Introduction to WEB

3-4 months

What are web applications? Static v/s dynamic web applications Web application Architecture

- Front End

- Back End

HTML

- Introduction to HTML 5
- Parts in HTML
- Document Head Section
- Meta Information

  Body Section
  Heading &
  Paragraph HTML
  FORMS
  Anchors, Images

- HTML Comments
- HTML   Table
- DIV Section

CSS

- Introduction CSS3
- Inline CSS
- Internal CSS
- External CSS
- Styling Text
- Styling Fonts
- CSS Borders
- Selectors
- Backgrounds and Borders
- Te xt Effects
- Margin & Padding

JavaScript

  What is Script?
  Introduction to JavaScript

- DOM and
- Comments and Types of Comments
- Popup Boxes
- Variables & Operators
- JavaScript Functions and Events
- Conditional Statements Looping Control
- Types of Errors Exception Handling
- Java Script Objects
- Browser Objects
- Validations in JS

Bootstrap

- Introduction to Bootstrap4
- Bootstrap CDN & Local
- Bootstrap Classes
- Bootstrap Forms
- Bootstrap Buttons
- Bootstrap Colors
- Bootstrap Grid System

Introduction To React Js

- What is React JS?
- What is SPA?
- DOM vs Virtual DOM
- Advantages and Disadvantages
- Key Features

Environmental Setup

- Node | NPM
- Installation of CLI
- Setup Project
- Directory Structure
- Code Editors
- How React JS Application Boot

Basic Features Of React Js

- React Concepts
- JSX and TSX
- Render Elements
- Function and Class Components

- Props and State

- Handling Events

- Dynamic Data Rendering

- Property Binding

Key Features Of React Js

- Conditional Rendering

- List and Keys

- Forms Handling

- Forms Validations

Component Lifecycle Hook

- Understanding component lifecycle

- All Lifecycle Hooks

- Understanding React Event System

- Passing arguments to event Handlers

Network Call

- Fetch

- Axios

Custom Services

- Introduction to Services

- Building a Service

- Local Storage

- Session Storage

- Cookies

Routing With React Router

- Setting up React Router
- Configuring route with Route Component
- Making routes dynamic with Route Params
- Working with nested routes
- Link and NavLink
- Redirect Routes

UI Components

- Angular Material
- PrimeNG

Introduction To Redux

- Why Redux
- Install and setup
- Store ,Reducer , actions
- Dispatcher
- High order Components
- mapStateToProps and mapDispatchToProps usage

Advance Redux

- Async Actions
- Middleware
- Redux Thunk and Redux Saga

React Hooks

- Why We Need Hooks.
- Different Types Of Hooks
- Using State And Effect Hooks
- Usereducer , Useref Etc.
- Custom Hooks
- Rules Of Hooks

Third Party Modules

- Social Login
- Pagination
- Search
- Filter
- JWT Token
- File Upload
- Many More

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Getting Started With Django

- Language v/s Framework
- What is Django Framework?
- Django Versions
- Installing Django

Understanding Django Project

- Creating Django Project
- Creating Django

   AppUnderstanding Directory
   Structure of Project

- UrlMappings, Views,manage.py
- HttpRequest and HttpResponse Objects
- Registering App in settings.py
- Django Development Server
- Control flow of request processing
- MVT Design Pattern

Django Templates (Presentation Logic)

- Built-in Templates Tags &
- Filters Template Variables
- Template Inheritance
- Building custom template tag
- Integration of Static Contents

- How to display static
- images How to use CSS
- and bootstrap Loading static
  data to template

Understanding Django Views (Business Logic)

- Why this Component?
- Types of Views
  - Function Based
  - Class Based
- How Views interact with other components
- How to get request data in views
- How to generate response in other formats

Understanding Django Forms

- Why this Component?
- Form class & Field
  Types
- GET and POST
- methods Form
  Validations
- How to render django form to template

  as table

  a
  s paragraph
  as li
- How to use Form in views

Django Models (ORM)

- Why this component?
- SQL v/s ORM approach
- Model class and Field Types
- Understanding Makemigrations and
- migrate Performing CRUD operations
  - create (insert)
  - read (select)
  - update delete
- Fetching Records from database
  - Understanding QuerySet
  - Fetching all records
  - Fetching records based on conditions
  - Fetching Data in an order
  - Data Slicing
- Understanding Association Mappings
  - one to one

- one to many
- many to one
- many to many Integration
  - with MySQL database

Django Admin Interface

- How to create super user How
- to access admin site
- Registering models with admin
- Managing users in the admin

Django State and Session Handling

- Why maintain state?
- Understanding stateless behavior of http protocol
- State management techniques
  - Cookies
  - URL-Rewriting (query strings)
  - Hidden form fields
  - Session
- Understanding Sessions in Details
  - Enable / Disable Session
  - Get and set data with session
  - Using session in template
  - Session Expiry

Django Middleware

- Why   middleware?
- Understanding built-in middleware
- Creating custom middleware
  - Function based
  - Class based
- How to enable custom middleware

Django User Authentication

- Working with User
- objectsPermissions and
- authorization Authentication in
  web requests
- Managing users in the admin
- Extending the existing User Model

Developing Web Services(APIs)

- What is a Web API?
- Difference between SOAP and RESTful APIs
- Django REST Framework for developing RESTful APIs

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- Understanding JSON response