



Introduction to ASP.NET MVC 5

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Learning Objectives

- After completing the training sessions and practicing the concepts practically for at-least 2 weeks 70% participants would be able to understand how to implement ASP.NET MVC 5 in the project.

Course Structure

Target audience	Audience who want to upgrade their web application development skill using ASP.NET MVC framework.
Level	SE or above
Pre-requisites	The participants must have basic understanding of any web application framework, .NET framework, C#, any RDBMS, HTTP, HTML and JavaScript.
Training methods	Lecture and demonstration
Evaluation	Assignments and Objective type test.

Agenda

- Introduction to ASP.NET MVC
- Controllers
- Views
- Models



What is Web Application

Client – Server Architecture

HTTP Protocol

Request and Response

IIS Express.

History of Web

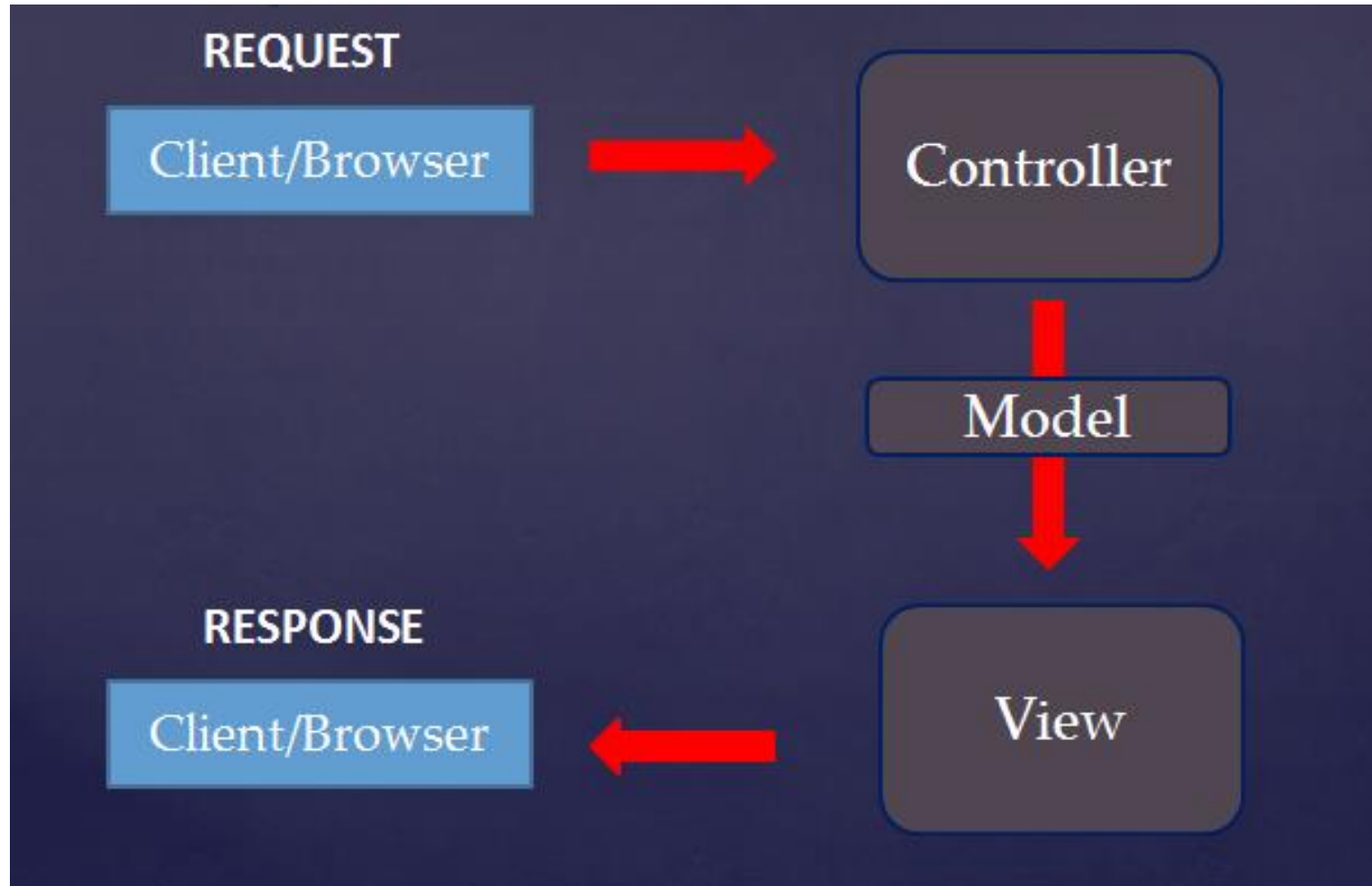
HTML

HTML with script

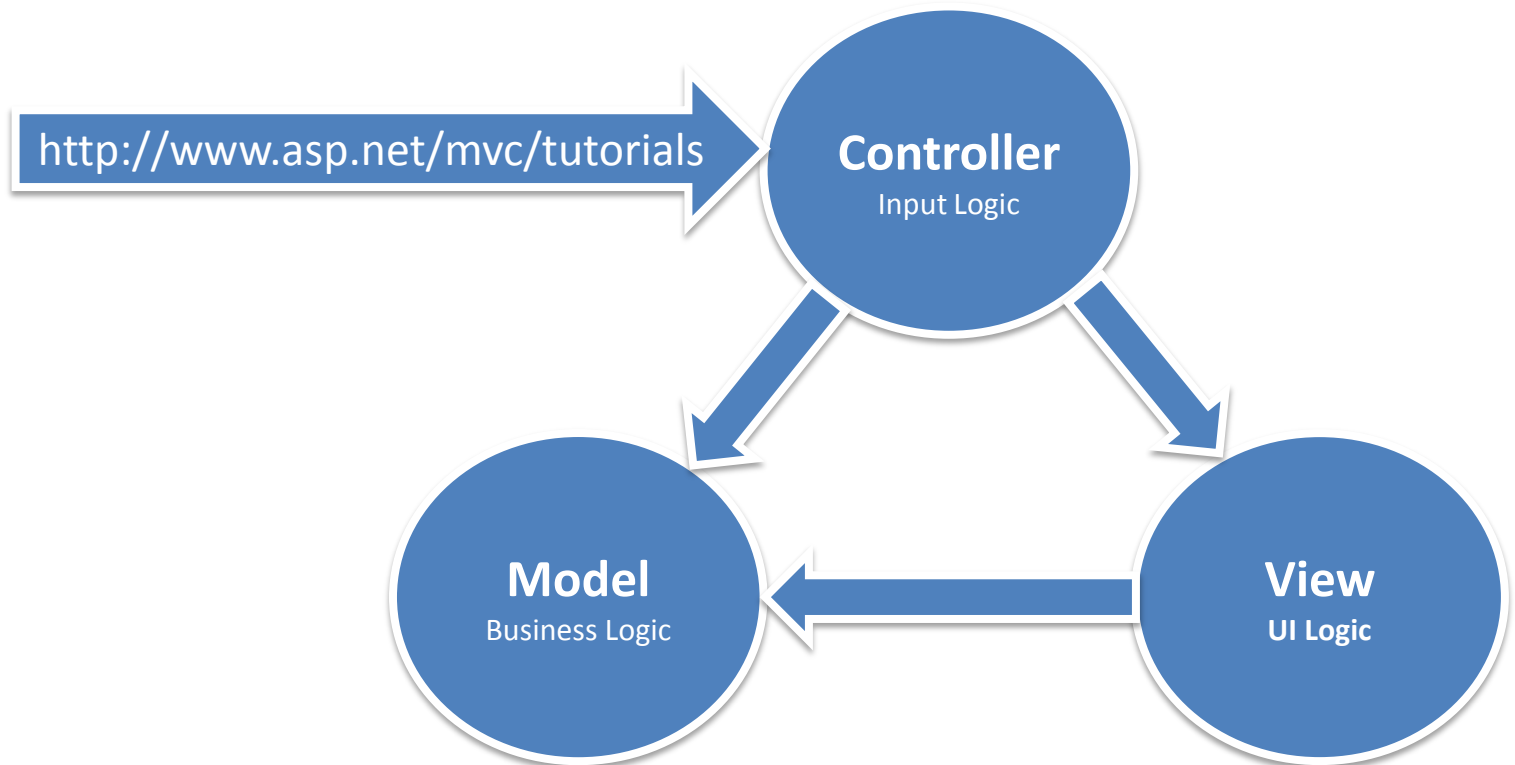
Classic ASP

ASP.NET Web Forms.

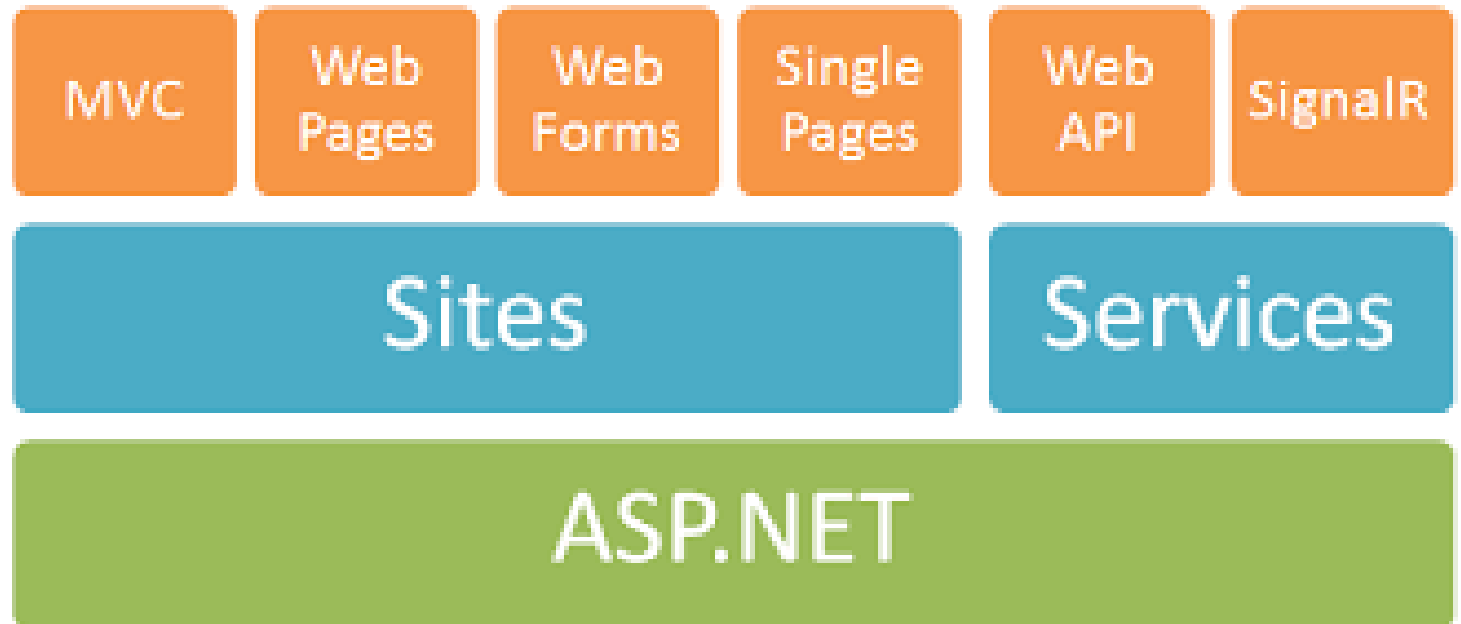
MVC – A Design Pattern



MVC – A Design Pattern...



ASP.NET Framework



Why MVC

Separation of concern

Convention over configuration

Highly extensible framework

Test driven development.

Web Forms VS. MVC

Team Size

- Small – Web Forms
- Large - MVC

Control Over App

- Full Control – MVC
- Less Control – Web Forms

Lines of Code

- Less Code – Web Forms
- More Code – MVC

Unit Testing

- Concern? – MVC
- Not a Concern – Web Forms.

What is Controller

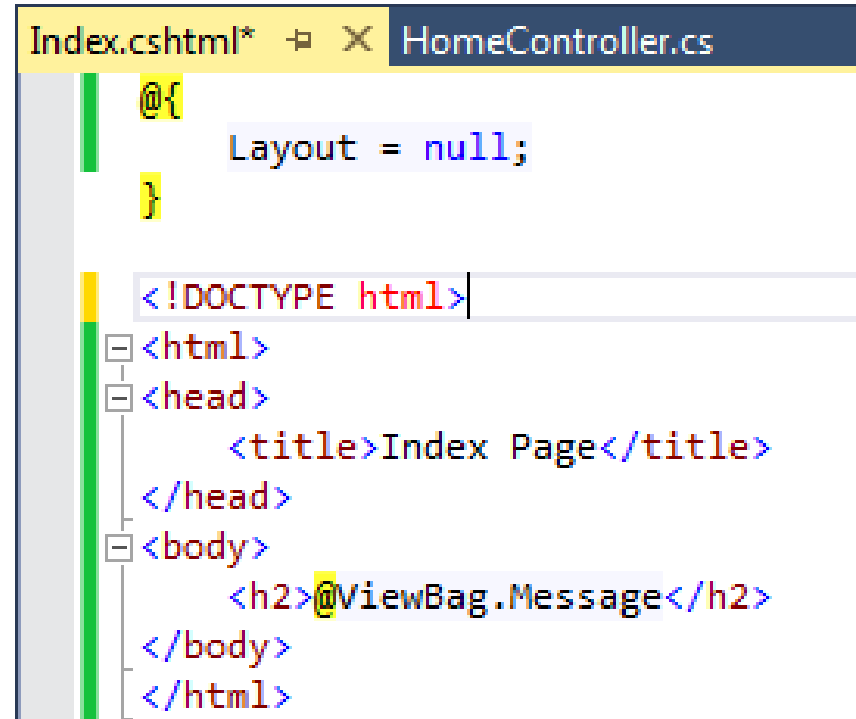
- Accepts requests from client
- Calls appropriate action methods
- Decides which model to pass
- Decides which view to call
- Inherits Controller : ControllerBase : IController

```
public class HomeController : Controller
{
    public ActionResult Index()
    {
        return View();
    }
}
```

Demo

What is Razor View

- A template that generates HTML response
- A clean, lightweight and simple view engine
- A Razor view has .cshtml or .vbhtml file extensions
- Contains HTML along with data.



```
@{
    Layout = null;
}

<!DOCTYPE html>
<html>
<head>
    <title>Index Page</title>
</head>
<body>
    <h2>@ViewBag.Message</h2>
</body>
</html>
```

Demo

Models

- Models are classes represent entities
- Model Binder uses model object to bind with action parameters
- The model class may also include validation logic

```
namespace MvcEmpMgmt.Models
{
    public class Employee
    {
        public int EmployeeId { get; set; }
        public string Name { get; set; }
        public DateTime JoiningDate { get; set; }
        public double Salary { get; set; }
        public string Department { get; set; }
    }
}
```


Demo

ASP.NET Routing

- Get route info from URL
- Reads Route Table
- First match wins
- Creates a data structure
- Passes it to MVC framework

```
public class RouteConfig
{
    public static void RegisterRoutes(RouteCollection routes)
    {
        routes.IgnoreRoute("{resource}.axd/{*pathInfo}");

        routes.MapRoute(
            name: "Default",
            url: "{controller}/{action}/{id}",
            defaults: new { controller = "Home", action = "Index", id = UrlParameter.Optional }
        );
    }
}
```

Demo

Summary

- What is MVC
- Controllers
- Views
- Models.

Bibliography, Important Links

- <http://www.asp.net/mvc>

Any Questions?



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Thank you!