

Chapter 1: Introduction to Python

- › Install Python and Environment Setup
- › Install Visual Studio Code
- › What are variables?
- › Python Identifiers, Keywords and Indentation
- › Comments and document interlude in Python
- › Getting User Input
- › Operators in Python

Chapter 2: Data Types in Python

- › Numbers
- › Strings
- › Built-in functions of Strings
- › Boolean
- › Understanding Iterators
- › **Arrays in python**
- › List
- › Tuple
- › Dictionary
- › Set

Chapter 3: Decision making Statements

- › Simple if
- › if-else
- › if-elif-else
- › Practices

Chapter 4: Looping Statements

- › working with for Loop
- › working with while Loop
- › Range function
- › Iterating over Python Arrays
- › Loop Control Statements
- › Break and Continue
- › Nested loops
- › Pass keyword

Chapter 5: Python Functions

- › Types of functions
- › Defining and calling Function
- › Argument passing methods
- › Return statement in Function
- › The anonymous Functions
- › Scope of variables
- › Practices

Chapter 6: Python Files

- › Introduction to file handling
- › Reading and Writing files
- › File modes
- › File methods
- › Working with Directories
- › Practices

Chapter 7: Modules and Packages

- › Using PIP Module
- › Use of Import
- › Built in and External Modules
- › Familiar with Date Time Module
- › OS Module

Chapter 8: Python Object Oriented

- › Overview of OOPS
- › Creating Classes and Objects
- › Methods and Attributes
- › Self variable
- › Constructor
- › Inheritance
- › Polymorphism
- › Abstraction
- › Encapsulation

Chapter 9: Django Web Framework in Python

- › Introduction to MVT architecture
- › Django folder structure and flow of control
- › Basic HTML,CSS,JS
- › Template Rendering.
- › CRUD Operations using Django.
- › Working with Django forms
- › Cookies and Session in Python
- › ORM in Python
- › Table Relations in django
- › Working with Data frame using Pandas
- › Django REST Framework
- › Writing Serializers and REST API Methods.
- › Decorators
- › Token generation.
- › Routing API's
- › Version Control-Git (Bitbucket)
- › Testing Tool- Postman
- › Sample Projects
- › Live Project.

Chapter 10: Using Databases in Python

- MySQL
- Python MySQL Database Access
- Install the MySQLdb and other Packages
- Create Database Connection
- Working with MySQL queries using python
- MongoDB
- Python MongoDB Access
- Install MongoDB
- Create Database Connection
- Working with Mongo queries using python

Application Development & Evaluation

- **E-Commerce Application**

Creating simple Home page, Content page, Product Listing page, Product information page

- **Ticket Management like Service Now**

Login, Create ticket, Edit ticket, View ticket

- **Internet Banking Application**

Login, Add beneficiary, Fund transfer, Balance Checking

- **Video based Learning Management System**

Login, Upload Video chapters, Student Registration, Student Course Purchase , Student Login, View Course Videos

Module 1 – Getting Started

- › Course Introduction
- › What is Angular?
- › Angular vs Angular 2 vs Latest Angular Version
- › CLI Deep Dive & Troubleshooting
- › Project Setup and First App
- › Editing the First App
- › What is TypeScript?
- › A Basic Project Setup using Bootstrap for Styling

Module 2 – The Basics

- › How an Angular App gets Loaded and Started
- › Creating a New Component
- › Understanding the Role of AppModule and Component Declaration
- › Using Custom Components
- › Creating Components with the CLI & Nesting Components
- › Working with Component Templates
- › Working with Component Styles
- › Fully Understanding the Component Selector
- › What is Databinding?
- › String Interpolation
- › Property Binding
- › Property Binding vs String Interpolation
- › Event Binding
- › Bindable Properties and Events
- › Passing and Using Data with Event Binding
- › Two-Way-Databinding

- Combining all Forms of Databinding
- Understanding Directives
- Using ngIf to Output Data Conditionally
- Enhancing ngIf with an Else Condition
- Styling Elements Dynamically with ngStyle
- Applying CSS Classes Dynamically with ngClass
- Outputting Lists with ngFor

Module 3 - Debugging

- Understanding Angular Error Messages
- Debugging Code in the Browser Using Sourcemaps
- Using Augury to Dive into Angular Apps

Module 4 - Components & Databinding Deep Dive

- Splitting Apps into Components
- Property & Event Binding Overview
- Binding to Custom Properties
- Binding to Custom Events
- Understanding View Encapsulation
- Using Local References in Templates
- Getting Access to the Template & DOM with @ViewChild
- Projecting Content into Components with ng-content
- Understanding the Component Lifecycle
- Lifecycle Hooks and Template Access
- Getting Access to ng-content with @ContentChild
- Recap and Section Assignment

Module 5 - Using Services & Dependency Injection

- › Why would you Need Services?
- › Creating a Logging Service
- › Injecting the Logging Service into Components
- › Creating a Data Service
- › Understanding the Hierarchical Injector
- › How many Instances of Service Should It Be?
- › Injecting Services into Services
- › Using Services for Cross-Component Communication

Module 6- Changing Pages with Routing

- › Why do we need a Router?
- › Setting up and Loading Routes
- › Navigating with Router Links
- › Understanding Navigation Paths
- › Styling Active Router Links
- › Navigating Programmatically
- › Using Relative Paths in Programmatic Navigation
- › Passing Parameters to Routes
- › Fetching Route Parameters
- › Fetching Route Parameters Reactively
- › Route Observables

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- › Passing Query Parameters and Fragments
- › Retrieving Query Parameters and Fragments
- › Setting up Child (Nested) Routes
- › Using Query Parameters - Practice
- › Configuring the Handling of Query Parameters
- › Redirecting and Wildcard Routes
- › Outsourcing the Route Configuration
- › An Introduction to Guards
- › Protecting Routes with canActivate
- › Protecting Child (Nested) Routes with canActivateChild
- › Using a Fake Auth Service
- › Controlling Navigation with canDeactivate
- › Passing Static Data to a Route
- › Resolving Dynamic Data with the resolve Guard
- › Understanding Location Strategies

Module 8 - Understanding Observables

- › Analyzing Angular Observables
- › Getting Closer to the Core of Observables
- › Building a Custom Observable
- › Errors & Completion
- › Understanding Operators
- › Subjects

Module 9 - Making Http Requests

- › How Does Angular Interact With Backends?
- › The Anatomy of a Http Request
- › Backend (Firebase) Setup
- › Sending a POST Request
- › GETting Data
- › Using RxJS Operators to Transform Response Data
- › Using Types with the HttpClient
- › Outputting Posts
- › Showing a Loading Indicator
- › Using a Service for Http Requests
- › Services & Components Working Together
- › Sending a DELETE Request
- › Handling Errors
- › Using Subjects for Error Handling
- › Using the catchError Operator
- › Error Handling & UX
- › Setting Headers
- › Adding Query Params
- › Observing Different Types of Responses
- › Changing the Response Body Type
- › Introducing Interceptors
- › Manipulating Request Objects
- › Response Interceptors
- › Multiple Interceptors

Additional Module

- › flask
- › ORM