SQL Connectivity In Streamlit

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AGENDA

01 Prerequisites

02 SQL and Streamlit

03 Implementing the project

04 Code Understanding and conclusion

01

Prerequisite

1)Python

2)VS Code

3)MySQL

4)Install packages:

  i)pandas

  ii)sql-connector

  iii)sreamlit

TERMINAL COMMANDS-

```
>>pip install mysql-connector-python
>>pip install streamlit
>>pip install pandas
```

02

SQL
Streamlit

SQL-CONNECTOR

Introduction

->Python Library

->connect with Mysql

->Python applications to execute SQL queries

Key features

->Database connectivity

->SQL queries

->Data retrievals

->Error Handling

->Connecting Pooling

Advantages

->Easy to use

->Performance

->Flexibility

SQL COMMANDS IN MySQL

Are as follows….

```
Step1->CREATE DATABASE FarmManagement;

Step2->USE FarmManagement;

Step3->CREATE TABLE Farmer (
farmer_id INT PRIMARY KEY,
name VARCHAR(100) NOT NULL,
 address VARCHAR(255),
 contact_info VARCHAR(255) );
```

```
----Creating the farm table----
CREATE TABLE Farm (
farm_id INT PRIMARY KEY,
 location VARCHAR(255),
size DECIMAL(10, 2),
farmer_id INT, FOREIGN KEY (farmer_id) REFERENCES
Farmer(farmer_id)
);
```

Recap on Streamlit:

- Title
- Sidebar
- Header
- Selectbox
- Write
- Form
- And many more….

Connections…..

Database connection

Function to execute query and return results

To run an action in python

```
# Database connection
def get_connection():
    return mysql.connector.connect(
        host="localhost",
        user="root",
        password=“xyz",
        database="FarmManagement"
    )
```

```
# Function to execute query and return results
def run_query(query):
    conn = get_connection()
    cursor = conn.cursor()
    cursor.execute(query)
    data = cursor.fetchall()
    columns = [col[0] for col in cursor.description]
    conn.close()
    return pd.DataFrame(data, columns=columns)
```

```
# To run an action in python
def run_action(query, values):
    conn = get_connection()
    cursor = conn.cursor()
    cursor.execute(query, values)
    conn.commit()
    conn.close()
```

03

Implementing DBMS project

Project Explanation

Farm Management System

Shifting to VS Code

04

Conclusion

Future Extension

Multi media support

Advanced Data Visualization

Forms and User Input Handling