FULLSTACK PYTHON

FRONTEND

HTML5

Introduction:

- UI Developer roles and responsibilities
- UX designer roles
- Technologies needed.
- Power of UI
- Current market requirements on UI
- Basic Technologies needed.
- Difference b/w Front end and Backend
- Sample Web Pages
- Crawling and Meta tags
- Basic

Basic-HTML:

- Exploring existing pages
- Browsers & Editors
- DOM
- Structure of HTML Page
- Mandatory tags in html page (html, head, body)
- Heading tags (H1…H6), Tags and attribute (Class, Id, style…etc.,)
- Inline and block level elements

More HTML Tags:

- Including external page links in page using Anchor tags and its properties
- Working with row and column data using table tags
- Hiding and un-hiding elements using display property.
- Debugging HTML &CSS (Firebug, IE and Chrome developer tool)
- Creating Tabs and menu lists

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HTML 5 Features:

- Geolocation
- Video Tag
- Audio Tag
- SVG

Form Elements:

- Get & Post Communication
- Validating Input Values in a form
- Form action and type

CSS

- What is CSS.
- Different ways of applying CSS for elements, and Priority chain of CSS.
- CSS Properties (color, font, size, border… etc.,)
- Box model
- Margin & Padding
- Floating Elements
- More CSS Properties
  - Adding borders, fonts, Pseudo classes and Pseudo Elements
  - Posting elements (absolute, relative, fixed and static)
  - Image Spirting
  - Box model (margin, padding)
  - Floating elements (float left, right etc.,)
  - Including external resources
  - Absolute and Relative path
  - Including external resources like CSS, image etc.,
  - Display Property (inline, block, inline block etc.,)
  - Display none and hidden elements

Working with CSS:

- Introduction to CSS
- Understanding Document Object Model
- Introduction to style sheets
- Introduction to style sheets
- CSS Syntax
- CSS Comments

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The CSS Rules:

- Ways to work with CSS.
- External style sheet
- Internal style sheet
- Inline style

CSS Selectors:

- The element Selector
- The id Selector
- The class Selector
- Grouping Selectors
- Universal Selector

The CSS Cascade:

- Background Color
- Background Image
- Background Image – Repeat Horizontally or Vertically
- Background Image – Set position and no-repeat.

CSS Fonts & Typography:

- CSS Font Families
- Font Style
- Font Size
- Text Color
- Text Alignment
- Text Decoration
- Text Transformation
- Styling Links
- Common link style
- List item Markers
- Image as the list items Maker

CSS Display and Positioning:

- CSS display and visibility
- How elements float
- Turning off float – using clear
- Static Positioning

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- Fixed Positioning
- Relative Positioning
- Absolute Positioning

CSS Box Model:

- Working with content
- Working with padding
- Working with border
- Working with margin

BOOTSTRAP

Working with Bootstrap 5

- Introduction to Bootstrap 5
- Bootstrap History
- Why Bootstrap
- Embedding Bootstrap into page
- Bootstrap grid system
- Bootstrap pager
- Bootstrap list group
- Bootstrap forms
- Bootstrap input
- Bootstrap carousel
- Bootstrap plugins
- Bootstrap jumbotron
- Bootstrap buttons
- Bootstrap pagination

JAVA SCRIPT

- Basic of JavaScript
- ES6 JavaScript
- Adv. JavaScript

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React.js/Redux Contents

- An Introduction to React
- Environment setup for React.
- Introduction to JSX
- Introduction to React DOM
- Creating the First React Application
- React elements.
- React Components-Class Based Components
- React Components-Function Based Components
- Component Lifecycle
- Rendering Elements
- State Management in React
- Introduction to props
- Working with props
- Binding Data in React
- Refs in React
- Lists and Keys
- Forms
- Component Styling in React
- Component Intercommunication
- Routing in React
- Working with Rest API
- React DOM Server

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BACKEND

1. PYTHON

INTRO & INSTALLATION:

1.1 INTRODUCTION TO PYTHON
1.2 FEATURES OF PYTHON
1.3 WHAT PROGRAMMERS SAY
1.4 INSTALLATION FOR WINDOWS USERS

DIVE IN:

TECHNICAL TERMS EXPLAINED
1.5 GENERAL PURPOSES
1.6 OOPS
1.7 FUNCTIONAL PROGRAMMING
1.8 INTERPRETED

DATATYPES & NUMBERS, STRINGS:

1.9 WHAT ARE DATA TYPES

1.10 DATATYPES IN PYTHON

1.11 NUMBERS

1.12 STRINGS

1.13 BOOLEAN

PYTHON SYNTAX AND NUMBER OPERATIONS AND STRING MANIPULATION:

1.14. WHAT IS SYNTAX

1.15 IDENTIFIER NAMING

1.16 INDENTATION

1.17 ARTHIMETIC OPERATIONS ON NUMBERS

1.18 STRING MANIPULATION TECHNIQUES

1.19 INDEXING, SLICING, CONCATINATING, REVERSE INDEXING

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1.20 STRING METHODS

1.21 NUMBER METHODS

1.22 CASTING, STR-INT, INT-STR

INTRO TO DATA STRUCTURES:

1.23 LIST

1.24 TUPLE

1.25 SET

1.26 DICTIONARIES

1.27 COMMON METHODS

LIST:

1.28 WHAT IS LIST?

1.29 METHODS

1.30 TECHNIQUES

DICTIONARIES:

1.31 WHAT IS DICTIONARIES

1.32 METHODS

1.33 TECHNIQUES

TUPLES, SETS AND CASTING:

1.34 WHAT IS TUPLE?

1.35 METHODS

1.36 TECHNIQUES

1.37 CASTING

1.38 DICT-LIST, LIST-SET, LIST-TUPLE, TUPLE-LIST

PYTHON INPUT OUTPUT:

1.39 INPUT FROM USER

1.40 OUTPUT GENERATION

1.41 DIFF BETWEEN CONSOLE AND FILE

1.42 DATA STRUCTURE PRACTICE

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PYTHON CONTROL FLOW:

1.43 CONTROL FLOW INTRODUCTION

1.44 THE IF STATEMENT

1.45 THE FOR LOOP

1.46 THE WHILE STATEMENT AND RANGE FUNCTION

1.47 BREAK AND CONTINUE STATEMENT

FILE HANDLING AND JSON:

1.48 READ TO FILE

1.49 WRITE TO FILE

1.50 TECHNIQIUES OF FILE HANDLING

JSON:

1.51 WHAT IS JSON

1.52 READ

1.53 WRITE

FUNCTIONS:

1.54 INTRODUCTION

1.55 LOCAL VARIABLE

1.56 USING THE GLOBAL STATEMENT

1.57 DEFAULT ARGUMENT VALUES

1.58 KEYWORD ARGUMENT

PROBLEM SOLVING:

1.59 RANGOLI

1.60 BUILDING A SMALL APPLICATIONS

EXCEPTION HANDLING:

1.61 EXECEPTION INTRODUCTION

1.62 ERRORS

1.63 EXCEPTIONS

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1.64 HANDLING EXCEPTIONS

1.65 RAISING EXCEPTIONS

1.66 TRY… FINALLY

MODULES AND PIP:

1.67 MODULES INTRODUCTION

1.68 THE FORM….IMPORT….STATEMENT

1.69 A MODULES_NAME_

1.70 MAKING YOUR OWN MODULES

PIP:

1.71 PIP INTRO

1.72 PACKAGE MANAGEMENT

PROJECT MANAGEMENT:

1.73 BUILDING MICRO PROJECTS

2. SQL

INTRO:

2.1 INTRO

2.2 INSTALLATION OF PGSQL

2.3 TYPES OF SQL

2.4 BASIC DEMO

IMPORT AND EXPORT:

2.5 IMPORTING DATA FROM CSV

2.6 CREATING DATABASE AND TABLES

2.7 LOADING DATA FROM CSV

2.8 EXPORTING SQL DATA IN TO CSV

ACID PROPERTIES:

2.9 ATOMICITY

2.10 CONCISTENCY

2.11 ISOLATION

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2.12 DURABILITY

CREATE AND SELECT SQL:

2.13 CREATING TABLE

2.14 GETTING DATA FROM TABLE

2.15 BASIC DATA MANIPULATION

2.16 WHERE CLAUSE

2.17 WILD CARDS

UPDATE AND DELETE:

2.18 UPDATING DATA

2.19 UPDATING TABLES

2.20 DELETING DATA

2.21 DELETING TABLES

JOINS:

2.22 INNER JOIN

2.23 OUTER JOIN

2.24 FULL JOIN

2.25 GROUP BY AND HAVING

3. FLASK

3.1 SETTING UP FLASK

3.2 HELLO WORLD WITH FLASK

3.3 ROUTING

3.4 DYNAMIC URLS

3.5 SENDING DATA TO SERVER

3.6 WORKING WITH FORMS

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4. EXPRESS JS

REQUIREMENTS:

4.1 REQUIREMENTS

4.2 WHAT IS EXPRESS JS?

4.3 WHY?

4.4 INSTALLATION (POSTMAN)

DIVE IN:

4.5 HELLO WORLD APP

4.6 PROJECT STRUCTURE

4.7 PACKAGE MANAGEMENT

4.8 POSTMAN INTRO

SEND AND RECEIVE:

4.9. RECEIVE DATA FROM FORMS

4.10 SEND DATA FROM SERVER

MIDDLE WARE:

4.11 WHAT IS MIDDLEWARE?

4.12 TYPES

4.13 USE CASES

CONNECTING SQL:

4.14 SENDING DATA FROM DB

4.15 OPERATIONS ON TOP OF SQL

4.16 PRACTICE ON EXPRESS JS

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5. REST

5.1 WHAT IS REST.

5.2 WHY REST

5.3 IMPORTANCE OF JSON

5.4 METHOD GET, POST, PUT, DEL, ETC.,

5.5 UPCOMING PROTOCOLS

5.6 GRAPHLET ETC.,