

BÀI TẬP LỚN MÔN LẬP TRÌNH WEB

I. YÊU CẦU:

- Mỗi bài tập chỉ do một sinh viên thực hiện.
- Nội dung thực hiện gồm: viết báo cáo (đóng thành cuốn), chiếu slide và thực thi chương trình minh họa (sinh viên cần chú trọng đến thiết kế giao diện đẹp).
- Nếu bài tập có nhiều phần, trang Web chính sẽ chứa các liên kết đến các trang khác để thực thi các phần đó.
- Trình bày ngắn gọn những nội dung chính, khi báo cáo không quá 5 slide.
- Chương trình được viết bằng C#.
- Giải thích mã lệnh trong chương trình nếu có yêu cầu.
- Nếu trong tài liệu không có chương trình minh họa, sinh viên phải tự viết chương trình. Có thể viết chương trình minh họa theo ý riêng.
- Nộp báo cáo và trình bày slide vào các buổi cuối khoá học.
- Thứ tự sinh viên báo cáo theo số thứ tự đề bài đã chọn.
- Tổng điểm bao gồm: Nội dung trình bày, kết quả thực thi và giao diện của chương trình, trả lời câu hỏi (nếu có).

II. TÀI LIỆU:

- Tài liệu tham khảo: **Stephen Walther, Kevin Hoffman, Nate Dudek**, *ASP.NET 4.0 Unleashed*, Sams, September, 2010, 1916 pages.

III. ĐỀ BÀI:

- 1. Accepting File Uploads (chapter 4):**
 - Saving Files to the File System.
 - Saving Files to a Database.
 - Uploading Large Files.
- 2. Displaying a Calendar (chapter 4):**
 - Creating a Pop-up Date Picker.
 - Rendering a Calendar from a Database Table.
 - Displaying Advertisements.
 - Storing Advertisements in an XML File.
 - Storing Advertisements in a Database Table.
 - Tracking Impressions and Transfers.
- 3. Displaying Different Page Views (chapter 4):**
 - Displaying a Tabbed Page View.
 - Displaying a Multi-Part Form.
 - Displaying a Wizard.
 - Displaying Silverlight Content.
- 4. Creating Master Pages (chapter 5):**
 - Creating Default Content.
 - Nesting Master Pages.
 - Using Images and Hyperlinks in Master Pages.
 - Registering Master Pages in Web Configuration.

5. Creating Master Pages (chapter 5):

- Modifying Master Page Content.
- Using the Title Attribute.
- Using the Page Header Property.
- Exposing Master Page Properties.
- Using FindControl with Master Pages.
- Loading Master Pages Dynamically.
- Loading Master Pages Dynamically for Multiple Content Pages.

6. Creating Themes (chapter 6):

- Adding Skins to Themes.
- Creating Named Skins.
- Themes Versus StyleSheetThemes.
- Disabling Themes.
- Registering Themes in the Web Configuration File.
- Adding Cascading Style Sheets to Themes.
- Adding Multiple Cascading Style Sheets to a Theme.
- Changing Page Layouts with Cascading Style Sheets.

7. Creating User Controls (chapter 7):

- Registering User Controls in the Web Configuration File.
- Exposing Properties from a User Control.
- Exposing Events from a User Control.
- Creating an AddressForm Control.
- AJAX and User Controls.

8. Building Basic Components (chapter 15):

- Components and Dynamic Compilation.
- Mixing Different Language Components in the App_Code Folder.
- Declaring Methods.
- Declaring Fields and Properties.
- Declaring Constructors.
- Overloading Methods and Constructors.
- Declaring Namespaces.
- Creating Partial Classes.
- Inheritance and Abstract Classes.
- Declaring Interfaces.
- Using Access Modifiers.

9. Building Component Libraries (chapter 15):

- Compiling Component Libraries.
- Adding a Reference to a Class Library.
- Architectural Considerations.
- Building Multi-Tier Applications.
- Creating the User Interface Layer.
- Creating the Business Logic Layer.
- Creating the Data Access Layer.

10. Representing Objects with the ObjectDataSource (chapter 16):

- Binding to a Component
- Binding to a DataReader.
- Binding to a DataSet.
- Binding to a LINQ to SQL Query.
- Binding to a Web Service.
- Using Parameters with the ObjectDataSource.
- Using Different Parameter Types.
- Passing Objects as Parameters.

11. Paging, Sorting, and Filtering Data with the ObjectDataSource Control (chapter 16):

- User Interface Paging.
- Data Source Paging.
- User Interface Sorting.
- Data Source Sorting.
- Filtering Data.

12. Handling ObjectDataSource Control Events (chapter 16):

- Adding and Modifying Parameters.
- Handling Method Errors.
- Handling the ObjectCreating Event.
- Concurrency and the ObjectDataSource Control.
- Extending the ObjectDataSource Control.
- Creating a Custom ObjectDataSource Control.
- Creating Custom Parameter Objects.

13. Executing Asynchronous Database Commands (chapter 17):

- Using Asynchronous ADO.NET Methods.
- Using Asynchronous ASP.NET Pages.
- Building Database Objects with the .NET Framework.
- Enabling CLR Integration.
- Creating the User-Defined Type Assembly.
- Building a Data Access Layer with a User-Defined Type.
- Creating Stored Procedures with the .NET Framework.
- Creating the Stored Procedure Assembly.

14. Performing Standard Database Commands with LINQ to SQL (chapter 18):

- LINQ to Objects versus LINQ to SQL.
- Selecting with LINQ to SQL.
- Inserting with LINQ to SQL.
- Updating with LINQ to SQL.
- Deleting with LINQ to SQL.
- Dynamic Queries.

15. Using the Menu Control (chapter 19):

- Declaratively Adding Menu Items.
- Using the Menu Control with the MultiView Control.
- Binding to a Site Map.
- Binding to an XML File.

- Binding to Database Data.
- Formatting the Menu Control.
- Using Templates with the Menu Control.

16. Using the TreeView Control (chapter 19):

- Declaratively Adding Tree Nodes.
- Displaying Check Boxes with the TreeView Control.
- Binding to a Site Map.
- Binding to an XML File.
- Binding to Database Data.
- Using Populate On Demand and AJAX.
- Formatting the TreeView Control.

17. Using the SiteMapDataSource Control (chapter 20):

- Setting SiteMapDataSource Properties.
- Using the SiteMap Class.
- Using the SiteMapNode Class.
- Advanced Site Map Configuration.
- Using Security Trimming.
- Merging Multiple Site Maps.
- Creating Custom Site Map Attributes.

18. Remapping URLs (chapter 21):

- Creating a Custom UrlRemapper Module.
- Using the VirtualPathProvider Class.
- Limitations of the VirtualPathProvider Class.
- Understanding the VirtualPathProvider Class.
- Registering a VirtualPathProvider Class.
- Storing a Website in Microsoft SQL Server.

19. Using the Login Control (chapter 22):

- Automatically Redirecting a User to the Referring Page.
- Automatically Hiding the Login Control from Authenticated Users.
- Using a Template with the Login Control.
- Performing Custom Authentication with the Login Control.
- Using the CreateUserWizard Control.
- Configuring Create User Form Fields.
- Sending a Create User Email Message.
- Automatically Redirecting a User to the Referring Page.
- Automatically Generating a Password.
- Using Templates with the CreateUserWizard Control.
- Adding Steps to the CreateUserWizard Control.

20. Using the LoginStatus Control (chapter 22):

- Using the LoginName Control.
- Using the ChangePassword Control.
- Sending a Change Password Email.
- Using Templates with the ChangePassword Control.
- Using the PasswordRecovery Control.
- Sending the Original Password.

- Requiring a Security Question and Answer.
- Using Templates with the PasswordRecovery Control.
- Using the LoginView Control.
- Using Roles with the LoginView Control.

21. Configuring Authentication (chapter 23):

- Configuring Forms Authentication.
- Using Cookieless Forms Authentication.
- Using Sliding Expiration with Forms Authentication.
- Using Forms Authentication Across Applications.
- Using Forms Authentication Across Domains.
- Using the User Class.
- Configuring Authorization.
- Authorizing by Role.
- Authorizing Files by Location.
- Using Authorization with Images and Other File Types.
- Using Authorization with ASP Classic Pages.

22. Using ASP.NET Membership (chapter 23):

- Encrypting and Hashing User Passwords.
- Modifying User Password Requirements.
- Locking Out Bad Users.
- Configuring the SQLMembershipProvider.
- Configuring the ActiveDirectoryMembershipProvider.
- Creating a Custom Membership Provider.
- Using the Role Manager.
- Configuring the SqlRoleProvider.
- Configuring the WindowsTokenRoleProvider.

23. Using Page Output Caching (chapter 25):

- Varying the Output Cache by Parameter.
- Varying the Output Cache by Control.
- Varying the Output Cache by Header.
- Varying the Output Cache by Browser.
- Varying the Output Cache by a Custom Function.
- Specifying the Cache Location.
- Creating a Page Output Cache File Dependency.
- Expiring the Page Output Cache Programmatically.
- Manipulating the Page Output Cache Programmatically.
- Creating Page Output Cache Profiles.

24. Using Partial Page Caching (chapter 25):

- Using Post-Cache Substitution.
- Caching with a User Control.
- Sharing a User Control Output Cache.
- Manipulating a User Control Cache Programmatically.
- Creating a User Control Cache File Dependency.
- Caching Dynamically Loaded User Controls.
- Using DataSource Caching.
- Using an Absolute Cache Expiration Policy.

- Using a Sliding Cache Expiration Policy.
- Caching with the ObjectDataSource Control.
- Caching with the XmlDataSource Control.
- Creating a DataSource Control Key Dependency.

25. Using Data Caching (chapter 25):

- Using the Cache Application Programming Interface.
- Adding Items to the Cache.
- Adding Items with an Absolute Expiration Policy.
- Adding Items with a Sliding Expiration Policy.
- Adding Items with Dependencies.
- Specifying Cache Item Priorities.
- Configuring the Cache.
- Using SQL Cache Dependencies:
- Using Polling SQL Cache Dependencies.
- Configuring Polling SQL Cache Dependencies.
- Using Polling SQL Cache Dependencies with Page Output Caching.
- Using Polling SQL Cache Dependencies with DataSource Caching.
- Using Polling SQL Cache Dependencies with Data Caching.
- Using Push SQL Cache Dependencies.
- Configuring Push SQL Cache Dependencies.

26. Setting the Current Culture (chapter 26):

- Setting a Culture Manually.
- Automatically Detecting a Culture.
- Setting the Culture in the Web Configuration File.
- Culture and ASP.NET Controls.
- Using the CultureInfo Class.
- Using the CultureInfo Class to Format String Values.
- Comparing and Sorting String Values.

27. Creating Local Resources (chapter 26):

- Explicit Localization Expressions.
- Implicit Localization Expressions.
- Using Local Resources with Page Properties.
- Retrieving Local Resources Programmatically.
- Creating Global Resources.
- Retrieving Global Resources Programmatically.
- Using Strongly Typed Localization Expressions.
- Using the Localize Control.

28. Creating a Custom BuildProvider (chapter 27):

- Creating a Simple BuildProvider.
- Creating a Data Access Component BuildProvider.
- Creating a Custom ExpressionBuilder.
- Creating a Lookup ExpressionBuilder.
- Creating HTTP Handlers.
- Creating a Generic Handler.
- Implementing the IHttpHandler Interface.

29. Overview of Website Configuration (chapter 28):

- Using the Web Site Administration Tool.
- Using the ASP.NET Microsoft Management Console Snap-In.
- ASP.NET Configuration Sections.
- Applying Configuration Settings to a Particular Path.
- Locking Configuration Settings.
- Adding Custom Application Settings.
- Placing Configuration Settings in an External File.
- Using the Configuration API.
- Reading Configuration Sections from the Current Application.
- Opening a Configuration File.
- Opening a Configuration File on a Remote Server.

30. Creating Custom Configuration Sections (chapter 28):

- Creating a Configuration Element Collection.
- Creating Encrypted Configuration Sections.
- Encrypting Sections with the aspnet_regiis tool.
- Encrypting Sections Programmatically.
- Deploying Encrypted Web Configuration Files.

31. Overview of Custom Control Building (chapter 29):

- Building Fully Rendered Controls.
- Building Composite Controls.
- Building Hybrid Controls.
- View State and Control State.
- Supporting View State.
- Supporting Control State.

32. Processing Postback Data and Events (chapter 29):

- Handling Postback Data.
- Handling Postback Events.
- Working with Control Property Collections.
- Using the ParseChildren Attribute.
- Using the AddParsedSubObject() Method.
- Using a ControlBuilder.

33. Creating Templated Controls (chapter 30):

- Implementing the ITemplate Interface.
- Creating a Default Template.
- Supporting Simplified Databinding.
- Supporting Two-Way Databinding.
- Creating Templated Databound Controls.
- Creating a DivView Control.

34. Using the UpdatePanel Control (chapter 31):

- Specifying UpdatePanel Triggers.
- Nesting UpdatePanel Controls.
- Updating UpdatePanels Programmatically.
- UpdatePanels and JavaScript.
- UpdatePanel Server-Side Page Execution Lifecycle.

35. Using the UpdatePanel Control (chapter 31):

- UpdatePanel Client-Side Page Execution Lifecycle.
- Canceling the Current Asynchronous Postback.
- Aborting the Previous Asynchronous Postback.
- Passing Additional Information During an Asynchronous Postback.
- Handling UpdatePanel Errors Gracefully.
- UpdatePanel Performance.

36. Using the AutoComplete Control (chapter 32):

- Using the AutoCompleteExtender with a Page Method.
- Using the AutoCompleteExtender with a Web Service Method.
- Using Text and Value Pairs with the AutoCompleteExtender.
- Using the DragPanel Control.
- Using the FilteredTextBox Control.
- Using the MaskedEdit Control.
- Using the Animation Control.

37. Making JavaScript Look Like C# (chapter 33):

- Using the Microsoft AJAX Library.
- Creating an AJAX Client Library.
- Taking Advantage of JavaScript Intellisense.
- Working with Classes.
- Working with Inheritance.
- Working with Namespaces.
- Retrieving DOM Elements.
- Handling DOM Events.
- Retrieving DOM Event Information.

38. Calling Web Services from the Client (chapter 33):

- Calling an External Web Service
- Calling a Static Page Method.
- Editing Movies with AJAX.
- Using the Authentication Service.
- Using the Role Service.
- Using the Profile Service.

39. Creating Custom AJAX Controls and Behaviors (chapter 33):

- Creating AJAX Controls.
- Launching a Client-Side Control from the Server.
- Creating Client-Side Behaviors.
- Launching a Client-Side Behavior from the Server.

40. Packaging Web Applications (chapter 35):

- Using Web.config Transformations.
- Deploying Databases.
- One-Click Publishing Web Applications.

41. Overview of Custom Control Building (chapter 36):

- Building Fully Rendered Controls.
- Understanding the HtmlTextWriter Class.

- Specifying the Containing WebControl Tag.
- Building Composite Controls.
- Building Hybrid Controls.

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