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► Python (6 months Industrial Training) Course Structure

Month 1: Foundations of Programming, Python Basics, and Object-Oriented Programming (OOP) with Python

- Programming
- Python Basics
- Python Control Structures
- Python Collections
- Python Dictionaries
- More Python Data Structures
- Basics of OOP
- Inheritance and Encapsulation
- Polymorphism and Abstraction
- Advanced OOP Techniques
- Practical OOP Applications in Python

Month 2: HTML, CSS, and JavaScript Fundamentals

- Structure of HTML documents
- HTML elements, attributes, and semantic markup
- Advanced HTML and Forms
- HTML5 elements (e.g., <article>, <section>, <nav>)
- Forms and form elements (<form>, <input>, <select>, <textarea>)
- CSS syntax, selectors, and properties
- Box model (margin, border, padding)
- Styling with CSS
- CSS layout techniques (floats, flexbox, grid)
- Responsive design principles (media queries)
- JavaScript (variables, data types, operators)
- Control structures (if statements, loops)
- Intermediate JavaScript
- Functions and scope
- DOM manipulation (selecting elements, modifying content and styles)

Month 3: MySQL Database Training Using Python

- Basics MySQL
- Python and MySQL Connection
- Executing SQL Queries in Python
- Error Handling and Transactions
- Advanced SQL Queries in Python
- Working with Data in Python
- Stored Procedures and Functions
- Python ORM (Object-Relational Mapping)
- Advanced Topics and Project Work

Month 4 : Web Development with Django Framework

- Familiarise yourself with the Django framework by reading documentation and introductory tutorials.
- Set up your development environment, including installing Python, Django, and any necessary tools.
- Create a simple Django project to understand the basic structure and components.
- Learn about URL routing in Django and create static views for different URLs.
- Explore Django templates and build static pages with HTML and CSS.
- Study Django models and databases. Create models for your web application's data.
- Implement dynamic content by fetching data from the database and displaying it in your views/templates.
- Learn about Django forms for user input. Implement forms for data submission and validation.
- Implement user authentication and authorization using Django's built-in features.
- Deploy your Django application to a web server, either locally or using a cloud platform like Heroku.
- Test and refine your application for deployment.

Month 5: Data Analysis, Visualization, and Machine Learning Fundamentals

- Python for Data Analysis
- Data Handling with Pandas
- NumPy
- Data Visualization with Matplotlib
- Machine Learning
- Data Preprocessing and Feature Engineering
- Unsupervised Learning Algorithms
- Dimensionality Reduction and Model Evaluation

Month 6 : Final Project and Advanced Topics

- Choosing a Project
- Planning and Structuring
- Implementing the Project
- Testing and Debugging
- Deployment
- Deploying on Platforms like Heroku
- Course Review
- Next Steps in Python Learning
- Additional Resources and Advanced Topics



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