

CS219 - Homework 3

Assignment: Convert Car Program (Week7-car.cpp) into a Proper Header and Source File Format

Objective:

The goal of this assignment is to practice creating and using header files in C++ by converting the car program into two separate source files (Car.cpp, CarMain.cpp) and one header file (Car.h). This will help you understand the importance of organizing code using headers for declarations and source files for definitions.

Instructions:

1. Understanding the Existing Code:

- The existing Week7-car.cpp file has all the car-related code in a single file.
- Study this file to understand how the Car class is structured and how it functions.

2. Task Breakdown:

- Step 1: Create a Car.h file:
 - This header file should declare the Car class, including any private member variables and public member functions.
 - Ensure proper use of include guards (#ifndef, #define, #endif) to prevent double inclusion issues.
- Step 2: Create a Car.cpp file:
 - This source file should define all the member functions of the Car class declared in the header file.
 - Ensure it includes the Car.h header to link the declarations with their corresponding definitions.
- Step 3: Create a CarMain.cpp file:
 - This file should contain the main() function, where objects of the Car class are instantiated and the class methods are called.
 - Include the Car.h file in this main file to access the Car class and its functionality.

3. Key Points to Implement:

- The header file (Car.h) should contain only the declarations of the class and its methods.
- The implementation of the methods should be in Car.cpp.
- The main() function should reside in a separate CarMain.cpp file and should only interact with the Car class through the header file.
- Properly comment your code to explain the purpose of each section.