WEB APPLICATION FOR A FLEET MANAGEMENT SYSTEM ADEDOLAPO ADETONA B00855779

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Introduction

This is a fleet web application for the management of Vehicles and their corresponding MOT(s).

The design of this web application involves access of different users (Guest, Manager and Administrator) to different functionalities to the web data ranging from view/read only to edit functions.

Functional Requirements

The application is to be built to enable:

- 1) The inputting of Vehicles and their corresponding MOTs.
- 2) System ability to create, delete, view and edit Vehicle
- 3) System ability to create, delete and view each MOT tied to a Vehicle without affecting the Vehicle

Models

Vehicle Model:

```
Go Run Terminal Help Wehicle.cs - FMS - Visual Studio Code
                                                                                                                                                            PAKSDBA Modes: V venue.

1 using System; component/ded.lostalmontations;

2 using System.Component/ded.lostalmontations;

3 using PRS_Data.Validations; // allows access to Unlessource

4 using PRS_Data.Models;

5 memspace PRS_Data.Models

7 {

36 references
  al references
public int Id { get; set; }

// suitable vehicle properties
Required]
freferences
                // suitable vehicle properties/relationships
              public string Make { get; set; }
             [Required]
17 references
public string Model { get; set; }
            [Required]
            public int Year { get; set; }
   21 memories
24 public string RegistrationNo { get; set; }
25
26 [Required]
             public string FuelType { get; set; }
  public string Transmission { get; set; }
 35
                [Required]
                public int NoofDoors { get; set; }
39
40
41
                public DateTime MOTDue { get; set; }
                public string CarPhotoUrl { get; set; }
                // Relationship 1-N MOT History
45
46
47
48
49
50 }
                public IList<Mot> Mot {get; set; } = new List<Mot>();
```

Mot Model:

```
C* Mot.cs
 FMS.Data > Models > C Mot.cs > { } FMS.Data.Models > C FMS.Data.Models.Mot
    1 using System;
        using System.ComponentModel.DataAnnotations;
        namespace FMS.Data.Models
    5
    6
             2 references | 0 references | 1 reference
    7
             public enum TestStatus { Pass, Fail }
    8
             32 references
    9
             public class Mot
   10
   11
                 public int Id { get; set; }
   12
   13
                 // suitable mot attributes / relationships
   14
   15
                 public DateTime DateOfMOT { get; set; } = DateTime.Now;
   16
   17
                 public string TesterName { get; set; }
   18
   19
   20
                 [Required]
                 10 references
   21
                 public string TestStatus { get; set; }
   22
   23
                 [Required]
   24
                 public int Mileage { get; set; }
   25
   26
                 [Required]
   27
                 public string TestReport { get; set; }
   28
   29
                 public string MotClosure {get; set; }
   30
                 9 references
                 public int VehicleId { get; set; }
                                                          // foreign key
                 public Vehicle Vehicle { get; set; } // navigation property
   32
   33
            public User User { get; set; }
35
36
    }
37
38
```

User Model:

```
FMS.Data > Models > C* User.cs > ...
  1 using System;
  2
       namespace FMS.Data.Models
  3
            13 references | 6 references | 1 reference | 1 reference
  4
            public enum Role { admin, manager, guest }
  5
            10 references
  6
            public class User
                0 references
                public int Id { get; set; }
  8
                public string Name { get; set; }
  9
                4 references
                public string Email { get; set; }
 10
                2 references
 11
                public string Password { get; set; }
                2 references
                public Role Role { get; set; }
 12
 13
 14
```

View screenshots and codes

User (Registration View)

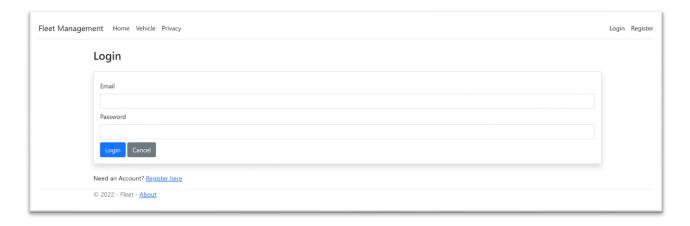


```
FMS.Web > Views > User > ≡ Register.cshtml
  1 @model UserRegisterViewModel
       <h3 class="mt-4 mb-4">Create Account</h3>
        <div class="card shadow rounded p-3">
            <form asp-action="Register" method="post">
                 <div asp-validation-summary="ModelOnly" class="text-danger"></div>
  10
                 <div class="mt-3">
                     <label asp-for="Name" class="form-label"></label>
<input asp-for="Name" class="form-control" />
  11
  12
                     <span asp-validation-for="Name" class="text-danger"></span>
  13
  14
                 </div>
 15
  16
                 <div class="mt-3">

<label asp-for="Email" class="form-label"></label>
<input asp-for="Email" class="form-control" />

  17
  19
                     <span asp-validation-for="Email" class="text-danger"></span>
  20
                 </div>
  21
                 <div class="mt-3">
  22
                    <label asp-for="Password" class="form-label"></label>
  23
  24
                     <input type="password" asp-for="Password" class="form-control" />
  25
                      <span asp-validation-for="Password" class="text-danger"></span>
                 </div>
  26
  27
                    (label asp-for="PasswordConfirm" class="form-label"></label>
<input type="password" asp-for="PasswordConfirm" class="form-control" />
  29
  30
                     <span asp-validation-for="PasswordConfirm" class="text-danger"></span>
  31
  32
  34
                 <div class="mt-3">
                     <label asp-for="Role" class="form-label"></label>
  35
                     <!-- Html.GetEnumSelectList<T>() is used to create a select list from the enum type (T) passed as a type parameter -->
  36
  37
                     <select asp-for="Role" asp-items="Html.GetEnumSelectList<Role>()" class="form-control">
                          <option disabled selected>Select Role</option>
  39
                     </select>
                     <span asp-validation-for="Role" class="text-danger"></span>
  40
                 </div>
 41
  42
                     <input type="submit" value="Register" class="btn btn-primary" />
<a class="btn btn-secondary" asp-controller="Home" asp-action="Index">Cancel</a>
  44
 45
                 </div>
  46
  48
            </form>
        </div>
  49
  50
 51
        @section Scripts {
        @{await Html.RenderPartialAsync("_ValidationScriptsPartial");}
  54
```

User (Login View)



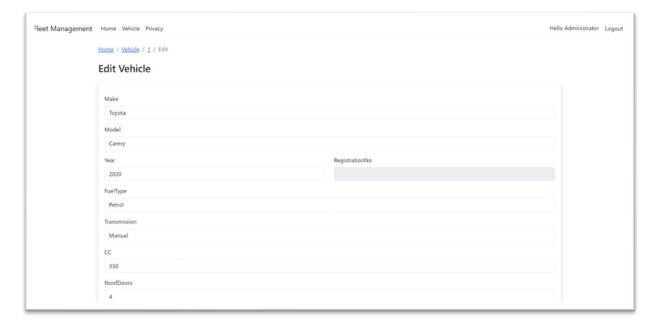
```
FMS.Web > Views > Shared > = _Login.cshtml
 1 
 2
        @if (User.Identity.IsAuthenticated)
 3
 4
           <a class="nav-link text-dark" title="Manage">Hello @User.Identity.Name</a>
 5
 6
           7
           8
             <form class="form-inline" asp-controller="User" asp-action="Logout">
 9
                 <button type="submit" class="nav-link btn btn-link text-dark">Logout</button>
              </form>
10
 11
           12
 13
        else
14
           15
16
           <a class="nav-link text-dark" asp-controller="User" asp-action="Login">Login</a>
17
           18
           <a class="nav-link text-dark" asp-controller="User" asp-action="Register">Register</a>
19
20
21
     22
```

Vehicle (Create view)



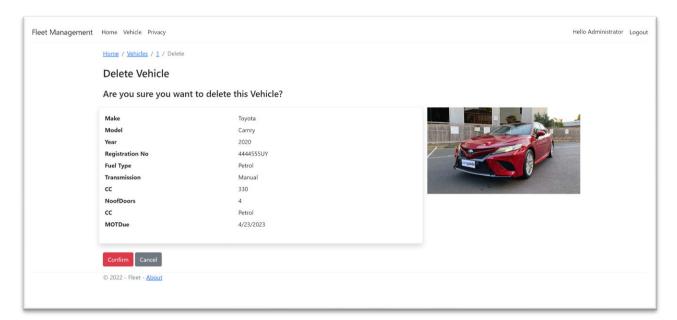


Vehicle (Edit View)

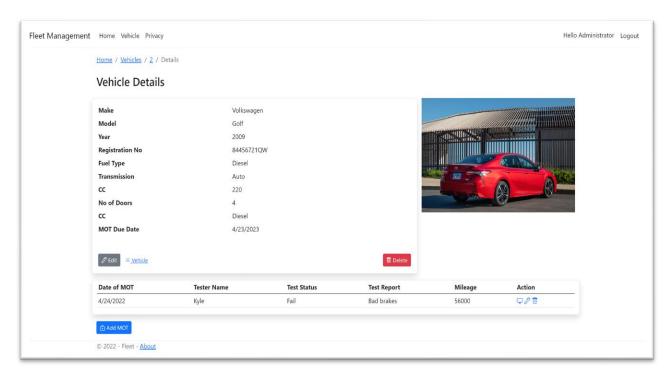




Vehicle (Delete View)



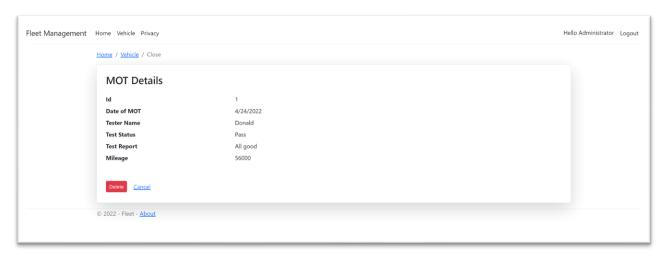
Vehicle (Details View)



Mot (Create View)



MOT (Detail View)



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embedded in them.

I declare that this is all my own work and does not contain unreferenced material copied from

any other source. I have read the University's policy on plagiarism and understand the

definition of plagiarism. If it is shown that material has been plagiarised, or I have otherwise

attempted to obtain an unfair advantage for myself or others, I understand that I may face

sanctions in accordance with the policies and procedures of the University. A mark of zero

may be awarded and the reason for that mark will be recorded on my file.

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Date: 24/04/2022