**Nama: Wahyu Purwaji**

**NPM: 5230411244**

**Mata Kuliah: Algoritma Pemrograman Praktik Vll**

**Projek: Projek Pertemuan 12**

**Codingan:**

**1.Create Database dan Tabel**

import sqlite3

connect = sqlite3.connect("database\_hewan.db")

connect.execute(

    """

                CREATE TABLE HEWAN(

                id\_hewan INT AUTO\_INCREMENT PRIMARY KEY,

                nama\_hewan VARCHAR(50),

                jenis VARCHAR(50),

                asal VARCHAR(50),

                jml\_skrng INTEGER(10),

                thn\_ditemukan INTEGER(10)

                )

                """

)

connect.close()

**2.Insert**

import sqlite3

connect = sqlite3.connect("database\_hewan.db")

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('1', 'Orangutan', 'Mamalia', 'Sumatera', 14000, 2021)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('2', 'Harimau Sumatera', 'Mamalia', 'Sumatera', 400, 2020)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('3', 'Komodo', 'Reptil', 'Nusa Tenggara', 3000, 2019)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('4', 'Anoa', 'Mamalia', 'Sulawesi', 5000, 2022)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('5', 'Badak Jawa', 'Mamalia', 'Jawa', 72, 2021)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('6', 'Kuskus', 'Mamalia', 'Papua', 50, 2020)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('7', 'Trenggiling', 'Mamalia', 'Sumatera', 90, 2022)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('8', 'Burung Cendrawasih', 'Burung', 'Papua', 45, 2021)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('9', 'Penyu Hijau', 'Reptil', 'NTT', 20, 2022)"

)

connect.execute(

    "INSERT INTO HEWAN (id\_hewan, nama\_hewan, jenis, asal, jml\_skrng, thn\_ditemukan) VALUES ('10', 'Gajah Sumatera', 'Mamalia', 'Sumatera', 2500, 2023)"

)

connect.commit()

connect.close()

**3.Select All**

import sqlite3

connect = sqlite3.connect("database\_hewan.db")

cursor = connect.cursor()

cursor.execute("SELECT \* FROM HEWAN")

rows = cursor.fetchall()

print("Data HEWAN")

print("=" \* 80)

print(

    "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20} ".format(

        "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"

    )

)

print("-" \* 80)

for row in rows:

    print(

        "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20} ".format(

            row[0], row[1], row[2], row[3], row[4], row[5]

        )

    )

connect.close()

**4.Select Where**

**a.Jenis = Mamalia**

import sqlite3

koneksi = sqlite3.connect("database\_hewan.db")

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN WHERE jenis = 'Mamalia'")

baris\_table = kursor.fetchall()

print("Data Pegawai:")

print("-" \* 80)

print(

    "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

        "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"

    )

)

print("\_" \* 80)

for baris in baris\_table:

    print(

        "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

            baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]

        )

    )

koneksi.close()

**b.Jumlahnya kurang dari sama dengan 1000 ekor**

import sqlite3

koneksi = sqlite3.connect("database\_hewan.db")

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN WHERE jml\_skrng <= '1000'")

baris\_table = kursor.fetchall()

print("Data Pegawai:")

print("-" \* 80)

print(

    "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

        "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"

    )

)

print("\_" \* 80)

for baris in baris\_table:

    print(

        "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

            baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]

        )

    )

koneksi.close()

**5.Select Where And**

import sqlite3

koneksi = sqlite3.connect("database\_hewan.db")

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN WHERE jenis = 'Mamalia' AND asal = 'Sumatera'")

baris\_table = kursor.fetchall()

print("Data Hewan:")

print("-" \* 80)

print(

    "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

        "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"

    )

)

print("\_" \* 80)

for baris in baris\_table:

    print(

        "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

            baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]

        )

    )

koneksi.close()

**6.Select Where Or**

import sqlite3

koneksi = sqlite3.connect("database\_hewan.db")

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN WHERE asal = 'Sumatera' OR jml\_skrng <= '500'")

baris\_table = kursor.fetchall()

print("Data Hewan:")

print("-" \* 80)

print(

    "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

        "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"

    )

)

print("\_" \* 80)

for baris in baris\_table:

    print(

        "{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(

            baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]

        )

    )

koneksi.close()

**7.Select SUM**

import sqlite3

conn = sqlite3.connect('database\_hewan.db')

cursor = conn.cursor()

cursor.execute("SELECT SUM(jml\_skrng) FROM hewan")

total\_populasi = cursor.fetchone()[0]

print(f"Total Populsi Sejarang: {total\_populasi}")

conn.close()

**8.Select Order By**

**a. Urutan nama hewan berdasarkan dari awal alpabetic**

import sqlite3

koneksi = sqlite3.connect('database\_hewan.db')

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN ORDER BY nama\_hewan ASC") #ASC|DESC

baris\_table = kursor.fetchall()

print("Data Hewan:")

print("==============================================================")

print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format( "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"))

print("--------------------------------------------------------------")

for baris in baris\_table:

    print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]))

koneksi.close()

**b.Urutan jumlah hewan saat ini berdasarkan dari yang terbanyak ke paling sedikit**

import sqlite3

koneksi = sqlite3.connect('database\_hewan.db')

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN ORDER BY jml\_skrng DESC") #ASC|DESC

baris\_table = kursor.fetchall()

print("Data Hewan:")

print("==============================================================")

print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format( "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"))

print("--------------------------------------------------------------")

for baris in baris\_table:

    print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]))

koneksi.close()

**c.Urutan tahun ditemukan saat ini berdasarkan dari yang terlama ke terbaru**

import sqlite3

koneksi = sqlite3.connect('database\_hewan.db')

kursor = koneksi.cursor()

kursor.execute("SELECT \* FROM HEWAN ORDER BY thn\_ditemukan ASC") #ASC|DESC

baris\_table = kursor.fetchall()

print("Data Hewan:")

print("==============================================================")

print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format( "id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"))

print("--------------------------------------------------------------")

for baris in baris\_table:

    print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format(baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]))

koneksi.close()

**9.Select Like**

import sqlite3

koneksi = sqlite3.connect('database\_hewan.db')

kursor = koneksi.cursor()

nama = 'B%'  # Mencari nama yang dimulai dengan 'John'

kursor.execute(f"SELECT \* FROM HEWAN WHERE nama\_hewan LIKE ?", (nama,))

baris\_table = kursor.fetchall()

print("Data Hewan:")

print("==============================================================")

print("{:<5} {:<20} {:<20} {:<20} {:<10} {:<20}".format("id\_hewan", "nama\_hewan", "jenis", "asal", "jml\_skrng", "thn\_ditemukan"))

print("--------------------------------------------------------------")

for baris in baris\_table:

    print("{:<5} {:<20} {:<20} {:<20} {:<10}{:<20}".format(baris[0], baris[1], baris[2], baris[3], baris[4], baris[5]))

koneksi.close()

**10.Update Set 1**

import sqlite3

conn = sqlite3.connect('database\_hewan.db')

cursor = conn.cursor()

# Data yang ingin diubah

id\_hewan = 1

jml\_skrng = 900

cursor.execute(f"UPDATE HEWAN SET jml\_skrng = {jml\_skrng} WHERE id\_hewan = {id\_hewan}")

conn.commit()

if cursor.rowcount > 0:

    print(f"Data hewan dengan id\_hewan {id\_hewan} berhasil diupdate.")

else:

    print(f"Tidak ada data hewan dengan id\_hewan {id\_hewan}.")

conn.close()

**11.Update set2**

import sqlite3

conn = sqlite3.connect('database\_hewan.db')

cursor = conn.cursor()

*# Data yang ingin diubah*

id\_hewan = 1

jml\_skrng = 900

*# Menjalankan query UPDATE*

cursor.execute(f"UPDATE HEWAN SET jml\_skrng = {jml\_skrng} WHERE id\_hewan = {id\_hewan}")

conn.commit()

*# Menampilkan pesan setelah update berhasil*

if cursor.rowcount > 0:

    print(f"Data hewan dengan id\_hewan {id\_hewan} berhasil diupdate.")

else:

    print(f"Tidak ada data hewan dengan id\_hewan {id\_hewan}.")

*# Menutup koneksi*

conn.close()

**12.Delete From**

import sqlite3

conn = sqlite3.connect('database\_hewan.db')

cursor = conn.cursor()

jenis = 'Mamalia'

cursor.execute(f"DELETE FROM hewan WHERE jenis = '{jenis}'")

conn.commit()

if cursor.rowcount > 0:

    print(f"Data HEWAN dengan Jenis {jenis} berhasil dihapus.")

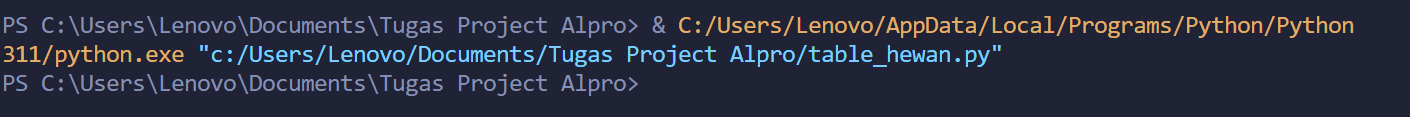
else:

    print(f"Tidak ada data HEWAN dengan Jenis {jenis}.")

conn.close()

**Sceensshot Hasi Codingan:**

**1.Create Database dan Tabel**

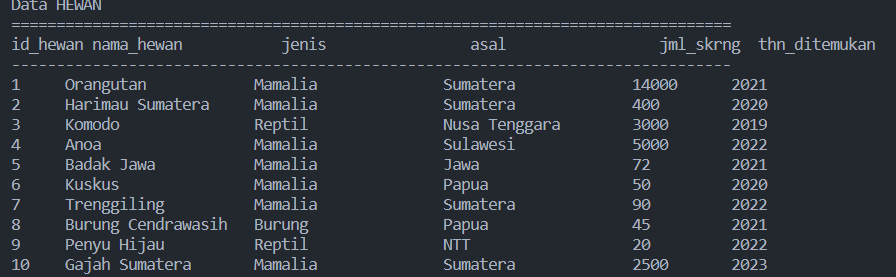


****

**2.Insert**

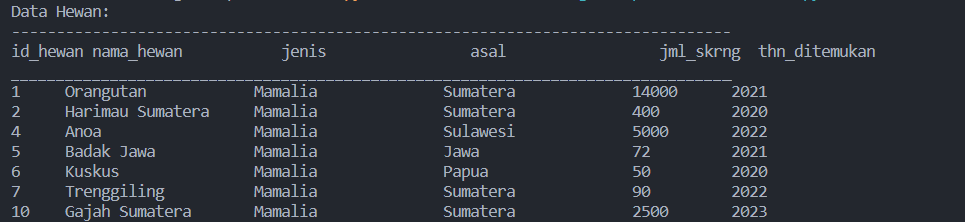
****

**3.Select All**

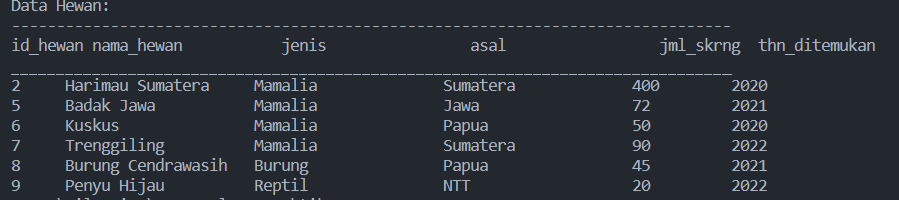
****

**4.Select Where**

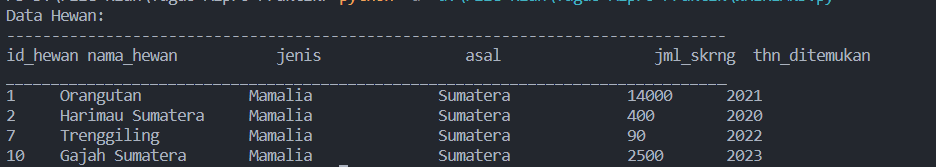
**a.Jenis = Mamalia**

****

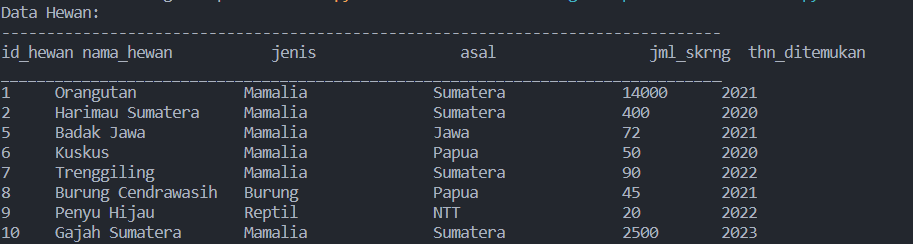
**b.Jumlahnya kurang dari sama dengan 1000 ekor**

****

**5.Select Where And**

****

**6.Select Where Or**

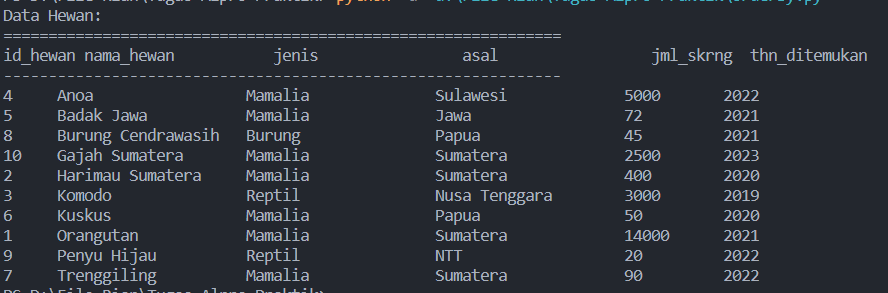
****

**7.Select Sum**

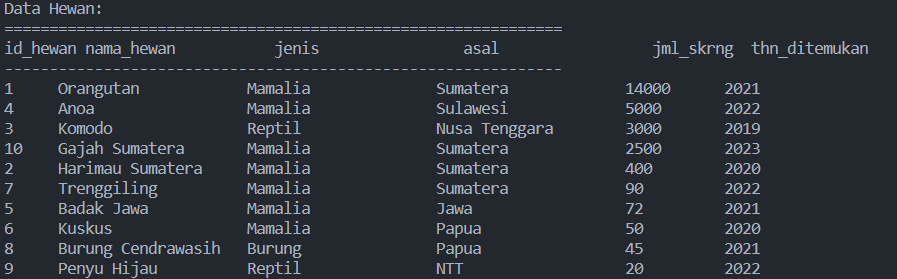
****

**8.Select Order By**

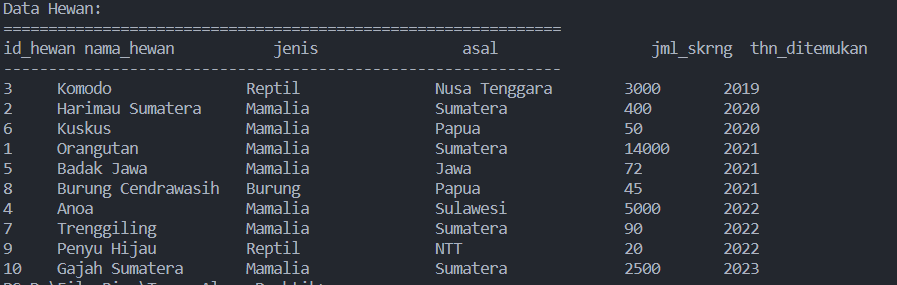
**a.Uruatan nama hewan berdasarkan dari awal alphabetic**

****

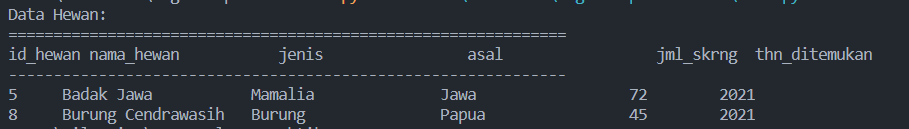
**b.Urutan jumlah hewan saat ini berdasarkan dari yang terbanyak ke paling sedikit**

****

**c.Urutan tahun ditemukna hewan berdasarkan dari tahun yang terlama ke terbaru**

****

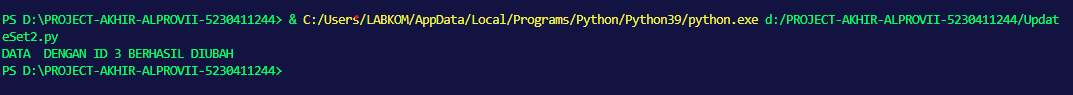
**9.Select Like**

****

**10.Update SET1**

****

**11.Update SET2**

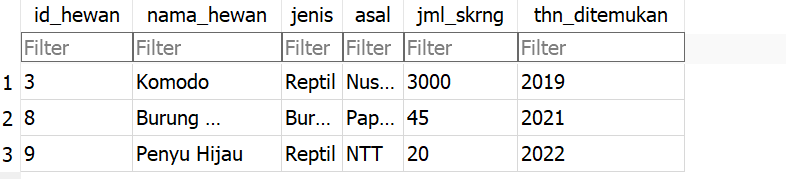
****

**12.Delete from**

**a.Sebelum delete**

****

**b.Setelah delete**

****