

# Python Learning Plan for Shriejan

## Detailed Session Plan

### Flask Basics and Connecting with Python (3 sessions)

Session 1: Intro to Flask, setting up a basic route to display 'Hello World'.

Session 2: Understanding how Flask integrates with HTML.

Session 3: Displaying data types on the website.

### Data Types (3 sessions)

Session 1: Numbers and basic operations.

Session 2: Strings and basic string operations.

Session 3: Booleans and combining different data types in code.

### Data Structures (4 sessions)

Session 1: Lists - creating and using lists.

Session 2: Dictionaries - key-value pairs and accessing data.

Session 3: Tuples - storing fixed data.

Session 4: Using data structures within Flask, like displaying a list on the website.

### Conditions (3 sessions)

Session 1: Basics of 'if', 'elif', and 'else'.

Session 2: Nested conditions and combining multiple checks.

Session 3: Adding conditional content to the website (e.g., 'Welcome' message based on input).

### Loops (4 sessions)

Session 1: 'for' loops and how they work with lists.

Session 2: 'while' loops and repeating tasks.

Session 3: Using loops with data structures.

Session 4: Displaying repeated data on the website (like a list of items).

## Functions (4 sessions)

Session 1: Creating and calling functions.

Session 2: Using parameters and return values.

Session 3: Applying functions to web tasks, like calculations.

Session 4: Organizing code by separating functions into modules.

## Classes (Object-Oriented Programming) (5 sessions)

Session 1: Basics of classes and objects.

Session 2: Creating attributes and methods in a class.

Session 3: Inheritance and creating subclasses.

Session 4: Using objects to manage content on the website.

Session 5: Adding class-based functionality to the website, such as profiles.

## File Reading & Writing (2 sessions)

Session 1: Reading data from files.

Session 2: Writing data to files and displaying it on the website.

## Modules (2 sessions)

Session 1: Using built-in modules for specific tasks.

Session 2: Creating a custom module and importing it into Flask.

## SQL for Databases (4 sessions)

Session 1: Introduction to SQL and basic database setup.

Session 2: Creating and managing tables.

Session 3: CRUD operations (Create, Read, Update, Delete).

Session 4: Displaying database data on the website.

## Flask (Web Development) (5 sessions)

Session 1: Setting up multiple routes and views.

Session 2: Using HTML templates to render pages.

Session 3: Creating forms to capture user data.

Session 4: Adding dynamic content to the website.

Session 5: Linking Python concepts directly to web features.

#### Django (Advanced Web Development) (6 sessions)

Session 1: Introduction to Django, setting up a project.

Session 2: Creating models and using Django ORM for databases.

Session 3: Setting up views and templates.

Session 4: Creating forms and handling form submissions.

Session 5: Adding more complex functionality with Django.

Session 6: Building the final advanced website project.