PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE
Autonomous
Siddhartha Nagar, Vijayawada–520010
Re-accredited at 'A+' by the NAAC

Course Code				**23DAMAP231**			
Title of the Course				**User Interface Design Lab**			
Offered to:				**B.Sc. Honours (Data Analytics)**			
L	**0**	**T**	**0**	**P**	**2**	**C**	**1**
Year of Introduction:	**2024-25**			**Semester:**			**3**
Course Category:	**Major Lab**			**Course Relates to:**	**Global**		
Year of Revision:	**--**			**Percentage:**	**--**		
Type of the Course:				**Skill Development**			
Crosscutting Issues of the Course :				**Professional Ethics**			
Pre-requisites, if any				**--**			

Course Description:

This course provides a comprehensive introduction to web development using HTML, CSS, JavaScript, and XML. Students will learn to create and style web pages, add interactivity, and manage data effectively. The course covers web architecture basics and focuses on hands-on projects, including the development of a static web page for a college department and a dynamic web page for a library system with user account management capabilities. By the end of the course, students will have a solid understanding of web development concepts and the skills needed to build both static and dynamic web pages for various real-world applications and scenarios.

Course Aims and Objectives:

S.NO	COURSE OBJECTIVES
1	Focus on understanding basic web concepts and creating simple web pages using HTML.
2	Learn to style web pages using CSS, including advanced features like text effects and layouts.
3	Use JavaScript to make web pages interactive, including form validation and event handling.
4	To Understand and use XML for data management and transformation.
5	To Apply skills to create static and dynamic web pages, preparing students for advanced projects and courses in computer science.

Course Outcomes

At the end of the course, the student will be able to…

CO NO	COURSE OUTCOME	BTL	PO	PSO
CO1	**Describe** web technologies, including HTML elements and basic web page creation.	**K1**	**PO1, PO5, PO6, PO7**	**PSO1, PSO2**
CO2	**Understand** CSS to style web pages, including text effects, fonts, and page layouts.	**K2**	**PO1, PO5, PO6, PO7**	**PSO1, PSO2**
CO3	**Develop** interactive web pages using JavaScript for form validation and event handling.	**K3**	**PO1, PO5, PO6, PO7**	**PSO1, PSO2**
CO4	**Design**and validate XML documents, and use XSL for transforming XML data.	**K5**	**PO1, PO5, PO6, PO7**	**PSO1, PSO2**
CO5	**Create** static and dynamic web pages for real-world applications.	**K6**	**PO1, PO5, PO6, PO7**	**PSO1, PSO2**

For BTL: K1: Remember; K2: Understand; K3: Apply; K4: Analyze; K5: Evaluate; K6: Create

CO-PO MATRIX									
CO NO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO1**	**PSO2**
CO1	**3**	**-**	**-**	**-**	**2**	**3**	**3**	**3**	**1**
CO2	**3**	**-**	**-**	**-**	**2**	**3**	**3**	**3**	**2**
CO3	**3**	**-**	**-**	**-**	**3**	**3**	**2**	**3**	**3**
CO4	**3**	**-**	**-**	**-**	**3**	**3**	**3**	**1**	**3**
CO5	**3**	**-**	**-**	**-**	**3**	**3**	**3**	**2**	**3**

Use the codes 3,2,1 for High, Moderate and Low correlation Between CO-PO-PSO respectively

Course Structure

This lab list covers the key areas of a ….(title of the course) course, providing hands-on practice with ….(technology/software)

Unit 1: [**Introduction to Web**] (6Hrs)

Lab 1:

- Construct a timetable by implementing HTML table elements.

- **Dataset** (web link) / **Experiment**: Use HTML to structure and display data in tabular format.
- **Tasks:**
  Timetable Creation:
  Construct a timetable using HTML table elements.

Lab 2:

1. Develop a login form for a basic web page.

2. Write a program to create the time table by using Table Tags.

- **Dataset**(web link) / **Experiment**: Develop foundational web elements using HTML.
- **Tasks:**

1. **Login Form Creation:**
   Develop a login form for a basic web page.
2. **Timetable with Table Tags:**
   Write a program to create a timetable using HTML table tags.

Unit 2: [**Dynamic HTML(CSS)**] (6Hrs)

Lab 3:

1. Develop a CSS stylesheet to change the background color of a webpage.

- **Dataset** (web link) / **Experiment**: Enhance web page design using CSS.
- **Tasks:**
  1. **Background Color with CSS:**
     Develop a CSS stylesheet to change the background color of a webpage.

Lab 4:

1. Create a CSS stylesheet to add padding and margin to elements on a webpage.

- **Dataset** (web link) / **Experiment**: Apply CSS to improve webpage layout and design.
- **Tasks:**
  1. **Padding and Margin with CSS:**
     Create a CSS stylesheet to add padding and margin to elements on a webpage.

Unit 3: [**JavaScript**] (6Hrs)

Lab 5:

1. Write a Java Script to update the information into the array, in the “onClick” event of the button “Update”.

- **Dataset** (web link) / **Experiment**: Implement interactive web features using JavaScript.
- **Tasks:**
  1. **Array Update with onClick:**
     Write a JavaScript function to update array information when the "Update" button is clicked.

Lab 6:

1. Create a dynamic dropdown menu that expands on click using CSS and JavaScript**.**

- **Dataset** (web link) / **Experiment**: Combine CSS and JavaScript to build interactive web elements.
- **Tasks:**
  1. **Dynamic Dropdown Menu:**
     Create a dropdown menu that expands on click using CSS and JavaScript.

Unit 4: [**XML**] (6Hrs)

Lab 7:

1. Create a simple XML document to represent a list of books with their titles, authors, and publication dates.

- **Dataset** (web link) / **Experiment**: Structure data using XML for effective information representation.
- **Tasks:**
  1. **Books List in XML:**
     Create a simple XML document to represent a list of books with their titles, authors, and publication dates.

Lab 8:

1. Create a simple XML document with root element "Data" and two child elements "item".
2. Design a document that how do you include an internal DTD within an XML document.

- **Dataset** (web link) / **Experiment**: Explore the creation and validation of XML documents.
- **Tasks:**
  1. **Simple XML Document:**
     Create an XML document with a root element "Data" and two child elements "item."
  2. **Internal DTD in XML:**
     Design an XML document that includes an internal DTD for validation.

Unit 5: [**Creating a static/Dynamic Web Pages**] (6Hrs)

Lab 9:

1. Create a static webpage for your college department, ensuring it includes all necessary features and functionalities.

- **Dataset** (web link) / **Experiment**:Develop a comprehensive static webpage using HTML and CSS.
- **Tasks:**
  1. **College Department Webpage:**
     Create a static webpage for your college department, including all necessary features and functionalities.

Lab 10:

1. Create a dynamic webpage for the library, featuring user account management capabilities and an interactive form for user interactions. The page should allow users to log in, manage their accounts, and interact with the library's resources.

- **Dataset** (web link) / **Experiment**:Implement user account management and interactive forms on a dynamic webpage.
- **Tasks:**

1. **Library Webpage Development:**
   Create a dynamic library webpage with user login, account management, and interactive forms for user interactions.

Lab Manual:

1. Kogent Learning Solutions Inc. (2013). HTML5 Black Book: Covers Css3, Javascript, Xml, Xhtml, Ajax, PhpAndJquery (2nd Edition), Dreamtech Press.
2. Tittel E, Minnick C, (2013). Beginning HMTL5 and CSS3 For Dummies (3rd Edition), John Wiley & Son's.

References:

1. Godbole and Khate (2017), Web Technologies Paperback – Picture Book (3rd Edition), McGraw Hill Education

Lab - Question Paper Pattern

23DAMAP231: User Interface Design Lab

Offered to: B.Sc. Honours (Data Analytics)

Max. Marks: 50 **Max. Time: 3Hrs**

Pass. Min: 20

(A)	**Evaluation Procedure**	**35 Marks**
I	Experiments (Exam & Execution)	**30 Marks**
II	Viva	**3 Marks**
III	Record	**2 Marks**
(B)	**CONTINUOUS ASSESMENT(Internal)**	**15 MARKS**

15 marks for the continuous assessment (Day to day work in the laboratory shall be evaluated for 15 marks by the concerned laboratory teacher based on the regularity/ record/viva). Laboratory teachers are mandated to ensure that every student completes 80%-90% of the lab assessments.

TOTAL: (A)+(B) = 50 MARKS