

Project Prompt: Car Repair Tracking System

1. Create three structs representing Cars, Repair Records, and Customers, with the specified attributes.
 - Car struct:
 - CarID (int), Model (string), Manufacturer (string), Year (int), LicensePlate (string), CurrentMileage (int)
 - RepairRecord struct:
 - RecordID (int), CarID (int), Date (string), Technician (string), Description (string), Cost (float)
 - Customer struct:
 - CustomerID (int), FirstName (string), LastName (string), ContactNumber (string), Email (string), Address (string)
2. Implement an enum RepairStatus for the status of a repair record.
3. File Handling:
 - Store data in text files.
 - Define file formats for storing Cars, Repair Records, and Customers data.
4. Operations on Data:
 - Cars:
 - Add a New Car
 - Find Car by ID or License Plate
 - Update Car Information
 - Delete Car
 - Repair Records:
 - Add a New Repair Record
 - Find Repair Records for a Car
 - Delete Repair Record
 - Customers:
 - Add a New Customer
 - Find Customer by ID or Contact Number
 - Update Customer Information
 - Delete Customer
5. String Operations and Pointers:
 - Use standard string functions (strcpy, strcat, strlen, strcmp) for string manipulation.
 - Utilize pointers for efficient string handling.
6. Function Pointers and Macros:
 - Use function pointers in a struct for customizable functionalities.
 - Utilize a macro function for code snippets expanded at compile time.
7. Library and Implementation Files:
 - Create a library file (e.g., car_repair_library.c) for common functionalities.
 - Include functions for file I/O, string operations, and other utilities.
 - Implement header files for encapsulation, reusability, and modularity.
8. Pointer to Pointer (Double Pointer):
 - Use double pointers as needed in the project context.
9. Calculation of Summarized Values:
 - Total Cost of Repairs: Sum costs of repair records.
 - Average Mileage Across Cars: Calculate the average mileage.

- Number of Cars in the System: Count total cars.

Remember to handle data integrity by validating and handling edge cases.