

PYTHON - BEGINNER TO ADVANCE



This course will cover all the topics which are most important for technical interviews. At the end of every topic questions based on the topic will be shared and solved.

by D'CODE Innovation Lab

1 PYTHON

- Big Picture
- Pycharm
- Package Manager (PIP/Anaconda)
- Scaler Types, Operators and Control Flow
- Introducing Strings, Collections and Iteration
- Modularity in Python
- Object Oriented Programming
- Built-In Collections
- Exception Handling
- Iterations and Iterables
- Classes
- File IO and Resource Management
- Multithreading
- Beyond Basic Function
 - Callable Instances
 - Classes are callable
 - Conditional Expressions
 - Lambdas
 - Detecting Callable Objects
 - Extended Formal Argument Syntax
 - Extended Call Syntax
 - Forwarding Arguments
 - Transposing Tables
- Closures and Decorator
- Advance Properties and Class Methods
- Advance String Methods
- Advance Numeric Types
- Advance Iterables and Iteration
- Advance Collection and Exception Handling
- DateTime Types
- Inheritance and Subtype Polymorphism
- Junit Testing
- Virtual Environment
- Database
- REST Api
- Flask
 - Rest API Implementation
 - Storing Resources in a SQL Database
 - Simplifying Storage
 - Understanding Model Template View Pattern
 - Creating and Processing Webforms with Flask
 - Creating Model Layer for Flask
 - Flask Users, Sessions and Authentication
- Case Study
 - A Game Of Chance
 - Movie Store (using Collections)
 - Movie Store (using Database)
 - Build a static file generator with python
 - Add Extension to a Static Site Generator
 - Build a Personal Budget Report with Python Collections and Iterables
 - Decoding Sensor Data using Python
 - Build Your Own CLI Planner App using python abstract Base classes
 - Control drone from your laptop



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2 DATA STRUCTURES

- Introduction to Data Structure
- Big O Notation
- Essential Concept
- Memory and Logarithm
- Array
- Recursion
- Linked List
- Stack
- Queue
- Hash tables
- Trees
- Heaps
- Tries
- Graphs
- Searching Algorithm
- Sorting Algorithm
- Dynamic Programming



3 PROJECTS

- Build smart door lock based on Face Recognition
- Control Drone through Hand Gesture
- Build Your Personal Assistant like Jarvis
- Create your own emoji with Python
- Sentiment Analysis System
- Digit Recognition
- Housing Prices Prediction Project
- Stock Price Prediction
- Fake News Detection
- Handwritten Character Recognition
- Credit Card Fraud Detection
- Customer Segmentation
- Speech Emotion Recognition
- Automatic License Number Plate Recognition System
- Image Segmentation
- MoneyBall: the power of Sports Analytics
- Election Forecasting: Predicting the winner Before any Votes are Cast
- Predictive Diagnosis: Discovering Patterns for Disease Detection
- Boston House Pricing Prediction Project
- Build a Movie Recommender
- Loan Eligibility Prediction
- Music Recommendation System
- Rating Review System based on Text
- Summary Generator
- Many More...

