G H Patel College of Engineering and Technology

Department of Computer Engineering

Vision

To produce globally competitive computer engineers, who are prepared to accept the challenges at professional level, while maintaining the core values.

Mission

- ✓ To create excellent teaching learning environment.
- ✓ To mould engineers with a strong foundation of scientific knowledge and engineering concepts.
- ✓ To enhance the acquired concepts and develop new technology through excellence in research.
- ✓ To assist nation building and elevating the quality of life of the people through leadership in professionalism, education, research and public services.

Programme Educational Objectives (PEO)

- ✓ To educate young aspirants with the fundamentals of engineering and knowledge of latest technologies.
- ✓ To encourage the students to remain updated by pursuing higher degree or certification programs.
- ✓ To assume management and leadership roles to contribute in socio-economic development of the nation.

G H Patel College of Engineering and Technology
Department of Computer Engineering (04)

A.Y. 2024-25 (ODD), SEMESTER 5
SUBJECT CODE: 202045612

SUBJECT NAME: PYTHON AND WEB PROGRAMMING

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NAME:_____

ENROLMENT NO: _____ **BRANCH:**_____

Sr. No	Name of the Experiment	Page No.	Date	Marks	Signature
1	**Python Basics - I** 1. Develop programs to understand variables, control structures, loops, and functions in Python 2. Develop programs to learn different types of structures (list, dictionary, tuples) in Python 3. Develop programs to learn the concept of function scoping, recursion, and list mutability				
2	**Python Basics –II** 1. Develop programs to understand the working of exception handling and assertions 2. Creating and importing Python packages, and libraries (both inbuilt and user-defined) 3. File reading/writing, regular expressions, Beautiful Soup library for Web Scrapping				
3	**Python Basics – III** 1. Introduction and basics of Class and objects 2. Class attributes and access modifiers, self-keyword, _init_ constructors, etc. 3. Class Access Modifiers, derived class.				
4	**Basic HTML Programming** 1. Creating Sample HTML pages using tags like headers, paragraphs, alignments, divisions, lists, etc. 2. Create tables in HTML 3. Displaying Images in HTML **HTML Forms** 1. Basics of Form Development Practical: text fields, radios, buttons, checkboxes 2. Advanced Form Development Practical: Combo, Date, File Upload				

5	**CSS Scripting** 1. Basics of CSS programming Practical: Class, Id, changing properties like color, size, background, etc. 2. CSS 3 Programming Practical: shadow, orientation, transformation, gradient, etc. 3. Positioning practical in CSS: Absolute and relative positioning, Z-index.				
6	**JavaScript** 1. Basic JS Practical: script tags, alerts, documents, functions, arrays, loops, and Conditions. 2. Advanced JS Practical: Objects, DOM references: getElementById, InnerHTML etc.				
7	**JavaScript and Event Listeners** 1. Listeners and JavaScript Practical: Mouse motion, movement, keyboard. 2. Perform Regular Expressions and validation using JavaScript.				
8	**Python Django Framework – I** 1. Introduction to MVC Framework, Django Installation, Server Configuration, ports, and sample website development. 2. Django Template tags, variables, loops, control structures, etc.				
9	**Python Django Framework - II** 1. Dynamic page that reads user data in a form and displays it on another page 2. Upload and download files from the server 3. User Authentication by comparing valid username and password from the database using the database.				
10	Create REST API using Python Flask to send the form data like username, and email into the database and test that API.				
11	**Mini Project (Part 1: Front End)**: **Develop a website for the registration of newly admitted User.** The site should contain the following pages: 1. Sign-up Page 2. Login Page 3. Forgot Password Page 4. User Registration Page 5. Upload Documents Page 6. Edit Current Profile Page				
12	**Mini Project (Part 2: Back End): Develop Database connectivity along with CRUD operations for the website developed in Part 1.** The backend architecture should contain the following tables: 1. User Login Table: Contains login credentials for User authentication 2. User Registration Table: Contains all the information provided by the User through the registration page 3. Document Track Table: This table contains a track of documents uploaded by the User.				

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