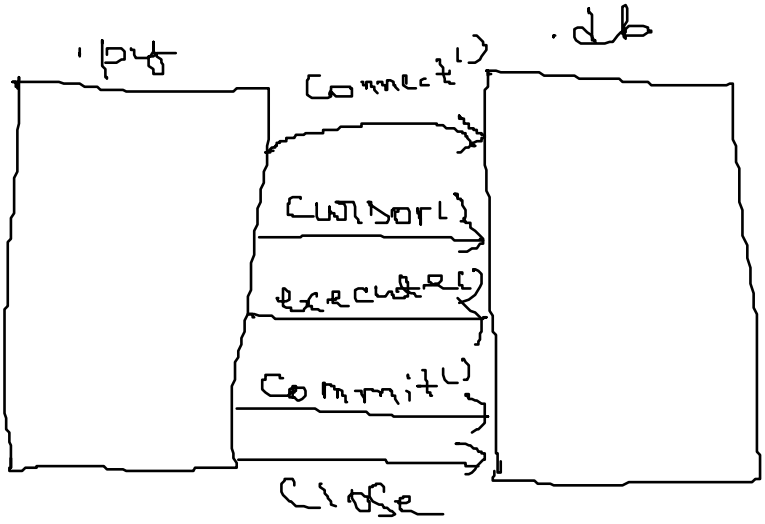
SQL Connections

Thursday, August 14, 2025 7:11 PM

For project, connectivity of frontend, backend and database is required.

Here we are going to learn about how to work on SQL file with the help of python.

To work w r t SQL, import sqlite3 is used.



Functions used:

1. Connect(): It is used to establish connection between .py and .db.
2. Cursor(): It is used to go and work inside the .db file.
3. Execute(): It is used to execute the SQL queries.
4. Commit(): It is used to save the changes
5. Close(): It is used to close the file.

Syntax:

```
Import sqlite3
Var=sqlite3.connect('databasename.db')
Var1=var.cursor()
Var1.execute('Queries')
Var1.commit()
Var.close()
```

Basic SQL Queries:

1. Create table:

   Create table table_name(
   Col1 datatype cons,
   Col2 datatype cons,
   Col3 datatype cons,
   .
   .
   .)

   While writing in python file ; is not required.

2. To insert data:

   Insert into table_name values(val1, val2, val3 ……. Val n)

   Number of values == Number of columns

3. To extract the data:

i. Select * from table_name #the whole table
ii. Select col_name from table_name #for particular column
iii. Select * from table_name where condition #data based on condition

- We can perform the whole CRUD operations using python:
  C: Create/insert
  R: Read/ retrieve
  U: Update/ modify
  D: Delete/ drop

  Eg:
  #to create database
  '''
  import sqlite3
  a=sqlite3.connect('data.db')
  b=a.cursor()
  b.execute("create table blinkit(prod_name char, prod_id number,price

```
number)")
b.execute("insert into blinkit values('Iphone 16',123,100000)")
b.execute("insert into blinkit values('Samsung S23',124,50000)")
a.commit()
a.close()


#to access the data
import sqlite3
a=sqlite3.connect('data.db')
b=a.cursor()

#to fetch whole table
res= b.execute('select * from blinkit')
print(list(res))
print(res.fetchall())
print(res.fetchone())

#to fetch particular column
res= b.execute('select prod_name from blinkit')
print(res.fetchall())

#to fetch based upon condition
res= b.execute('select prod_name from blinkit where price>51000')
print(res.fetchall())
```

If we just write print statement then it will show the address

To get the exact data, we have 3 ways:

i. Typecast: print(datatype(var))
ii. Fetchall(): print(var.fetchall())
iii. Fetchone(): print(var.fetchone())