 5 ##################################

Please enter your name:

Jamie

Please enter the number of software packages you would like to purchase as a number value. i.e 3 for three:

19

Jamie has a discount amount of 10% for ordering 19 units.

The total amount of the order with the discount is $1,692.90

With the total discount savings of $188.10

From the normal price of $1,881.00