



# Shop Smith

02.26.2023

---

Ernys Madariaga

ErnysMadariaga@gmail.com

Software Development 1

## Objective

Shop Smith is a computer program that will help manage projects in an automotive repair/fabrication shop environment. It will allow the shop manager and employees to keep track of the labor performed on customer vehicles. It will also allow customers to access specific data regarding their vehicles.

## Program Features

- Managers will be able to add/remove vehicles in the shop.
- Managers will be able to view all labor hours and description of work performed by the employees.
- Employees will be able to log the hours worked on a vehicle.
- Employees will be able to add a description of the work performed in any job.
- Employees will be able to choose the category of the type of work performed.
- Customers will have access to the total time worked on their vehicle and the categories of the type of work performed.

## Project Features

### I. Implement a “master loop” (Easy):

The program will implement a “master loop” that will ask the user to identify themselves as a “Manager”, “Employee”, or “Customer”. The program will then ask what task the user will want to perform based on the specified input. The user will then complete any task necessary and will be given the option to exit the program.

### II. Create a class that inherits a property from a parent class (Easy):

The program will have three classes that inherit from the “User” class. The “Manager” class, the “Employee” class, and the “Customer” class will inherit from the “User” class.

### III. Use a LINQ query to retrieve information (Easy):

The "Customer" will be able to retrieve the total amount of labor hours and labor categories performed to their vehicle and view this data.

### IV. Create a dictionary or list, populate it with several values, retrieve at least one value, and use it in your program (Medium):

- The "Manager" will be able to add/remove vehicles to a list.
- The "Employee" will be able to retrieve the vehicle list and choose one vehicle to add labor hours, category of labor, and a brief description of labor performed.
- The "Manager" will be able to retrieve from the list of information entered by the "Employee" and view the labor hours, category of labor, and description of labor performed.
- The "Customer" will be able to retrieve from the list of information entered by the "Employee" and view the labor hours and category of labor.

### V. Calculate and display data based on an external factor (ex: get the current date, and display how many days remaining until some event) (Hard):

The program will have a waitlist that will show how many days before a new vehicle can be worked on.