Paravastu Lawn Mowing Services Application: Instructions

Problem statement:

Lawn Mowing season lasts 20 weeks. The weekly charge for mowing a lawn are as follows:

- for 10000 square feet or less: $25 per week.
- 10000 to 25000 square feet: $30 per week.
- 25000 to 35000 square feet: $35 per week.
- above 35000 square feet: $40 per week.

Create a web form and get the customer name, lawn area in SFT, and number of weeks as form inputs from the customer. Once inputs are valid: calculate the quote for the area and number of weeks of lawn mowing requested, and then display the result in a different page.

Implementation:

1. Create a new ASP.Net Core MVC - C# project. Name the project as *yourLastnameWeek2W*
2. Delete all the controllers in the controllers folder.
3. Delete all the models in the models folder.
4. Delete all the views inside the Views → Home folder.
5. Delete all files inside Views → shared folder.
6. Delete the _viewStart.chstml file inside the Views folder as well.
7. Now: Right click on Controllers folder → Add → Controller: Add one empty controller called HomeController.cs
8. Right click on Models folder → Add → class: Add one c# class and name it as MowersModel.cs
9. Right click on Views-> Home folder → Add → View: Add one empty Razor view called Index.cshtml
10. Right click on Views → Home folder → Add → View: Add one more empty Razor view called LawnQuote.cshtml

Your project set up is complete. Now follow the code given to you and implement the Lawn Mowing Service application.

```csharp
1  using System.ComponentModel.DataAnnotations;
2  //Created by Dr. Paravastu
3  namespace ParavastuLawnMowers.Models
4  {
5      public class MowersModel
6      {
7          /*
8           * 1111111111111111111111111111111111
9           * Properties
10          * These properties map to the form controls -- their name properties.
11          * the annotations in square brackets on top of the property declarations  ⮧
              is to make sure the data is validated according to these annotations     ⮧
              when the binding model validates.
12          * The Quote property is the result that will be dislayed for the customer
13          * the CalculateQuote method calculates and sets the quote property.
14          */
15         [Required]
16         public string? Name { get; set; }
17
18         [Range(1000, 500000)]
19         public double? Area { get; set; }
20
21         [Range(1, 20)]
22         public int? NumberOfWeeks { get; set; }
23
24         public double Quote { get; set; }
25
26         public void CalculateQuote()
27         {
28             if (Area != null && NumberOfWeeks != null)
29             {
30                 if (Area > 35000){ this.Quote = (double)(NumberOfWeeks * 40);}
31                 else if (Area > 25000){ Quote = (double)(NumberOfWeeks * 35);}
32                 else if(Area > 10000) { this.Quote = (double)(NumberOfWeeks *      ⮧
                     30); }
33                 else { Quote = (double)(NumberOfWeeks * 25); }
34             }//if null check
35
36         }//calculateQuote()
37     }//class
38 }//namespace
39
```

```csharp
1  using Microsoft.AspNetCore.Mvc;
2  using ParavastuLawnMowers.Models;
3
4  namespace ParavastuLawnMowers.Controllers
5  {
6      public class HomeController : Controller
7      {
8          /*
9           * Created by Dr. Paravastu
10          * 22222222222222222222222
11          */
12         public IActionResult Index()
13         {
14             return View();
15         }
16         [HttpPost] //this annotation is for the method to fire only on post
             method.
17         public IActionResult Index(MowersModel model)
18         {
19             if (ModelState.IsValid)
20             {
21                 model.CalculateQuote(); //call the model method to calculate
                     quote.
22                 return View("LawnQuote",model);
23             }
24             return View("Index", model);
25
26         }
27     }
28 }
29
```

```
1   @*
2       Created by Dr. Paravastu
3       4444444444444444444444444
4       //note the @model directive at the top of the view. This will allow you to    ⮡
            access the model's properties and methods from this view.
5   *@
6   @model MowersModel
7
8   <!DOCTYPE html>
9   <html>
10      <head>
11          <!-- Created by Dr. Paravastu -->
12          <title>Paravastu Lawn Mowing</title>
13          <meta name="viewport" content="width=device-width" />
14          <meta charset="UTF-8">
15      </head>
16      <body>
17          <h1>Paravastu Lawn Mowing Services</h1>
18          <h3>Binding Model</h3>
19          @*display the results by accessing the properties using the @Model and dot ⮡
                notation to access the MowersModel's properties.*@
20          <h4>Quote for @Model.Name</h4>
21          <p>Total Area to be Mowed: @Model.Area SFt.</p>
22          <p>Number of Weeks: @Model.NumberOfWeeks</p>
23          <p>Amount Quoted for Lawn Mowing Services: @Model.Quote.ToString("n2")</p>
24      </body>
25  </html>
26
```

```cshtml
1  @*
2      Created by Dr.Paravastu
3      3333333333333333333333333
4  *@
5  @model MowersModel //You will need to add this declaration in order to map your
       properties in the model, to the form controls on this view.
6
7  <!DOCTYPE html>
8  <html>
9      <head>
10          <!-- Created by Dr. Paravastu -->
11          <title>Paravastu Lawn Mowing</title>
12          <meta name="viewport" content="width=device-width" />
13          <meta charset="UTF-8">
14      </head>
15      <body>
16          <h1>Paravastu Lawn Mowing Services</h1>
17          <h3>Binding Model</h3>
18          <p>Lawn mowing season typically lasts 20 weeks. The weekly charge for
             mowing a lawn are as follows:
19              <ul> If your lawn size is:
20                  <li>10000 square feet or less: $25 per week.</li>
21                  <li>10000 to 25000 square feet: $30 per week.</li>
22                  <li>25000 to 35000 square feet: $35 per week.</li>
23                  <li>above 35000 square feet: $40 per week.</li>
24              </ul>
25
26
27          </p>
28          <form asp-action="Index" asp-controller="Home" method='POST'>
29              <p>
30                  <label asp-for="Name">Enter Your Name:  </label><input asp-
                     for="Name" />
31              </p>
32              <p>
33                  <label asp-for="Area">Enter Lawn Area in Square Feet (min 1000
                     sft): </label><input asp-for="Area" />
34              </p>
35              <p>
36                  <label asp-for="NumberOfWeeks">Enter Number of weeks (between 1
                     and 20): </label><input asp-for="NumberOfWeeks" />
37              </p>
38              <p><input type="submit" /> </p>
39          </form>
40      </body>
41  </html>
```