

Module 1 - Basics of Python Programming

Motivation & Applicability to various domains ,Installation & Setting up path Input / Output
Keywords and Identifiers , Variables and Data Types
Conditional Statements
Looping , Control flow (along with loops)
Strings and Features
String Manipulation , Functions

Module 2 - Collections / Sequences

Lists and Features
List Functions
List Comprehension
Tuple and Features
Functions and Methods
Dictionaries
Sets and Frozen sets

Module 3 - Working with Collections (Tasks)

Working with Lists and Tuples
Working with Dictionaries
Working with Sets and Frozen Sets

Module 4 - Functional Programming

Types of functions
Function Arguments
Anonymous functions
Exception Handling
Try & finally clause
User Defined Exceptions

Module 5 - File Handling and Modules

File operations Part - 1
File operations Part - 2
Modules , Importing module , Packages
Math , Random and OS module

Module 6 - Classes and OOPS in Python

Classes and objects
Inheritance
Polymorphism
Data hiding (Abstraction)
Encapsulation

Module 7 - DataBase Programming with Python

Introduction of MySQL
Connections and Queries
PISQL / MySQL
Multithreading
Regular expressions

Module 8 - Add-Ons

DevTools - Usage of Git
Introduction to Flask / Django

Module 9 - GUI development

Introduction to Tkinter
Components in tkinter
Layout management

Module 10 - Socket programming

Introduction to socket and networks
Server client architecture
Socket API overview
Multi connection client server

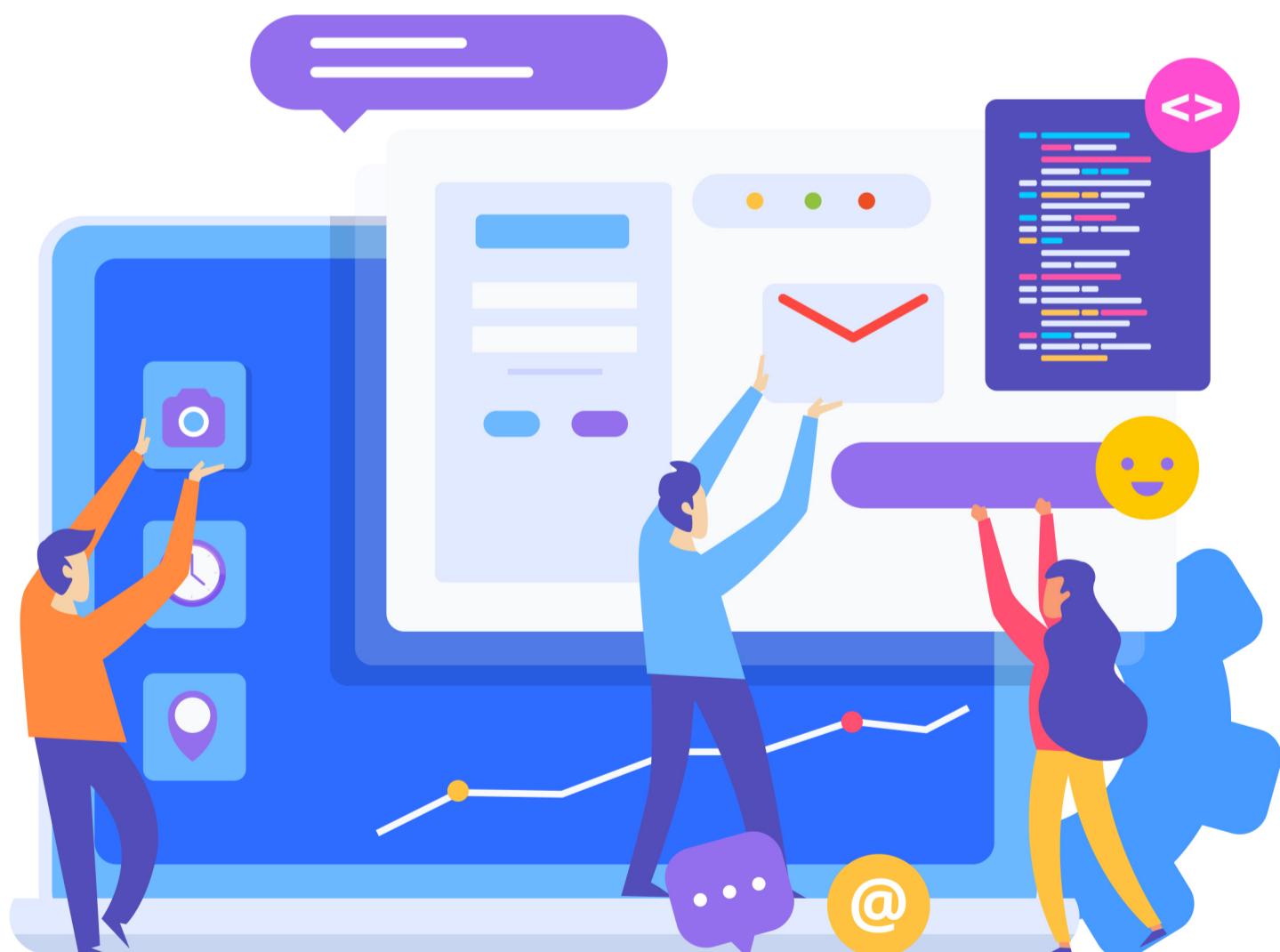
Project 1

Student Attendance web application (django / flask) [Lead Tracker]

The project will have the databases that will be easy for managing the data than manually maintaining in a document which contains details of all courses offered and techies in the organization, details of all students who walked into the organization and students who certified from the organization.

Lead tracker tracks all the details of students from the day one to the end of his/her course which can be used for tracking enrolments, registration, student presence status, students. It supports for enhancing with providing the details to for making calls and auto email(SMTP).

Stack used : Python , django , MySQL



Project 2

Backend development Random password generator with DataBase Validations

Get the random password generated for the user name passed as an input and making data validations in Collections of Python and also Data manipulations using SQL database.

Modules used : OS , Random , MySQLDB

