

## PYTHON AND MYSQL COURSE SYLLABUS FOR KIDS

### ❖ Day 1: Introduction to Python

- What is Python? Why is it important?
- Setting up the Python environment
- Getting Started with Python
- Introduction to basic syntax: variables, data types, and print statements
- Basic arithmetic operations in Python

### ❖ Day 2: Python Control Structures

- Introduction to if statements and conditional execution
- Using if-else statements for decision-making
- Hands-on practice with conditional statements and decision-making in Python

### ❖ Day 3: Loops and Iterations

- Understanding loops: for loops and while loops
- Using loops for repetitive tasks
- Hands-on practice with loops and iterations in Python

### ❖ Day 4: Lists and Tuples

- Introduction to lists and tuples in Python



- Understanding list operations: append, remove, index
- Hands-on practice with lists and tuples manipulation

## ❖ Day 5: Dictionaries and Sets

- Understanding dictionaries and sets in Python
- Exploring dictionary and set operations
- Hands-on practice with dictionaries and sets manipulation

## ❖ Day 6: Functions in Python

- What are functions and why are they useful?
- Defining and calling functions in Python
- Hands-on practice with function creation and usage

## ❖ Day 7: Introduction to File Handling

- Reading from and writing to files in Python
- Understanding file modes: read, write, append
- Hands-on practice with file handling operations

## ❖ Day 8: Introduction to MySQL

- Understanding what MySQL is and its role in database management



- Learning basic MySQL syntax for creating databases and tables
- Setting up a MySQL database and creating sample tables
- ❖ Day 9: Connecting Python to MySQL
  - Learning how to establish a connection between Python and MySQL
  - Understanding basic SQL queries for data retrieval and manipulation
  - Hands-on practice executing MySQL queries from Python scripts
- ❖ Day 10: Working with Data in MySQL Database
  - Learning how to insert, update, and delete data in a MySQL database using Python
  - Understanding basic SQL queries for data manipulation
  - Hands-on practice working with data in a MySQL database using Python
- ❖ Day 11: Retrieving Data from MySQL Database
  - Learning how to retrieve data from a MySQL database using Python
  - Understanding basic SELECT queries for data retrieval
  - Hands-on practice retrieving and displaying data from a MySQL database using Python
- ❖ Day 12: Introduction to Data Analysis with Python

Understanding the basics of data analysis with Python



- Introduction to libraries such as Pandas for data manipulation
- Hands-on practice with basic data analysis tasks using Python

## ❖ Day 13: Application Projects

- Students work on individual or group projects applying Python and MySQL skills learned so far
- Projects may include building a simple inventory management system, creating a student information database, or developing a basic blogging platform
- Guidance and feedback provided by instructors as students work through their projects

## ❖ Day 14: Project Presentations and Feedback

- Students present their completed projects to peers or parents
- Feedback session: peers provide constructive feedback on each other's projects
- Reflection: students reflect on their learning experience and the application of Python and MySQL skills in their projects

## ❖ Day 15: Review and Recap

- Reviewing key concepts covered throughout the course
- Recapping important Python and MySQL features and techniques
- Providing additional practice opportunities and challenges for students to reinforce their learning

