Tops Technology

Module 15) Advance Python Programming

Presented By :

Nandni Vala

SQLite3 and PyMySQL (Database Connectors)

1. Introduction to SQLite3 and PyMySQL for database connectivity.

- SQLite3 is a lightweight, serverless database ideal for small applications.
- It is built into Python, requires no setup, and stores data in a single file. Python's sqlite3 module provides easy interaction for executing SQL queries.
- **Key Features:**
- Easy to set up and use (no server installation required).
- Cross-platform and embedded in many software.
- Suitable for applications requiring minimal database interaction.
- Supports standard SQL syntax.
- Pymysql :
- Pymysql is a library that allows python application to connect to mysql databases.
- It uses mysql's client/server architecture,making it suitable for applications requiring centralized database management.

- **Key features:**
- **Facilitates interaction with mysql database using python**
- **Allows secure connections with authentication and encryption.**
- **Supports advanced mysql features like stored procedures and transaction.**

2.Creating and executing SQL queries from python using these connectors.

- **Using SQLite3:**
- **Connect : use sqlite3.connect to connect or create a database.**
- **Create table: execute CREATE TABLE using cursor.execute().**
- **Insert data: use cursor.execute("INSERT INTO table VALUES(?,?)",values().**
- **Query data: Fetch data with cursor.execute("SELECT** * FROM table").fetchall().
- **Close:** Use conn.close() to close the connection

- **Using PyMySQL:**
- **Connect:** Use pymysql.connect() with host, user, and database details.
- **Create Table:** Execute CREATE TABLE via cursor.execute().
- **Insert Data:** Use cursor.execute("INSERT INTO table VALUES (%s, %s)", values).
- **Query Data:** Fetch data with cursor.execute("SELECT * FROM table").fetchall().
- **Close:** Use conn.close() to end the session.