Building your first ASP.NET MVC5 Application in 4 simple steps

By IMRAN ABDUL GHANI | February 24, 2014

6

Model-View-Controller is a software pattern for achieving isolation between different application components. Its always desirable for software applications (especially web-based applications) that there must be clear separation between business logic and the user interface. We can achieve this requirement by using **MVC** (Model View Controller) design that makes our application more flexible to change.**ASP.NET MVC** is a framework based on MVC (*Model View Controller*) design pattern for building web applications. Microsoft has released the latest version of this framework as **MVC5** now, with new features and enhancing existing features as well. For an overview of New Features in ASP.NET MVC5 and a good comparison with earlier versions. please Click Here.Let's understand a bit about MVC i.e. Model, View and Controller here but in order to get understanding of pre-requisite concepts in more detail, please read through ASP.NET MVC FAQs.

- **Model:-** a representation of our data structure in a data source e.g. database.
- **View:-** a user interface for model that is presented to end-user.
- **Controller:-** Translating input from a user to an action on model and preparing appropriate view in response.

For the purpose of implementation, I am going to use *Visual Studio Express 2013 for Web*. You can easily download it from Microsoft at following URL.
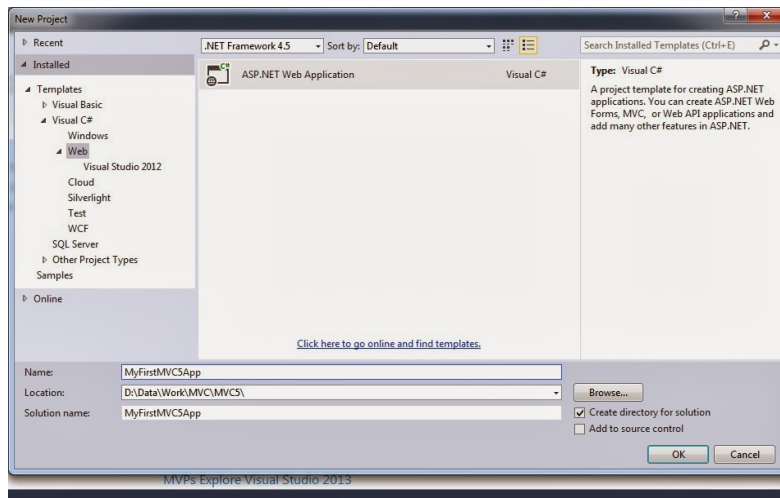
- Microsoft Visual Studio Express 2013 for Web

:::To test your ASP.NET MVC Skills, take a free Online Test:::

We will follow below steps to build a simple ASP.NET MVC5 application:
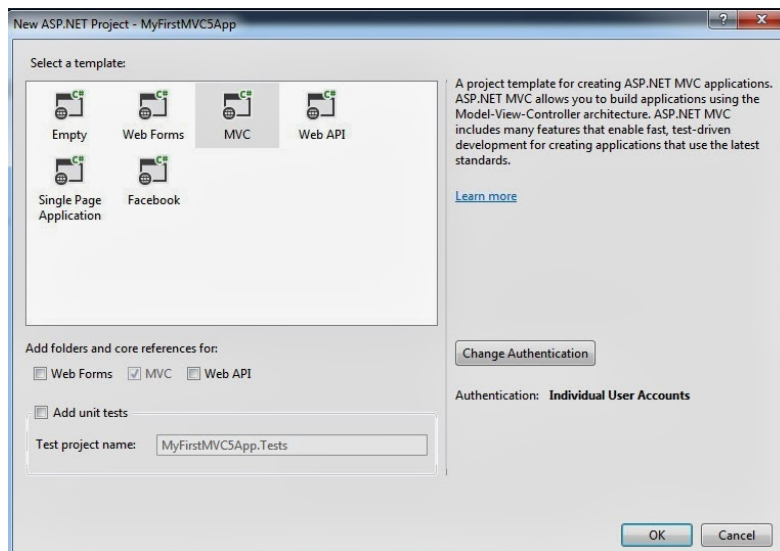
1. Creating MVC5 project in VS 2013
2. Preparing a Model
3. Add a Controller
4. Add simple View
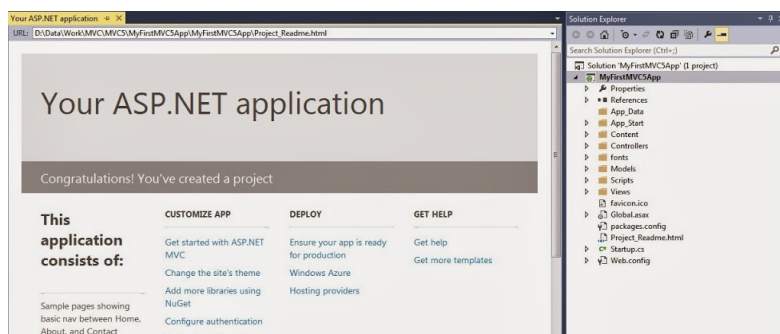
1. Creating MVC5 project in Visual Studio 2013

- Open Visual Studio Express 2013 for Web and create "New Project" as "File –> New Project.
- Choose "*ASP.NET Web Application*" template as shown in following figure. Name the project as "MyFirstMVC5App", choose location and press "OK" button.

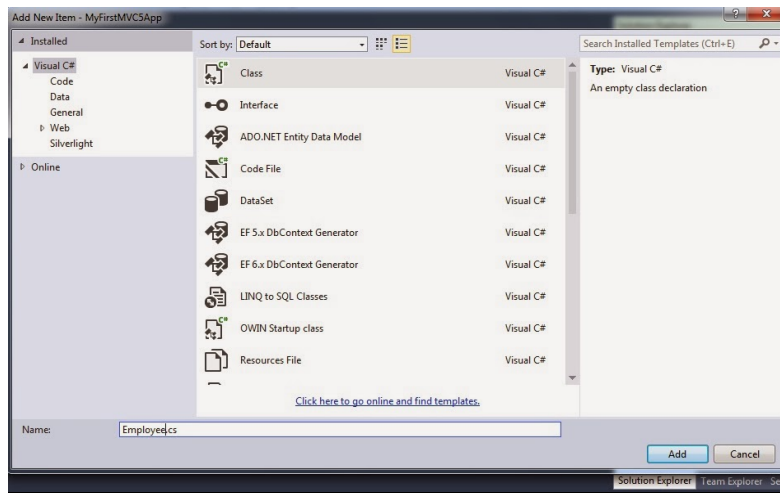- In next dialog, choose "MVC" as template and again press "OK" button.

- A new ASP.NET MVC 5 project will be created as follows. You can easily find the "Controllers", "Models" and "Views" folder in solution explorer.

2. Preparing a Model

- In order to prepare a model, right click on "Models" folder and choose "Add", then "Class".
- Name the class as "Employee.cs".
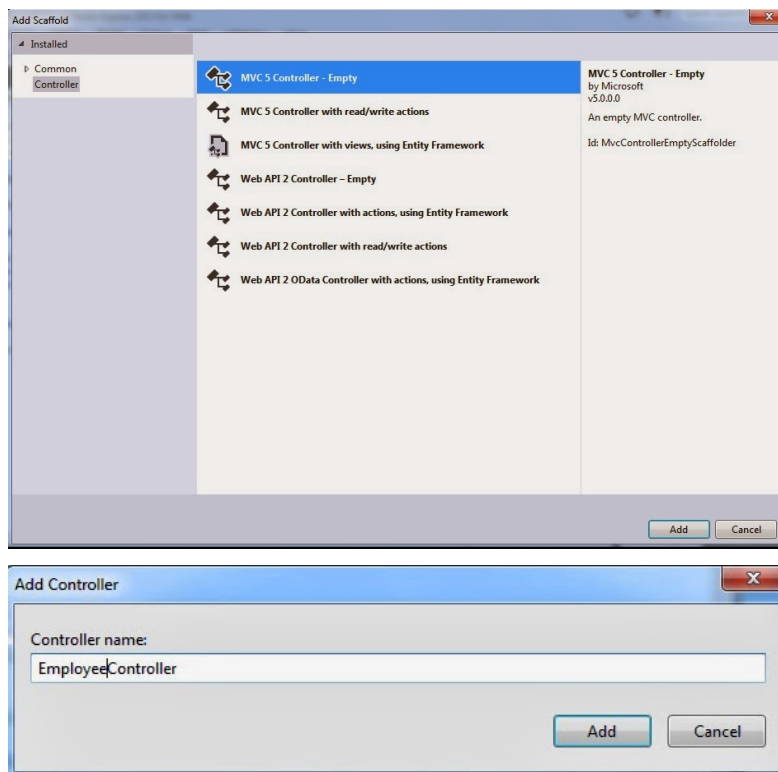
```
public class Employee
{
        public string EmpID { get; set; }
        public string EmpFirstName { get; set; }
        public string EmpLastName { get; set; }
}
```

- As we discussed earlier that "Model" is the representation of data structure in our Data Source, so you can assume this "*Employee*" class represents an Employee table in our database with columns as "EmpID", "EmpFirstName", "EmpLastName" and so on.

Note: In order to keep this **ASP.NET MVC5** tutorial simple and straight forward, I am not going to perform any CRUD operation. We will use this *Employees.cs* class in later articles on this blog.

3. Add a Controller

- To add a controller to our project, right click on "Controllers" folder, choose "Add", then "Controller".
- From "Add Scaffold" dialog, choose "MVC 5 Controller – Empty" and press "Add" button as follows:

- Name the controller as "EmployeeController" in next dialog and press "Add". A new controller will be

added to "Controllers" folder. Controller code generated will be as follows:
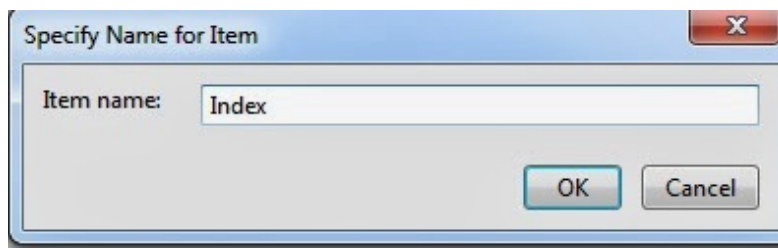
```
namespace MyFirstMVC5App.Controllers
{
  public class EmployeeController : Controller
  {
    // GET: /Employee/
    public ActionResult Index()
    {
      return View();
    }
  }
}
```

There are few important things need to understand here:

1. *EmployeeController* inheriting from base*Controller* class has a method named *Index()*. This Index() method will be the default method called when accessing this controller as (http://localhost:xxxx/Employee/).
2. In order to generate HTML response, above Index() method uses a view template i.e. represented in code as "return View();"
3. As we create a controller, a new folder will be created under "Views" named as "Employee".
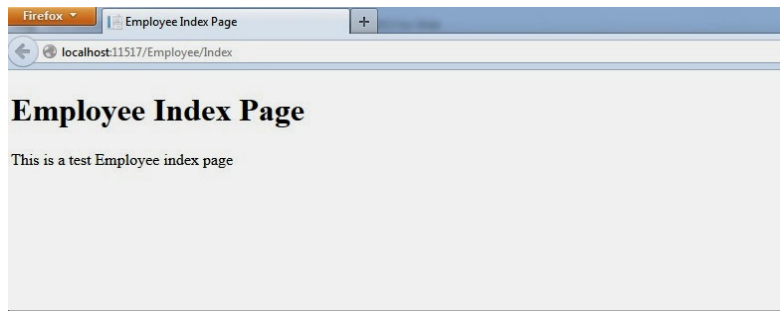
4. Add a View

- Finally for adding a view, right click on newly created "Employee" folder under views, choose "Add", then "MVC 5 View Page (Razor)". Specify the name for the view "Index" as follows:

- A new file with the name "Index.cshtml" will be added under "Views->Employee" folder. I have added meaningful some text to this page as shown in below figure.

Now, we are done with creating a simple ASP.NET MVC 5 application. To run the application, click CTRL + F5. Result will be as follows:

Now change the URL in browser from above to*http://localhost:11517/Employee/* and press enter, still the output remains the same.

Now it will be clear that request actually comes to controller i.e. *EmployeeController* in our case and controller renders a view (Index.cshtml we created under Views->Employee folder) for us in browser.