**Project 05**

1. A software company sells a package that retails for $109. Quantity discounts are given according to the following table:

**Quantity Discount**

10-19 22%

20-49 32%

50-99 45%

100 or more 55%

Design a modular program that prompts the user to enter the number of packages purchased. The program also displays the amount of the discount (if any) and the total amount of the purchase after the discount. Make sure **data is validated**.

1. Design a modular program that asks a user to enter a store’s sales for each day of the month for one year. The amount should be stored in an array. Calculate the total and average sales for the month and the year and then display the results. For each month, find the day (the day number in the month) at which the highest sale was achieved and the sale of that day. (provide two versions of the loop using **For** and **While** loop).

Example of the output:

**month day sale($)**

1 14 5000

2 21 5500

3 05 4950

. . .

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1. Write a program that will calculate a XXX% tip and a 6% tax on a meal price. The user will enter the meal price and the program will calculate tip, tax, and the total. The total is the meal price plus the tip plus the tax. Your program will then display the values of tip, tax, and total.

The restaurant now wants to change the program so that the tip percent is based on the meal price. The new amounts are as follows:

|  |  |
| --- | --- |
| **Meal Price Range** | **Tip Percent** |
| .01 to 5.99 | 10% |
| 6 to 12.00 | 13% |
| 12.01 to 17.00 | 16% |
| 17.01 to 25.00 | 19% |
| 25.01 and more | 22% |