

Programming Project

Design the following GUI (Graphical User Interface) for an application to manage the CARs data represented in a Data Grid View control.

The screenshot shows the 'Cars Data' application window. At the top, there's a title bar 'Cars Data'. Below it, a 'Customize the Columns' section has checkboxes for Id, Model, Year, GearBox, Color, and Max_Speed, all of which are checked. A 'Customize' button is to the right. The main data grid has 7 columns: Id, Model, Year, GearBox, Color, and Max_Speed. The first row has values 0, , 0, , , and 0. Below the grid is a 'Selected or a New Car' section with input fields for Id, Model, Year, GearBox, Color, and Max_Speed. On the right, an 'Operations' panel contains buttons for 'Add a New Car (No Duplication)', 'Remove the Selected Car', 'Find the Number of:' (with radio buttons for Manual Cars and Automatic Cars), 'Find the Fastest Car / Cars', 'Choose a Brand:' (a dropdown menu), and a link 'Visit the Web Site'.

Define a new class for **Car** consisting the following attributes:

Id, Model, Year, GearBox, Color, Max_Speed

The list of cars is supposed to be stored in a Binding List.

A sample snapshot of the program is shown below:

This screenshot shows the 'Cars Data' application window with a sample dataset. The 'Customize the Columns' section remains the same. The data grid now contains three rows of data:

	Id	Model	Year	GearBox	Color	Max_Speed
	1	Mercedes B180 CDI	2015	Automatic	White	280
	2	Honda Civic	2019	Manual	Red	250
	3	BMW 328 i	2018	Manual	Black	180

The third row (Id 3) is selected. Below the grid, the 'Selected or a New Car' section shows the details of the selected car: Id 1, Model Mercedes B180 CDI, Year 2015, GearBox Automatic, Color White, and Max_Speed 280. The 'Operations' panel on the right is also visible, with the 'Find the Fastest Car / Cars' button highlighted.

- Write a code for **Customize** button to customize the number of columns in DataGrid View control according to the check boxes. For example, if you uncheck the **Year**, the **Year** column will be removed from the DataGrid view.
- Write a code for “**Add a New Car**” button to add a new car to the list and DataGrid View control. The user enters the new car info using the text boxes at the bottom of form. Please notice that duplication is not allowed in the list and you need to prevent duplication. Likewise, the user is not supposed to enter Id (Id should be managed automatically).
- Write a code for “**Remove the Selected Car**” button to delete the selected car. The selected car must be represented by the text boxes at the bottom of the form.
- Write a code for “**Find the Number of**” button to count the number of Manual / Automatic Cars in the list and display it in a message box. The GearBox can be selected by the Radio buttons.
- Write a code for “**Find the Fastest Car/cars**” and display the result in a message box or in text boxes at the bottom of the form.
- And finally write a code for the click event of the **Link Label** on the form to visit the website of the selected brand from the combo box.