SharePoint Development for .NET Developers

About This Course

- ◆ Description
- ◆ Objectives
- ◆ Audience

Prerequisites

- ◆ At least six month's experience developing solutions on the .NET platform
- ◆ Proficiency in either Visual Basic.NET or Visual C# (or both)

Course Outline

◆ Module 1: Developing Solutions on the SharePoint Platform
◆ Module 2: Web Parts
◆ Module 3: Page Navigation
◆ Module 4: Page Branding
◆ Module 5: Data Lists
◆ Module 6: Web Services
◆ Module 7: Event Handlers
◆ Module 8: Content Types
◆ Module 9: Workflow
◆ Module 10: User Management
◆ Module 11: Silverlight
◆ Module 12: Deployment

Module 1:
Developing Solutions on the SharePoint Platform

Overview

◆ SharePoint as a Development Platform

◆ SharePoint Tools and Technologies for Developers

◆ Comparing MOSS 2007 to WSS 3.0

Lesson 1: SharePoint as a Development Platform

◆ SharePoint: A Collaborative Platform

◆ Why Develop Solutions on the SharePoint Platform?

◆ Leveraging Collaborative Features as a Developer

◆ Using your .NET Skills on the SharePoint Platform

◆ Technology Stack: .NET, Windows SharePoint Services 3.0, and Microsoft Office SharePoint Server 2007

◆ Leveraging ASP.NET Provider Framework

◆ SharePoint Object Models

◆ SharePoint Web Services

SharePoint: A Collaborative Platform

- WSS provides many different types of collaborative features
  - Data Lists
    - Tasks, Issues, Discussions, Contacts, Calendars, Surveys, Custom Lists
  - Document Management
    - Storage
    - Check-in/ Check-out
    - Version Control
  - Workflows

Why Develop Solutions on the SharePoint Platform?

- Many functional requirements are already met
  - Data storage
  - Document management
  - User interfaces
  - Administrative interfaces
  - Search
- Complex non-functional requirements are already met
  - Security
  - Scalability
  - Manageability
  - Flexibility
  - Maintainability
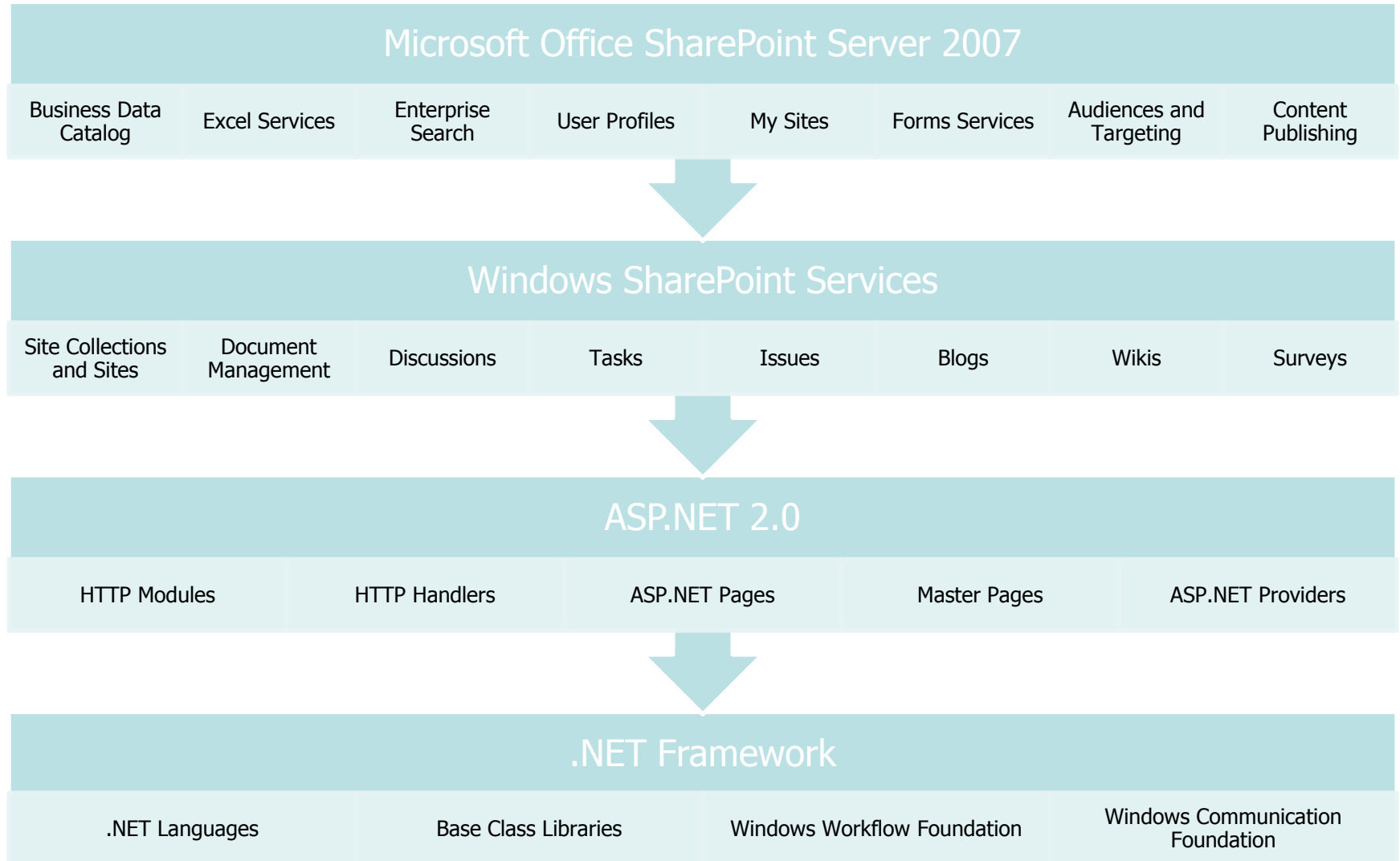 - Performance

Leveraging Collaborative Features as a Developer

◆ Extend the built-in data model
  ▪ Customize built-in lists
  ▪ Create new custom lists
◆ Create custom user interfaces to support your specific business processes
  ▪ Web Parts
  ▪ Administrative pages
◆ Consume SharePoint data from non-SharePoint applications via Web services
  ▪ ASP.NET Web applications
  ▪ Windows forms applications

Using your .NET Skills on the SharePoint Platform

- Coding in the context of SharePoint gives you full access to the .NET Framework
  - Just like in an ASP.NET Web application
- Also gives you access to SharePoint class libraries
  - Used just like .NET Framework base class libraries
- Coding typically done in Visual Studio
  - Project templates for SharePoint solutions

Technology Stack: .NET, WSS 3.0, and MOSS 2007

Microsoft Office SharePoint Server 2007							
Business Data Catalog	Excel Services	Enterprise Search	User Profiles	My Sites	Forms Services	Audiences and Targeting	Content Publishing

Windows SharePoint Services							
Site Collections and Sites	Document Management	Discussions	Tasks	Issues	Blogs	Wikis	Surveys

ASP.NET 2.0				
HTTP Modules	HTTP Handlers	ASP.NET Pages	Master Pages	ASP.NET Providers

.NET Framework			
.NET Languages	Base Class Libraries	Windows Workflow Foundation	Windows Communication Foundation

Leveraging ASP.NET Provider Framework

- Themes
- Profiles
- Personalization
- Membership
- SiteMap
- Session State
- OLEDB Connections

SharePoint Object Models

Windows SharePoint Services 3.0	Mirosoft® Office SharePoint® Server 2007
Microsoft.SharePoint.dll	Microsoft.Office.Server.dll
	Microsoft.Office.Server.Publishing.dll
	Microsoft.Office.Server.Policy.dll
	Microsoft.Office.Server.Search.dll
	Microsoft.SharePoint.Portal.dll
	Microsoft.Office.Workflow.Tasks.dll
	Microsoft.SharePoint.Publishing.dll
	Microsoft.SharePoint.Workflow.Actions.dll

SharePoint Web Services

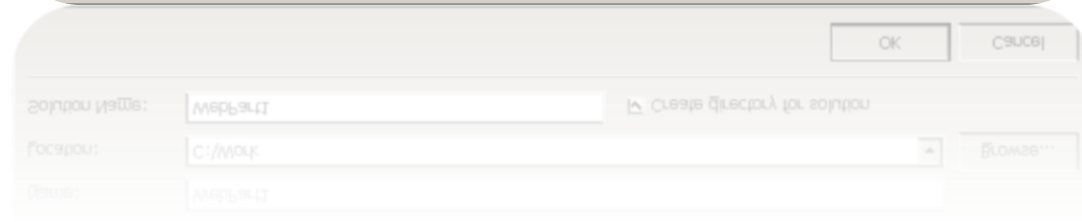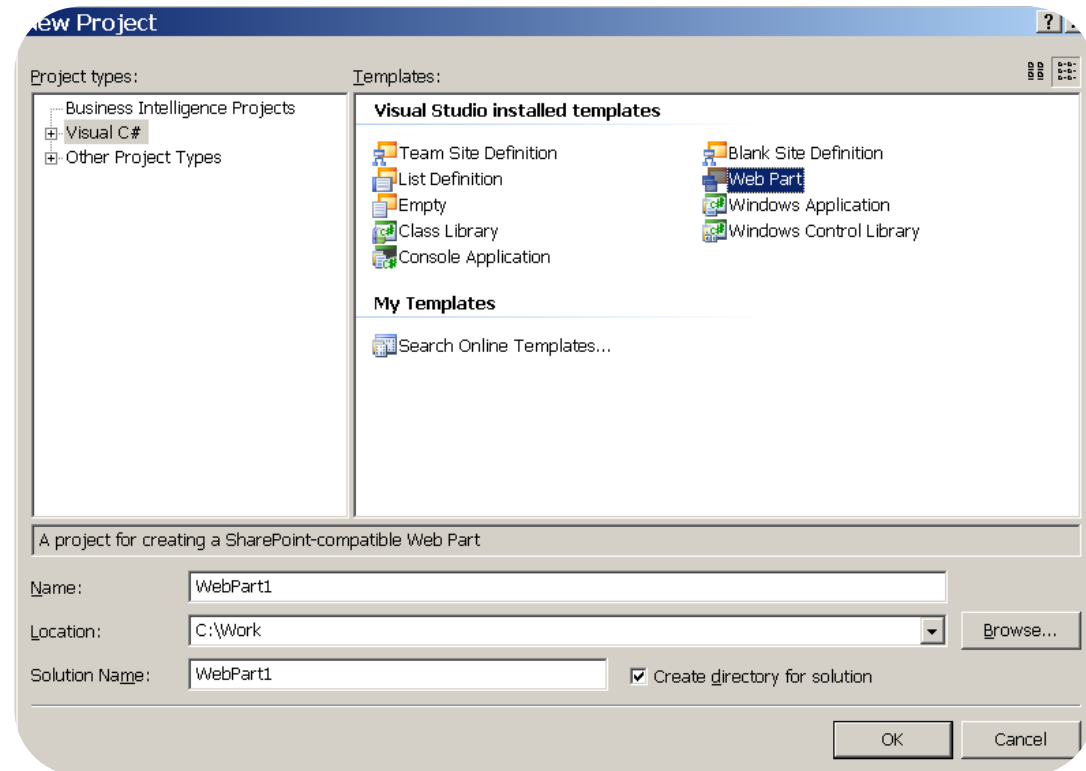- Administration Service (admin.asmx)
- Alerts Service (alerts.asmx)
- Copy Service (copy.asmx)
- Document Workspace Service (dws.asmx)
- Forms Service (forms.asmx)
- Imaging Service (imaging.asmx)
- List Data Retrieval Service (dspsts.asmx)
- Lists Service (lists.asmx)
- Meetings Service (meetings.asmx)
- People Service (People.asmx)
- Permissions Service (permissions.asmx)
- Site Data Service (sitedata.asmx)
- Site Service (sites.asmx)
- Search Service (spsearch.asmx)
- Users and Groups Services (usergroup.asmx)
- Versions Service (versions.asmx)
- Views Service (views.asmx)
- Web Part Pages Service (webpartpages.asmx)
- Webs Service (webs.asmx)

Lesson 2: SharePoint Tools and Technologies for Developers

◆ Getting Started – Visual Studio 2008 Templates for SharePoint Development

◆ Web Applications, Site Collections and Sites

◆ Web Parts and Web Part Pages

◆ Application Pages and the _layouts folder

Getting Started – Visual Studio 2008 Templates for SharePoint Development

◆ Microsoft Visual Studio 2005 extended with Visual Studio Extensions for Windows SharePoint Services 3.0 (1.1)

◆ Visual Studio 2008 with Visual Studio Extensions for Windows SharePoint Services 3.0

Web Applications, Site Collections and Sites

- SharePoint IIS Web Applications exposed via **SPWebApplication** object
    - Major unit controlled by Web.config settings
    - Consumes providers such as authentication, SiteMap, membership, profiles, and so on
    - Contains one or more Site Collections
- Site Collections exposed via **SPSite** object
    - Unit that defines security boundaries
    - Contains one or more sites
- Sites exposed via **SPWeb** object
    - Unit that defines storage
        - Pages, Document Libraries, Lists

Web Parts and Web Part Pages

- ◆ WSS 3.0 supports two types of Web Parts
  - ▪ WSS 2.0-type Web Parts
    - ‣ Mainly for backwards compatibility
  - ▪ ASP.NET 2.0-type Web Parts
    - ‣ Most common type for new solutions
- ◆ WSS 3.0 Web Part Pages
  - ▪ Built on ASP.NET 2.0 Web Part Pages
  - ▪ Includes SPWebPartManager control and SPWebPartZone controls
  - ▪ Stored in content databases, rather than on the file system

Application Pages and the _layouts folder

- All WSS Web applications include a virtual directory mapping
  - _layouts → ...\12\Templates\Layouts
- Contains ASPX pages in the file system
  - Administrative pages
- You can create your own
- You can modify existing files
  - Look and feel
  - Additional links and functionality

Changes affect *all* WSS Web applications on the server

Lesson 3: Comparing MOSS 2007 to WSS 3.0

◆ What is Microsoft Office SharePoint Server 2007 from a Developer's Perspective?

◆ Business Data Catalog

◆ Excel Services

◆ User Profiles

◆ Enterprise Search

◆ Audiences and Targeting

What is Microsoft Office SharePoint Server 2007 from a Developer's Perspective?

- ◆ MOSS is a WSS 'Application'
  - ▪ Good example of building on the WSS platform
- ◆ Adds additional features and functionality
  - ▪ BDC, Excel Services, Audiences, User Profiles
- ◆ Extends WSS core functionality
  - ▪ Enterprise Search
- ◆ Exposes additional object models and Web services

Business Data Catalog

- Abstraction layer for connecting to data
  - OLE-DB
  - Web Services
- Manages connections
- Manages data definitions
- Enables you to consume data without writing 'plumbing' code

Excel Services

◆ Excel Calculation Services

◆ Excel Web Services

◆ Excel Web Parts

User Profiles

◆ Complete profile subsystem

◆ Accessible to developers

◆ Integrated with 'My Sites'

◆ Provides the basis for People Search

Enterprise Search

◆ Extends indexing to include
- File shares
- External SharePoint sites
- Non-SharePoint sites
- BDC Data
- Exchange Public Folders
- Lotus Notes Data
- People

Audiences and Targeting

◆ Audiences defined on:

- User profile properties
- Group membership
- Organizational hierarchy

◆ Targeting surfaces information to audience members

Review

- ◆ SharePoint as a Development Platform
- ◆ SharePoint Tools and Technologies for Developers
- ◆ Comparing MOSS 2007 to WSS 3.0