Assignment 2

Due Feb 28 by 11:59pm   **Points** 10   **Submitting** a file upload   **File Types** zip
Available until Mar 5 at 11:59pm

This assignment was locked Mar 5 at 11:59pm.

Mohawk Car Rentals Site

Statement of Authorship

- Lab to be done individually
- In order to be graded, the following Statement of Authorship must be on the Privacy page
- I, Firstname Lastname, student number 123456789, certify that this material is my original work. No other person's work has been used without due acknowledgement and I have not made my work available to anyone else.
- Replace Firstname Lastname with your name and 123456789 with your student number

Requirements

- Create a C# ASP.NET Core Web Application project named **assignment2**, ensure solution and project are not in same directory
- Use version **ASP.NET Core 3.1** with the Web Application (Model-View-Controller) template, do not configure HTTPS
- The site allows the user to maintain a fleet of cars used by a rental car agency
- Each of the pages will need to have their Page Title property modified

Car Class

- Create a model class named Car with the following properties
  - Id as an integer, which will be the Key
  - Make, which is required
  - Model, which is required
  - Colour, which is required
  - Year as an integer
  - PurchaseDate as a DateTime, but only allow dates (not times), set display name to Purchase Date
  - Kilometres as an integer, only allow the range 0 to 999,999, add a DisplayFormat attribute to format as numeric (which will display thousand separators) with 0 decimal places, you will need to investigate this

ICarRepository Interface

- Create an interface named ICarRepository with the following methods
  - GetCars that returns an IEnumerable of Car
  - GetCar that accepts a Car Id and returns a Car
  - CreateCar that accepts a Car object
  - EditCar that accepts a Car object
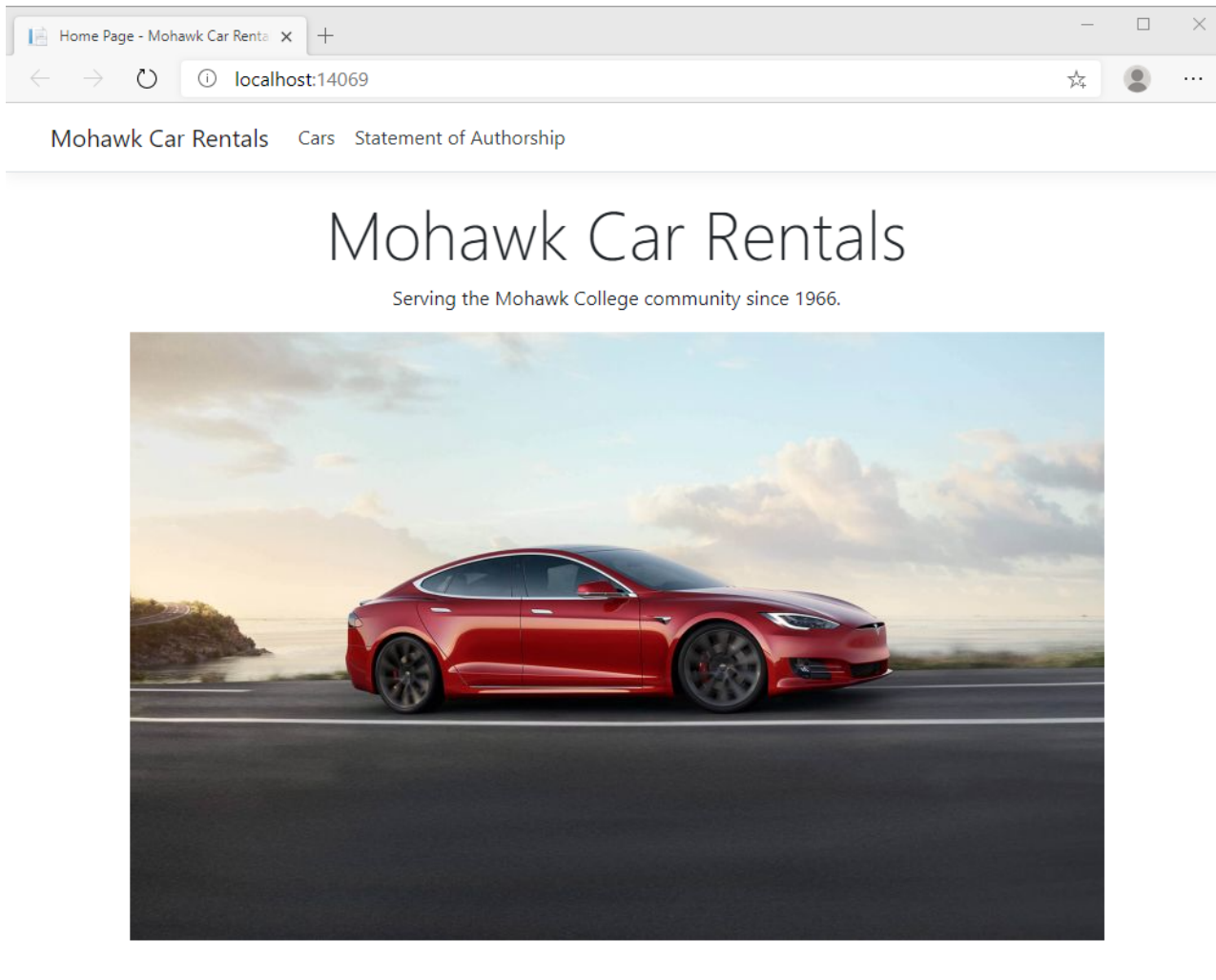 - DeleteCar that accepts a Car Id

CarRepository Class

- Create a class named CarRepository that implements the ICarRepository interface
- Create at least 3 Cars of your own choosing, they must be different than the cars in the screenshots
- The Cars must be stored as JSON in a file named cars.json

_Layout.cshtml and Home / Index.cshtml

- _Layout.cshtml changes
  - Update title to include Mohawk Car Rentals
  - Update menu as shown
  - Footer: change 20XX to current year and Firstname Lastname to your name
- Home / Index.cshtml changes
  - Text as shown
  - Add an images folder to wwwroot, download a picture of a car of your choice and link it on the page

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Mohawk Car Rentals   Cars   Statement of Authorship

Mohawk Car Rentals

Serving the Mohawk College community since 1966.

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Cars Controller

- Add an MVC Controller with read/write actions named CarsController
- Declare an ICarRepository
- Add a constructor that accepts an ICarRepository as a parameter
- Fully implement the controller with appropriate error handling
  - Add a Description property to the ErrorViewModel
  - Update the Error view to show the description property and remove the Development Mode verbiage
- Generate the views for each method and modify them as shown
- Notice that the car id doesn't appear in any view
- Ensure that Make receives focus on the Create and Edit views
- In the Index view, the Kilometres column has been right-justified as it is a numeric value, this is achieved by adding a float-right class to the td element

Index - Mohawk Car Rentals   × +

← → ↻   ⓘ localhost:14069/Cars   ☆   ●   ...
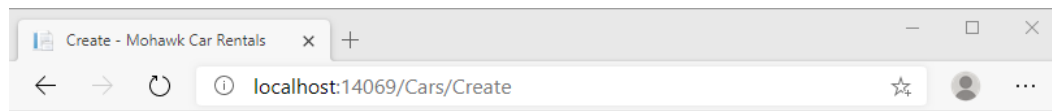
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Inventory

Create New

Make	Model	Colour	Year	Purchase Date	Kilometres	
Ford	Mustang	Blue	2020	2019-11-15	10,123	Edit | Details | Delete
Chevrolet	Corvette	Red	2019	2019-01-25	41,258	Edit | Details | Delete
Tesla	Model S	Black	2020	2019-05-11	25,672	Edit | Details | Delete

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Create - Mohawk Car Rentals   ×   +

← → ↻   ⓘ localhost:14069/Cars/Create   ☆   👤   ⋯

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Create

Car

Make

Model

Colour

Year

Purchase Date

yyyy-mm-dd   📅

Kilometres

[Create]

Back to List

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Details - Mohawk Car Rentals   ×   +

← → ↻   ⓘ localhost:14069/Cars/Details/1   ☆

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Ford Mustang

Make	Ford
Model	Mustang
Colour	Blue
Year	2020
Purchase Date	2019-11-15
Kilometres	10,123

Edit | Back to List

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▶

Edit - Mohawk Car Rentals   ×   +

←   →   ↻   ⓘ   localhost:14069/Cars/Edit/1   ☆   👤   ⋯
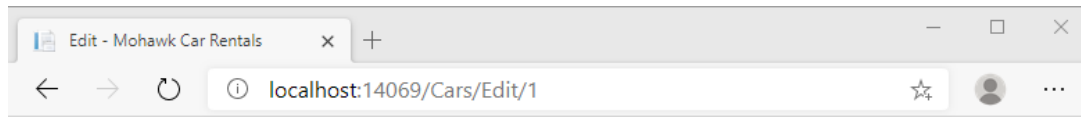
Mohawk Car Rentals   Cars   Statement of Authorship

Ford Mustang

Make

> Ford

Model

> Mustang

Colour

> Blue

Year

> 2020

Purchase Date

> 2019-11-15   📅

Kilometres

> 10123

Save

Back to List

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▶

Delete - Mohawk Car Rentals   ✕   +

localhost:14069/Cars/Delete/2   ☆   👤   ...

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Are you sure you want to delete the Chevrolet Corvette?

Make	Chevrolet
Model	Corvette
Colour	Red
Year	2019
Purchase Date	2019-01-25
Kilometres	41,258

Delete | Back to List

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Error - Mohawk Car Rentals   ✕   +

localhost:14069/Cars/Details/4   ☆   👤   ...

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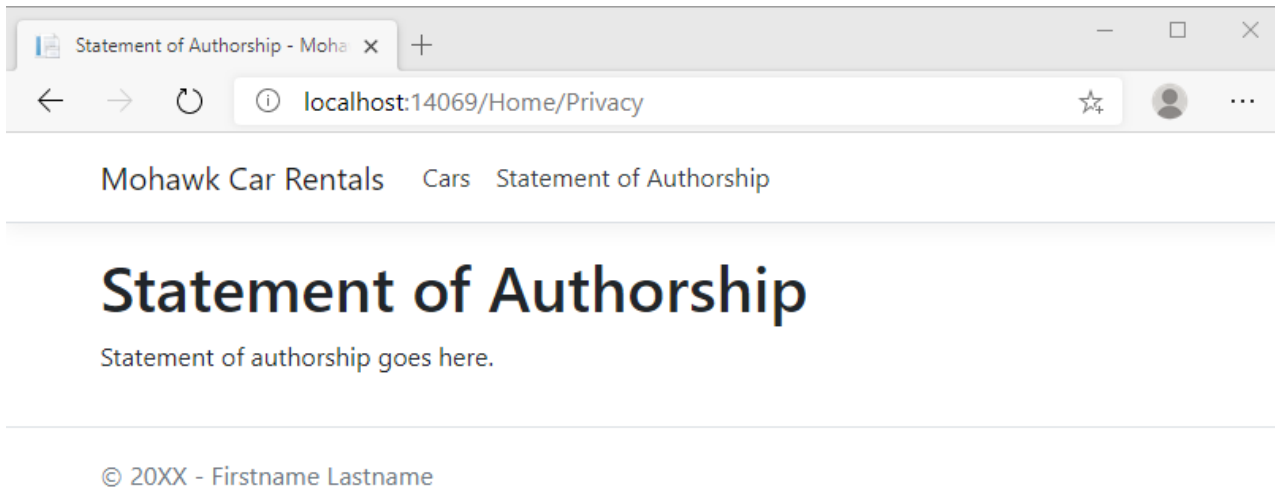# Error.

An error occurred while processing your request.

Request ID: 4

Description: Unable to find car with id=4

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▶️ Privacy View

- Add statement of authorship

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Statement of Authorship

Statement of authorship goes here.

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Testing

- Add a xUnit Test project named **assignment2_test** to the solution
- Add a TestRepository class that implements ICarRepository, create a static list of 2 cars, they must be different than the other cars in the project
- Ensure that the tests run in the sequence shown
- Test the following methods
  - Index - Test each car at least once and each property at least once
  - Details - Fully test one car
  - POST Create - Add a car; after the car has been created, call the Index method to ensure the correct number of cars are present
  - POST Edit - Edit a car, changing at least two properties; after the car has been edited, call the Details method to ensure that the properties have been changed as expected
  - POST Delete - Delete a car; after the car has been deleted, call the Index method to ensure the correct number of cars are present
    - Since you won't have a form collection, set the second parameter of the call to the Delete method to null

Submission Instructions

- Once you have completed the assignment
- Exit all instances of Visual Studio
- Open File Explorer
- Find the folder where your assignment is
- These instructions will use C:\code\co884\assignment2 as an example
- Verify that the expected files are present
- Double-click the assignment2 folder
- Click the View menu and select Hidden Items if necessary
- Delete the **.vs** folder, it stores temporary data and can get quite large

- Return to the C:\code\co884 folder
- Right-click the assignment2 folder and select Send To / Compressed (zipped) folder
- Submit this file (assignment2.zip) by clicking the Submit Assignment button in the upper-right of this page and completing the submission

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- Return to the C:\code\co884 folder
- Right-click the assignment2 folder and select Send To / Compressed (zipped) folder