



MANIPAL INSTITUTE OF TECHNOLOGY
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CSE 407 - ADVANCED INTERNET TECHNOLOGY LAB MANUAL

VII Sem, B. Tech. (CSE)

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Week-wise Schedule

Week 1	:	Hyper Text Markup Language (HTML) Tags
Week 2	:	C# Programming – variables, operations, conditional logics, functions
Week 3	:	C# Programming – arrays, classes, inheritance, polymorphism
Week 4	:	Web Forms and Web Controls
Week 5	:	State Management
Week 6	:	Validation & Rich Controls
Week 7	:	Styles, Themes and Master Pages
Week 8 & 9	:	Mini Project - Phase 1
Week 10	:	Working with Data
Week 11 & 12	:	Mini Project - Phase 2
Week 13 & 14	:	Test

Week 1: Hyper Text Markup Language (HTML) Tags

Objective: To learn basic HTML tags and to design HTML pages using simple text editors like notepad.

Background: Basic knowledge about HTML is required. A HTML tutorial file will be given to students for reference.

1. Illustrate the usage of following tags with all attributes by creating an HTML document containing your bio data.

<H1> through <H6>, <P>, , <I>, <BLOCKQUOTE>, <PRE>, , , <DL>, <DT>, <DD>, <HR>, <U>, <SUB>, <SUP>, <STRIKE>, <CENTER>, , , <A>,
, <!-->

2. Create an html page named as "TimeTable.html" to display your class time table.

- a) Provide the title as Time Table.
- b) Provide various color options to the cells (Highlight the lab hours and elective hours with different colors.)
- c) Include spanning of rows and columns
- d) Include cell spacing and padding.

3. Create an html page named as "mixedframe.html". Divide the page into two columns of 25% & 75% size. In 25% display an image file and divide the 75% into two rows (50% & 50%). In the first 50% display the bio data file created in exercise 1, and other 50% the time table created in exercise 2.

4. Design a given form that includes all the following Form related tags with all the possible attributes:

<INPUT> with all TYPES, <SELECT>, <TEXTAREA>

APPLICATION FOR FREE PRODUCT INFORMATION

1. Title :	<input type="radio"/> Mr.	<input type="radio"/> Ms.	<input type="radio"/> Dr.	<input type="radio"/> Prof.	<input type="radio"/> HH
2. Last Name :	<input type="text"/>				
3. First Name :	<input type="text"/>				
4. Position Held Designation :	<input type="text"/>				
Department :	<input type="text"/>				
Organization :	<input type="text"/>				
Address :	<input type="text"/>				
5. Please indicate the product(s) you would be interested. (Tick all the boxes that apply).					
<input type="checkbox"/> Computer Systems		<input type="checkbox"/> Operating Systems			
<input type="checkbox"/> Peripherals		<input type="checkbox"/> Graphics Software			
1. What is the likely period of your purchasing one or more of the above products ? (Check only one box).					
<input type="checkbox"/> Immediately		<input checked="" type="checkbox"/> 1 to 3 months		<input type="checkbox"/> Within 6 months	
				<input type="checkbox"/> Within 1 year	
<input type="button" value="SUBMIT"/>			<input type="button" value="CANCEL DATA"/>		

Week 2: C# Programming – Variables, operations, conditional logics, loops, functions

Objective: To learn Fundamentals of C# Programming Language. To learn how to declare variables, operations, conditional logics, loops and functions. These exercises are preliminary programs which will build basis for ASP .NET web applications.

1. Write a simple console application to perform arithmetic operations.
2. Develop a simple C# windows application to display the discount to be paid to the customer for the amount for which a customer has purchased goods. The amount is received as an input through a textbox and discount (20% of the amount) is displayed in a textbox. Provision should also be made to clear the details of the transactions on the screen, once it is over.

3. Develop a simple C# windows application to select two types of accessories namely Hard Disks and Mobiles using checkbox controls. Under both categories display the manufacturer names using RadioButtonList controls. When any of these is checked by the user the corresponding name of the manufacturer should be listed in the label control. (Hint: Use an event RadioButtonList of control to achieve this).
4. Develop a simple C# windows application to display the names of brands of shuttle badminton racquets using label controls. Use TextBox control to accept the brand name and number of racquets the user wants to purchase. Based on the brand selected calculate and display the cost of purchase to the user. (Eg: Cost/Racquet for some brands are: Yonex- 2000Rs, 2Silvers- 1000Rs, Cosco- 800Rs).
5. Develop a simple C# windows application to compute the bonus to be paid to an employee on basis of his performance level using a function. Use textbox for Salary and Combo box for performance. (Performance Level1 = $0.1 * \text{Salary}$, Level2 to Level4 = $0.09 * \text{Salary}$, Level5 to Level7 = $0.07 * \text{Salary}$, Level8 to Level10 = $0.05 * \text{Salary}$)

Week 3: C# Programming – arrays, classes, inheritance, polymorphism

Objective: To learn Fundamentals of C# Programming Language. To learn how to use arrays, class, inheritance, polymorphism and simple windows controls. These exercises are preliminary programs which will build basis for ASP .NET web applications.

1. Write a Program in C# to sort and reverse a single dimensional array.
2. Create a console application which contains a class named "Item" which contains one automatic property called "name" of type string and a shared property called "cost" which takes only positive decimal values. Write a function "CalculateVAT()" which returns a decimal value (Formula for VAT:8% of the base cost).
3. Write a program in C# to demonstrate declaration, instantiation, and use of a delegate, NumberChanger, that can be used to reference methods, AddNum (int) and MultNum (int), which add and multiply an integer parameter to a given number and returns an integer value.
4. Create a class named EBBill. This class contains four variables named ownerName, houseNumber, unitsConsumed and metreRent. Among these four variables, the variable metreRent is shared variable, while other three variables are instance variables. Create simple C# windows application to compute electricity bill and display the name of the owner and electricity bill. (Total amount = $1.2 * \text{Units Consumed} + \text{Metre Rent}$).

Week 4: Web Forms and Web Controls:

Objective: To learn ASP.NET application model, and considering what files and folders belong in a web application and to take a closer look at server controls, the basic building block of any web form

1. Develop a simple ASP.NET Web Form containing the following controls:

- A DropDownList
- A Button
- An Image
- A label

The DropDownList is used to list items available in a store. When the user selects an item in the DropDownList, its image is displayed in the image control. When the user clicks the button, the cost of the selected item is displayed in the label.

2. The form should provide options for selecting the image, selecting the background color. There should be options to take input messages that should be displayed on the front cover, change their fonts both in size and color. Using above parameters, develop a simple ASP.NET Web Form that generates the front page design for a magazine.
3. Develop simple application using web controls to reproduce the given Captcha. Upon match, suitable message has to be displayed. If there is a mismatch for more than 3 times, textbox has to be disabled.(Hint: Use Hidden Textbox).
4. Create a Web form which allows the employer to enter the Employee name, address, contact no, email id and a submit button. After filling all the information and on clicking the submit button, all the above information should be added to a label which will also be displayed on the same page.

Week 5: State Management:

Objective: To learn how to store information over the lifetime of your application. This information can be as simple as a user's name or as complex as a stuffed-full shopping cart for an e-commerce store.

1. Develop a simple ASP.NET application which contains two pages. Using cross page posting method, one page will send the message to another page. Consider two text boxes for Name and Age, one button for submit in first page. Display the same name and age in the next page using label control.
2. Develop a simple ASP.NET application to demonstrate use of QueryString to transfer information between pages. User should be presented a list of entries [fruits list] using dropdown list and user should enter the vitamin name present in the selected fruit in to the textbox. When the user click the button, the user is forwarded to a new page. This page displays the fruit name and the vitamin name. Try to avoid potential risk by using URL encoding technique.
3. Develop a simple ASP.NET application to store a customer name and shopping cart inside a

cookie. Demonstrate the use of cookie by making the shopping cart, and clicking the ContinueShopping button. Then, close the browser, and request the page again. The second time, the page will find the cookie, display the name of the items in the shopping cart, and display a welcome message with customer name.

4. Develop simple application using web controls to form a login page. Upon login, display the global counter that tracks the number of times users have successfully logged in. If login fails more than 3 times, disable the textbox. (Hint: Use Session and Application variables)

Week 6: Validation & Rich Controls:

Objective: To learn how to use the validation controls and rich controls in an ASP.NET web page and how to get the most out of them with sophisticated regular expressions, custom validation functions, and more.

1. Design a Registration form Default.aspx page with fields Username, choose password, confirm password, age, email id, contact number and a submit button. Display message “Successfully Submitted” after Clicking Submit button i.e. after successful validation of registration page.

Use:

- a) RequiredFieldValidator - for Username, Choose password, Age, Email Id fields.
- b) CompareValidator - for Confirm password field.
- c) RangeValidator - for Age field.
- d) RegularExpressionValidator - for Email field.
- e) CustomValidator - for contact number field.

2. Create an ASP.NET form to develop calendar. User should enter the holiday list in the listbox. All the holidays and weekends must be highlighted in the calendar.

3. Create an ASP.NET form that displays two advertisements alternately. When the user clicks on one of the advertisements, he/she is redirected to “www.amazon.com”, and the other advertisement redirects the user to “www.fabmart.com”. The weightage of the amazon advertisement is 50 and that of the other one is 40. The advertisement should be centered horizontally and should cover 60% of the width of the screen. Its height should be 80 units. The width of the border should be 5 units

4. Create an ASP.NET page using Wizard control and which has 3 steps. The idea here is if we click on ‘My Websites’ link, it should show the list of web sites. When ‘My Schedule’ is clicked, a calendar control should be seen and display the selected date, and when we click on ‘Upload Photo’ link, provision to upload a photo should be given.

Create a similar ASP.NET page with Panel controls.

Week 7: Styles, Themes and Master Pages:

Objective: To learn about themes and master pages, which can ensure that all the pages on your website share a standardized look and layout.

1. Develop a Web Application using C#.NET and ASP.NET for an E-Commerce firm. The master page should consist of name of the firm, Logo and contact details. Also, it should provide hyperlinks to Electronics, Baggages and Offers zone. These three pages should be designed as static pages. The hyperlinks should navigate to these static pages in the form of Content Pages associated with Master Page designed. The Electronics page should display the categories namely mobiles, laptops and printers. Also display the vendor names for all the categories in DropDownList controls. The Baggages page can have images of laptop bags, trolley bags and backpacks. In the Offers zone page use AdRotator to display atleast 2 offer advertisements.
2. Create two themes: Summer and Monsoon. For each theme, add the CSS layout, which is applied to the site automatically. Configure the application to use one of the themes and then switch to the other to see the differences. Extend the above created themes by adding suitable images and in created ASP.NET form add a DropDownList control which contains the available themes so a user can choose dynamically switch between the themes.

Week 8 & Week 9: Mini Project – Phase 1

Instructions to the students to carry out mini project:

- Students are supposed to come up with an idea regarding a simple website.
- Students have to give the name of the project at the end of the 6th week of regular lab session.
- Students can work in batch containing maximum of two students.
- Your project must cover most of the topics discussed in class and worked previous lab sessions.
- At the end of every lab session, progress of project must be reported to the instructor and same need be documented.

Mini project carries 20 marks.

Week 10: Working with Data

Objective: To learn basics about ADO.NET, SQL Server Connection and performing simple database management activities using web forms.

1. Consider a database named as “SuperMarket” containing table called “sales_detail”.

sales_detail Table Schema			sales_detail sample data			
Column Name	Data Type	Allow Nulls	sales_id	item_name	item_amt	quantity
sales_id	int	<input checked="" type="checkbox"/>	1	Soap	100.00	6.000
item_name	varchar(255)	<input type="checkbox"/>	1	Fruits	100.00	5.500
item_amt	numeric(10, 2)	<input type="checkbox"/>	1	Powder	50.00	1.000
quantity	numeric(8, 3)	<input checked="" type="checkbox"/>	2	Soap	100.00	4.000
			3	Toothpaste	50.00	4.000
			3	Brush	50.00	2.000
			NULL	NULL	NULL	NULL

A) Develop a simple web application that allows you to select the “sales_id” from the dropdown and displays the sales detail of selected “sales_id” in GridView control as shown in figure below.

Sales Id: 1 ▾			
Name	Details		
Soap	Amount: 100.00 Quantity: 6.000	Select	Edit
Fruits	Amount: 100.00 Quantity: 5.500	Select	Edit
1 2			

Figure 1: Sample Output

- Extract the information from database using appropriate data source control.
- User should be able to sort records by “item_name”.
- Show only 2 records at a time in GridView.
- Change background color of the header to "Gray" and color of header text to "White" with bold font.
- Change background color of the selected row to "Light Gray".
- User should be allowed to edit only “item_name” and “quantity”.

B) Develop a simple web application that reads all item names from the "sales_detail" table using disconnected data access and inserts the first three letters of customer name in capitals to a text file under "App_Data" folder.

2. Create a web application as shown in the following figure, which accepts user input for name, expiry date, category and availability of a Product.

Product Name:

Expiry Date: ≤ October 2012 ≥

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Category: CAMERAS
CHILD CARE
TABLETS
LAPTOPS

Available: ☒

On click of "Create an Xml file" button, Xml file as shown below should be created under "App_Data" folder.

```
<?xml version="1.0"?>
<ProductList>
  <!--This file is generated by web application-->
  <Product Name="Apple IPAD 3" ExpiryDate="10/19/2012">
    <Category>TABLETS</Category>
  </Product>
</ProductList>
```

Week 11 & Week 12: Mini Project – Phase 2

Week 13 & 14: Test

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