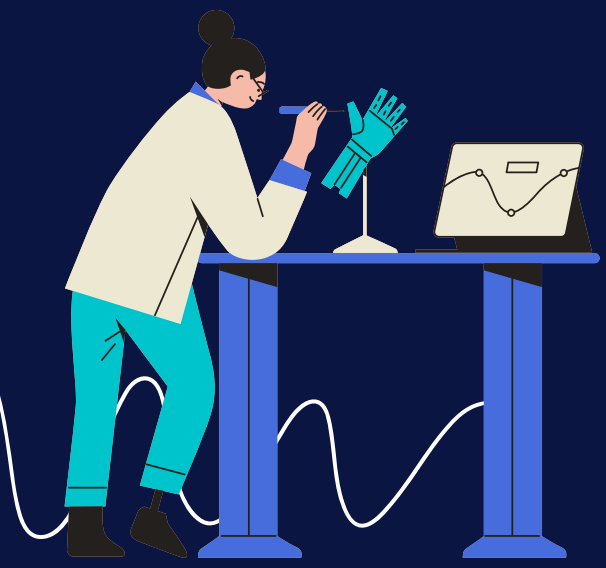
KRAZY CODERS
IT SOLUTIONS

PYTHON
FULL STACK COURSE



Kickstart your career in web development with the comprehensive Python Fullstack Course at KrazyCoders IT Solutions. This course is meticulously designed to equip you with in-demand skills in Python, Django, SQL, HTML, CSS, JavaScript, Bootstrap, React, and version control tools like Git and GitHub.

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PYTHON

Module 1: Introduction to Python

- Features of Python
- Why Python?
- Where is Python Used?
- Python Installation
- Python Editors

Module 2: Python Basics

- Variables
- Data Types
- Operators
- Data Structures
- Strings
- User Input in Python

Module 3: Control Flow in Python

- Conditional Statements
- Loops

Module 4: Functions

- Function Definition and Function Creation
- Parameters and Arguments in Functions
- Types of Arguments
- Types of Functions in Python
- Scope of a Variable

Module 5: Object-Oriented Programming (OOP) in Python

- Classes & Objects
- Inheritance
- Encapsulation
- Access Modifiers
- Polymorphism
- Abstraction

PYTHON

Module 6: Handling Exceptions

- Error Handling
- Types of Errors
- Handling Errors with Print Statement
- Using Raise Statement

Module 7: File Handling

- Reading from and Writing to Files

Module 8: Working with Modules & Packages

- Understanding Modules
- Creating and Using Packages

Module 9: Advanced Techniques

- List Comprehension
- Map Function
- Filter Function
- Reduce Function
- Regular Expressions
- Python Decorators

Module 10: Testing in Python

- Introduction to Unit Testing
- Writing and Running Unit Tests

Module 11: Data Manipulation with Python Libraries

- Working with JSON
- Multithreading & Multiprocessing
- PDBC/PYODBC

Django

1. Introduction to Django

- What is Django?
- Why Django?
- Key Advantages
- History of Django
- Features of Django
- Characteristics of Django
- Companies Using Django

2. Understanding Web Frameworks

- What is a Web Framework?
- What is a Server?
- HTTP Requests and HTTP Responses
- Django Architecture
- Django Installation
- Virtual Environment
- Working with Integrated Development Environments (IDEs like PyCharm and Atom)

3. Django Project Architecture:

- Exploring manage.py
- Exploring urls.py
- Exploring settings.py
- Exploring admin.py
- Exploring models.py
- Exploring views.py
- Application Creation and Examples

4. Django Application Creation

- Steps in Application Creation
- Working with Views
- Working with HTML and CSS
- Working with Bootstrap
- Django Application Creation in Atom
- Django Application Creation in PyCharm
- Project with Multiple Applications
- Reusing an Application in Different Projects
- Working with Static Files

Django

5. Django Views

- Requesting a Web Page via URL
- Rendering a Web Page via View Function
- Render Http Response to Templates
- Application with Multiple Views
- Understanding Context Object and Dictionary Type
- GET and POST Methods

6. Django Templates

- Template Tags
- Template Filters
- Template API
- Template Inheritance
- Passing Dynamic Content to Template File
- Passing Multiple Dict Values to Template
- Loading Static Files
- Adding an Image File to the Template
- Advanced Templates
- Template Library
- Custom Template Filter
- Custom Template Tags
- Registering the Tags

7. Django Admin

- Activating the Admin Interface
- Creating Superuser for Admin Site
- Using the Admin Site
- How to Use the Admin Site

8. Django Models

- Working with Models and Databases
- Defining Models
- Model Fields
- Defining Forms
- Model Forms
- Model Relationships
- Makemigrations and Migrate
- Registering Models in settings.py
- Registering Models with Admin Site

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SQL

SQL FUNDAMENTALS

1. Introduction to SQL

- What is SQL
- Why SQL is Important?
- History of SQL

2. DML & DDL Commands

- Overview of Data Manipulation Language (DML) and Data Definition Language (DDL)
- Common DML Commands: INSERT, UPDATE, DELETE
- Common DDL Commands: CREATE, ALTER, DROP

3. SQL Database Management

- Creating a Database (CREATE DATABASE)
- Dropping a Database (DROP DATABASE)

4. Table Operations

- Creating Tables (CREATE TABLE)
- Altering Tables (ALTER TABLE)
- Dropping Tables (DROP TABLE)

5. Normalization & Denormalization

- Understanding the Concepts of Normalization and Denormalization
- Benefits and Drawbacks of Each Approach
- Normal Forms: 1NF, 2NF, 3NF
- Techniques for Normalization and Denormalization in Database Design

6. Table Constraints

- Understanding Constraints: PRIMARY KEY, FOREIGN KEY, UNIQUE, NOT NULL
- Adding Constraints to Tables

7. Identity Columns

- Introduction to Identity Columns
- Creating Tables with Identity Columns

SQL

Querying Data with SQL

1. SELECT Statement

- Syntax and Usage of the SELECT Statement
- Retrieving Data from Tables

2. Data Manipulation

- INSERT INTO Statement
- DISTINCT Keyword
- WHERE Clause for Filtering Data

3. Grouping and Sorting

- GROUP BY Clause
- ORDER BY Clause

4. Updating Data

- UPDATE Statement
- Modifying Existing Data in Tables

5. Deleting Data

- DELETE Statement
- Using WHERE Clause with DELETE

SQL

Advanced SQL Concepts

1. TOP Clause and Aggregate Functions

- Using the TOP Clause to Limit Rows
- Aggregate Functions: COUNT, AVG, SUM, MIN, MAX

2. Pattern Matching and Filtering

- Usage of LIKE and Other Wildcards
- Filtering with IN, BETWEEN, UNION, UNION ALL, INTERSECT, MINUS

3. Handling NULL Values

- Understanding NULL Values in SQL
- Techniques for Handling NULL Values in Queries

4. String Functions

- Introduction to String Functions: CONCAT, SUBSTRING, CHARINDEX, LEN
- Examples Demonstrating the Usage of String Functions in SQL Queries

5. Date Functions

- Overview of Date Functions: DATEADD, DATEDIFF, DATEPART, GETDATE
- Manipulating and Formatting Dates in SQL Queries

6. SQL Joins

- Introduction to SQL Joins: INNER, OUTER, LEFT, RIGHT
- Performing Joins on Multiple Tables

SQL

Advanced SQL Techniques

1. CASE Statements

- Writing CASE Statements in SELECT, WHERE, and ORDER BY Clauses
- Conditional Logic in SQL Queries

2. Sub-queries

- Understanding Sub-queries
- Writing Sub-queries in SQL Statements

3. Ranking Functions

- Overview of Ranking Functions: RANK, DENSE_RANK, ROW_NUMBER
- Analyzing Data Using Ranking Functions

4. Common Table Expressions (CTE)

- What are CTEs and Their Advantages?
- Syntax and Usage of CTEs in SQL Queries
- Recursive CTEs for Hierarchical Data

5. Views

- Overview of Date Functions: DATEADD, DATEDIFF, DATEPART, GETDATE
- Creating Views in SQL
- Advantages of Using Views

6. Temporary Tables

- Introduction to Temporary Tables
- Creating and Using Temporary Tables in SQL Queries
- Comparison with Permanent Tables and Their Scope

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UI

HTML 5

- Introduction to HTML
- Structure of an HTML Document
- HTML Elements and Attributes
- Text Formatting Tags
- Semantic HTML Tags
- Creating Links and Navigation
- Adding Images to a Webpage
- Working with Audio and Video Tags
- Creating Lists: Ordered and Unordered
- Designing Tables in HTML
- Building Forms and Input Fields
- HTML5 New Elements and Features
- Global Attributes in HTML
- Using Div and Span for Layout
- HTML Validation and Best Practices

CSS 3

- Introduction to CSS
- Types of CSS: Inline, Internal, External
- CSS Syntax and Selectors
- Colors in CSS: Named Colors, Hex, RGB, HSL
- Working with Fonts and Text Styling
- Box Model: Margin, Border, Padding, Content
- CSS Positioning: Static, Relative, Absolute, Fixed
- Flexbox for Responsive Layouts

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UI

CSS 3

- CSS Grid Layout
- Background Properties: Color, Image, Gradient
- Border and Box Shadow Properties
- Advanced Selectors: nth-child, first-child, last-child
- Transitions and Animations
- Media Queries for Responsive Design
- Best Practices and Optimization Techniques

Bootstrap

- Introduction to Bootstrap
- Setting Up and Linking Bootstrap
- Bootstrap Grid System and Layouts
- Typography and Text Utilities
- Working with Bootstrap Components (Buttons, Alerts, Badges)
- Forms and Input Elements in Bootstrap
- Navigation Bar and Menus
- Bootstrap Cards and Modals
- Responsive Design with Breakpoints
- Customizing Bootstrap with Utilities and Themes

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UI

JavaScript

- Introduction to JavaScript
- JavaScript Syntax and Basics
- Variables and Data Types
- Operators in JavaScript
- Conditional Statements (if, else, switch)
- Loops (for, while, do-while)
- Functions and Function Expressions
- Arrays and Array Methods
- Objects and Object Properties
- Events and Event Handling
- DOM Manipulation
- JavaScript ES6 Features (Arrow Functions, Template Literals, etc.)
- Promises and Asynchronous Programming
- Error Handling in JavaScript (try, catch, finally)
- Best Practices and Debugging Techniques

React

- React Home
- React Introduction
- React Get Started
- React Render HTML
- React JSX
- React Components
- React Class Components

UI

React

- React Lists
- React Forms
- React Router
- React CSS Styling
- React Sass Styling