Module01

Exploring ASP.NET MVC

Module Overview

- Overview of Microsoft Web Technologies
- Overview of ASP.NET
- Introduction to ASP.NET MVC

Lesson 1: Overview of Microsoft Web Technologies

- Introduction to Microsoft Web Technologies
- Overview of ASP.NET
- Client-Side Web Technologies
- Internet Information Server
- Windows Azure

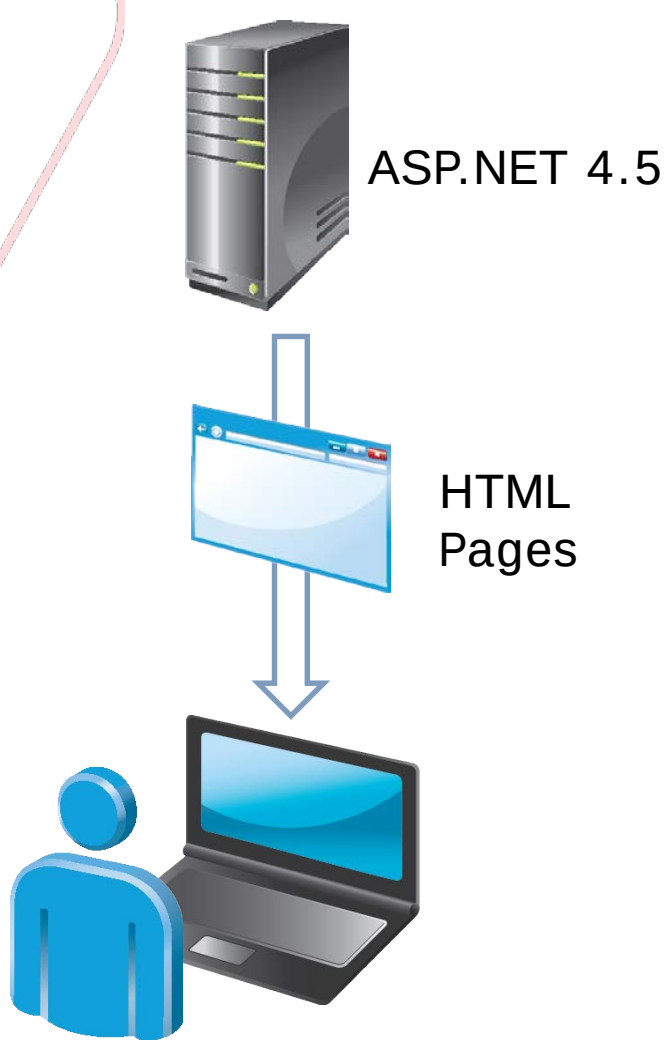
Introduction to Microsoft Web Technologies

itucation

Develop	Host	Execute	
		Server-Side	Client-Side
• WebMatrix • Visual Studio • Visual Studio Express	• IIS • SQL Server • Windows Azure • SQL Database	• ASP.NET	• JavaScript • jQuery • AJAX

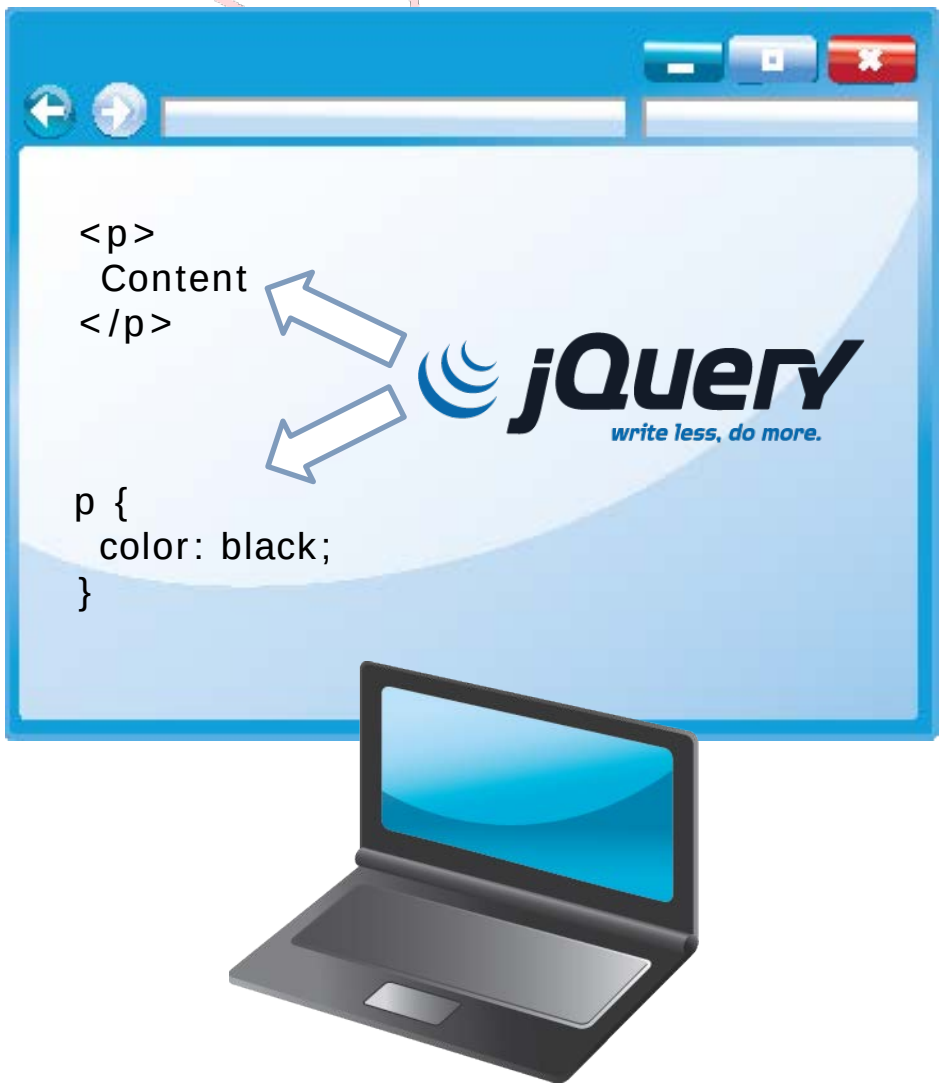
Overview of ASP.NET

- Programming Models
  - Web Pages
  - Web Forms
  - MVC
- ASP.NET API
  - Configuration
  - Authentication and Authorization
  - Caching
- Compiling ASP.NET Code



Client-Side Web Technologies

- JavaScript
- jQuery
  - jQuery UI
  - jQuery Mobile
- AJAX



Internet Information Server

- IIS
  - Features
  - Scaling
  - Perimeter Networks
- IIS Express
- Other Web Servers
- Visual Studio Development Server

Windows Azure

- What Is Windows Azure?
  - Websites
  - Web Services
  - SQL Database
  - Virtual Servers
  - Mobile Services
  - Media Storage

Lesson 2: Overview of ASP.NET

- Web Pages Applications
- Web Forms Applications
- MVC Applications
- Discussion: ASP.NET Application Scenarios
- Shared ASP.NET Features

Web Pages Applications

- Web Matrix or Visual Studio
- Code in .CSHTML files
- Precise Control of HTML

```
<h2>Special Offers</h2>
<p>Get the best possible value on Northwind specialty
   foods by taking advantage of these offers:</p>
@foreach (var item in offers) {
  <div class="offer-card">
    <div class="offer-picture">
      @if (!String.IsNullOrEmpty(item.PhotoUrl)){
        <img src="@Href(item.PhotoUrl) alt="@item.Title" />
      }
    </div>
  </div>
}
```

Web Forms Applications

- Visual Studio only
- Code in .aspx files and code-behind files
- Create a UI by dragging controls onto a page
- Controls provide rich properties and events
- Bind controls to data

MVC Applications

- Visual Studio only
- Models encapsulate objects and data
- Views generate the user interface
- Controllers interact with user actions
- Code in .cshtml and .cs files
- Precise control of HTML and URLs
- Easy to use unit tests

Discussion: ASP.NET Application Scenarios

Which programming model will you use in the following scenarios?

- A database front-end to be hosted on an intranet
- An e-commerce site for a large software organization
- A website for a small charitable trust

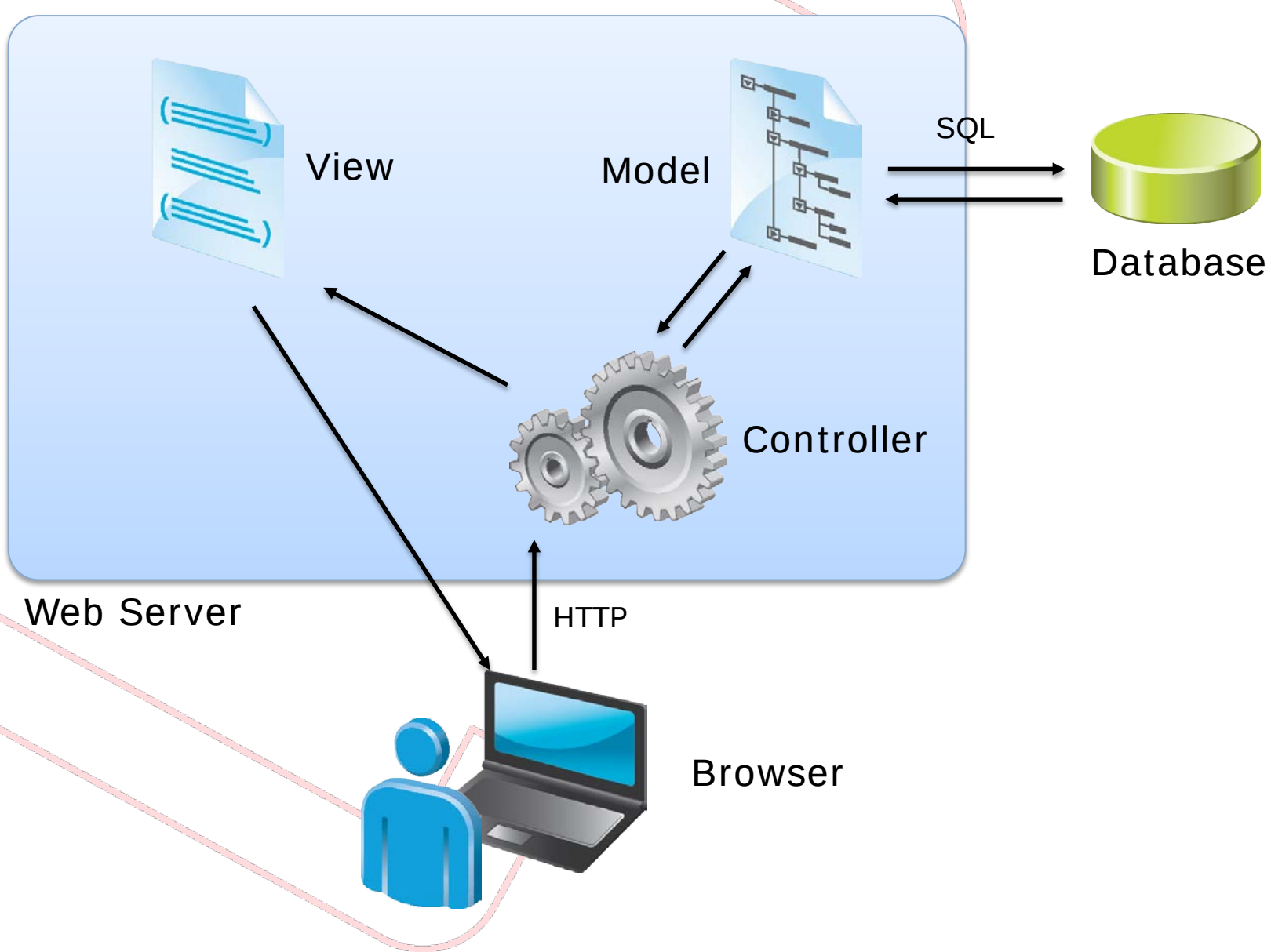
Shared ASP.NET Features

- Configuration
- Authentication
- Membership and Roles
- State Management
- Caching

Lesson 3: Introduction to ASP.NET MVC 4

- Models, Views, and Controllers
- Demonstration: How to Explore an MVC Application
- New Features of ASP.NET MVC

Models, Views, and Controllers



Demonstration: How to Explore an MVC Application

In this demonstration, you will see how to:

1. Examine an MVC application renders the default home page
2. Examine the default route that forwards requests to the Controller
3. Examine the Photo Model code
4. Examine the Photo Controller code
5. Examine the Photo Details View code
6. Examine the photo details rendered as a result of Models, Controllers, and Views working together

New Features of ASP.NET MVC

- ASP.NET Web API
- Mobile Features
- Display Modes
- Asynchronous Controllers
- OAuth and OpenID
- Bundling and Minification

Lab: Exploring ASP.NET MVC

- Exercise 1: Exploring a Photo Sharing Application
- Exercise 2: Exploring a Web Pages Application
- Exercise 3: Exploring a Web Forms Application
- Exercise 4: Exploring an MVC Application

Estimated Time: 45 minutes

Lab Scenario

You are working as a junior developer at Adventure Works. You have been asked by a senior developer to investigate the possibility of creating a web-based photo sharing application for your organization's customers, similar to one that the senior developer has seen on the Internet. Such an application will promote a community of cyclists who use Adventure Works equipment, and the community members will be able to share their experiences. This initiative is intended to increase the popularity of Adventure Works Cycles, and thereby to increase sales. You have been asked to begin the planning of the application by examining an existing photo sharing application and evaluating its functionality. You have also been asked to examine programming models available to ASP.NET developers. To do this, you need to create basic web applications written with three different models: Web Pages, Web Forms, and MVC. Your manager has asked you to report on the following specific questions for each programming model:

- How does the developer set a connection string and data provider?
- How does the developer impose a consistent layout, with Adventure Works branding and menus, on all pages in the web application?
- How does the developer set a cascading style sheet with a consistent set of color, fonts, borders, and other styles?
- How does the developer add a new page to the application and apply the layout and styles to it?

Lab Review

- Which of the three programming models has the simplest method of applying a single layout across multiple pages?
- Which of the three programming models has the simplest method of building a user interface?
- Which of the application programming models will you recommend for the photo sharing application: Web Pages, Web Forms, or MVC?

Module Review and Takeaways

- Review Question(s)
- Real-world Issues and Scenarios
- Tools
- Best Practice
- Common Issues and Troubleshooting Tips
- Additional Reading