**Chapter 2 Practice**

1. **Restaurant Bill**

Write a program that computes the tax and tip on a restaurant bill for a patron with a $88.67 meal charge. The tax should be 6.75 percent of the meal cost. The tip should be 20 percent of the total after adding the tax. Display the meal cost, tax amount, tip amount, and total bill on the screen.

1. **Average of Values**

To get the average of a series of values, you add the values up then divide the sum by the number of values. Write a program that stores the following values in five different variables: 28, 32, 37, 24, and 33. The program should first calculate the sum of these five variables and store the result in a separate variable named sum. Then, the program should divide the sum variable by 5 to get the average. Display the average on the screen.

Use the double data type for all variables in this program.

1. **Annual Pay**

Suppose an employee gets paid every two weeks and earns $2,200 each pay period. In a year, the employee gets paid 26 times. Write a program that defines the following variables:

|  |  |
| --- | --- |
| payAmount | This variable will hold the amount of pay the employee earns each pay period. Initialize the variable with 2200.0. |
| payPeriods | This variable will hold the number of pay periods in a year. Initialize the variable with 26. |
| annualPay | This variable will hold the employee’s total annual pay, which will be calculated. |

The program should calculate the employee’s total annual pay by multiplying the employee’s pay amount by the number of pay periods in a year and store the result in the annualPay variable. Display the total annual pay on the screen.

1. **Ocean Levels**

Assuming the ocean’s level is currently rising at about 1.5 millimeters per year, write a program that displays:

* + The number of millimeters higher than the current level that the ocean’s level will be in 5 years.
  + The number of millimeters higher than the current level that the ocean’s level will be in 7 years.
  + The number of millimeters higher than the current level that the ocean’s level will be in 10 years.