Objectives:
        Variable declaration, simple arithmetic calculation, input, output, input validation

A car averages 22.5 miles per gallon when driven in town and 29.5 miles per gallon when driven
in on the highway. Write a C++ program that calculates the gas consumption for a trip given the
number of miles driven in town and on the highway. Your program should ask the user to enter
the number of miles driven in town and the number of miles driven on the highway. The
program should print an error message if the number of miles is less than zero and quit. The
program should then calculate and output the following:
  - The number of miles driven in town
  - The gas consumption for town driving
  - The number of miles driven on the highway
  - The gas consumption for highway driving
  - The total number of miles driven
  - The total gas consumption
  - The average miles per gallon for the whole trip

Sample User Interaction:

Example 1:
```
Enter the number of miles driven in town: 220
Enter the number of miles driven on the highway: 300

--------------- Gas consumption -------------------
The number of miles driven in town: 220.0 miles
The gas consumption for town driving: 9.8 gallons
The number of miles driven on the highway: 300.0 miles
The gas consumption for highway driving: 10.2 gallons
The total miles driven: 520.0 miles
The total gas consumption: 19.9 gallons
The average mpg for the trip: 26.1 miles/gallon
----------------------------------------------------
```
Example 2:
```
Enter the number of miles driven in town: 22
Enter the number of miles driven on the highway: -29

--------------- Gas consumption ------------------
Error: number of miles driven in town cannot be negative
----------------------------------------------------
```
Example 3:
```
Enter the number of miles driven in town: -22

--------------- Gas consumption -------------------
Error: number of miles driven in town cannot be negative
```

Example 4:

```
Enter the number of miles driven in town: 0
Enter the number of miles driven on the highway: 0

--------------- Gas consumption -------------------
The number of miles driven in town: 0.0 miles
The gas consumption for town driving: 0.0 gallons
The number of miles driven on the highway: 0.0 miles
The gas consumption for highway driving: 0.0 gallons
The total miles driven: 0.0 miles
The total gas consumption: 0.0 gallons
No Average can be calculated
----------------------------------------------------
```

Grading:
Program must be submitted on GitHub as indicated in the README.md file
Programs that contain syntax errors will earn zero points.
Programs that use libraries not discussed in class will earn zero points.
Programs that use global variables other than constants, will earn zero points.

Your grade will be determine using the following criteria:

- Correctness (10 points)
    - All output results are displayed as requested and have accurate values
    - All instructions are followed
- All errors are checked (3 points)
- Clarity and format of the output (3 points)
- Style & Documentation (4 points). See programming style below

  ## Follow the coding style outline on GitHub:
  https://github.com/nasseef/cs2400/blob/master/docs/coding-style.md

Program must be submitted on GitHub as indicated in the README.md file.
Submit a link to your repository on Blackboard.