## Chapter 2 Programming Project

**Your name:**

**IDE used**: \_\_\_\_\_\_Visual Studio \_\_\_\_\_Replit Other (provide name)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**URL to GitHub repository**:

**Program 1. Ocean Levels**

**Instructions:**

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.

**Design Details** (algorithm, pseudocode, or flowchart):

**Reflection:**

1. What did you find most challenging with this program?
2. What problems did you encounter and how did you solve them?
3. What did you learn from writing this program?

**Project 2.** **Distance per Tank of Gas**

**Instructions:**

A car with a 20-gallon gas tank averages 23.5 miles per gallon when driven in town, and 28.9 miles per gallon when driven on the highway. Write a program that calculates and displays the distance the car can travel on one tank of gas when driven in town and when driven on the highway.

Hint: The following formula can be used to calculate the distance:

Distance = Number of Gallons x Average Miles per Gallon

**Design Details** (algorithm, pseudocode, or flowchart):

**Reflection:**

1. What did you find most challenging with this program?
2. What problems did you encounter and how did you solve them?
3. What did you learn from writing this program?

**Project 3. Energy Drink Consumption**

A soft drink company recently surveyed 16,500 of its customers and found that approximately 15 percent of those surveyed purchase one or more energy drinks per week. Of those customers who purchase energy drinks, approximately 58 percent of them prefer citrus-flavored energy drinks. Write a program that displays the following:

* The approximate number of customers in the survey purchasing one or more energy drinks per week.
* The approximate number of customers in the survey preferring citrus-flavored energy drinks.

**Design Details** (algorithm, pseudocode, or flowchart):

**Reflection:**

1. What did you find most challenging with this program?
2. What problems did you encounter and how did you solve them?
3. What did you learn from writing this program?