

Using SQLite with Python and Pandas

1. Introduction

SQLite is a popular choice for lightweight database applications, and when combined with Python, it becomes a powerful tool for data manipulation and analysis. Pandas, a widely-used data analysis library in Python, can be used to query SQLite databases efficiently. This guide will cover how to connect to a SQLite database using Python, execute SQL commands, pull data, and use Pandas for advanced data analysis.

2. Setting Up SQLite with Python

Before you start, ensure you have the following Python libraries installed:

- `sqlite3`: Standard library for SQLite database interaction in Python.
- `pandas`: Data manipulation and analysis library.

You can install Pandas using pip:

```
pip install pandas
```

3. Connecting to SQLite Database

To connect to an SQLite database in Python, you use the `sqlite3` module, which is part of the Python Standard Library.

Example:

```
import sqlite3

# Connect to the SQLite database
connection = sqlite3.connect('my_database.db')

# Create a cursor object
cursor = connection.cursor()
```