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	Projek	Projek Pertemuan 12

Copy Paste Codingan:

1. Soal 1 (CREATE)

```python
import sqlite3
fauna=sqlite3.connect('database_fauna.db')
fauna.execute('''
            CREATE TABLE FAUNA(
                id_fauna INTEGER PRIMARY KEY AUTOINCREMENT,
                nama_fauna VARCHAR(50),
                jenis VARCHAR(50),
                asal VARCHAR(50),
                jml_skrng INT(10),
                thn_ditemukan INT(10)
            )
            ''')
fauna.close()
```

2. Soal 2 (INSERT INTO)

```python
import sqlite3
#koneksi database
conn=sqlite3.connect('database_fauna.db')
#list data mahasiswa
fauna=[
    ('Harimau Jawa','Mamalia','Jawa','40','2019'),
    ('Kuskus Beruang','Mamalia','Sulawesi','30','2021'),
    ('Beruang Madu','Mamalia','Sumatra','1000','2020'),
    ('Pesut Mahakam','Mamalia','Kalimantan','100','2021'),
    ('Burung Maleo','Burung','Sulawesi','7000','2023'),
    ('Macan Dahan','Mamalia','Sumatra','400','2020'),
    ('Kancil','Mamalia','Jawa','60','2022'),
    ('Gajah Kalimantan','Mamalia','Kalimantan','1500','2021'),
    ('Elang Jawa','Burung','Jawa','200','2021'),
    ('Katak Borneo','Amfibi','Kalimantan','2000','2023'),
]
#variabel insert SQL
insert_data='''
            INSERT INTO FAUNA (nama_fauna,jenis,asal,jml_skrng,thn_ditemukan)
            VALUES (?,?,?,?,?)
'''
#execute insert data mahasiswa
conn.executemany(insert_data,fauna)
conn.commit()
conn.close()
```

	id_fauna	nama_fauna	jenis	asal	jml_skrng	thn_ditemukan
	Filter	Filter	Filter	Filter	Filter	Filter
1	1	Harimau Jawa	Mamalia	Jawa	40	2019
2	2	Kuskus Beruang	Mamalia	Sulawesi	30	2021
3	3	Beruang Madu	Mamalia	Sumatra	1000	2020
4	4	Pesut Mahakam	Mamalia	Kalimantan	100	2021
5	5	Burung Maleo	Burung	Sulawesi	7000	2023
6	6	Macan Dahan	Mamalia	Sumatra	400	2020
7	7	Kancil	Mamalia	Jawa	60	2022
8	8	Gajah Kalimantan	Mamalia	Kalimantan	1500	2021
9	9	Elang Jawa	Burung	Jawa	200	2021
10	10	Katak Borneo	Amfibi	Kalimantan	2000	2023

3. Soal 3 (SELECT ALL)

```python
import sqlite3
#koneksi database
fauna=sqlite3.connect('database_fauna.db')
#buat variabel cursos untuk menampung data
cur=fauna.cursor()
#select data from table
# bintang(*) artinya menyeleksi semua isian table
cur.execute("SELECT * FROM FAUNA")
data_fauna=cur.fetchall()

#menampilkan data dalam format table
if len(data_fauna)>0:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jen
is","asal","jml_skrng","thn_ditemukan"))
    print("="*105)
    for fun in data_fauna:
        print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun
[3],fun[4],fun[5]))
fauna.close()
```

4. Soal 4 (SELECT WHERE)
- Select Where Jenis

```python
import sqlite3
fauna=sqlite3.connect('database_fauna.db')
#SELECT ALL DATA PEGAWAI
kursor=fauna.cursor()
#mengambil semua data dalam tabel dan tampilkan
kursor.execute("SELECT*FROM FAUNA WHERE jenis = 'Mamalia'")
#tampilkan dalam bentuk baris
baris_tabel=kursor.fetchall()
#membuat format tabel dengan method format()
print("data fauna 2023")
print("="*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
```

```python
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

- Select Where Jumlah

```python
import sqlite3
fauna=sqlite3.connect('database_fauna.db')
#SELECT ALL DATA PEGAWAI
kursor=fauna.cursor()
#mengambil semua data dalam tabel dan tampilkan
kursor.execute("SELECT*FROM FAUNA WHERE jml_skrng <=1000")
#tampilkan dalam bentuk baris
baris_tabel=kursor.fetchall()
#membuat format tabel dengan method format()
print("data fauna 2023")
print("="*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

5. Soal 5 (SELECT WHERE AND)

```python
import sqlite3
fauna=sqlite3.connect('database_fauna.db')
#SELECT ALL DATA PEGAWAI
kursor=fauna.cursor()
#mengambil semua data dalam tabel dan tampilkan
kursor.execute("SELECT*FROM FAUNA WHERE jenis='Mamalia' AND asal='Sulawesi' ")
#tampilkan dalam bentuk baris
baris_tabel=kursor.fetchall()
#membuat format tabel dengan method format()
print("data fauna 2023")
print("="*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

6. Soal 6 (SELECT WHERE OR)

```python
import sqlite3
fauna=sqlite3.connect('database_fauna.db')
#SELECT ALL DATA PEGAWAI
```

```python
kursor=fauna.cursor()
#mengambil semua data dalam tabel dan tampilkan
kursor.execute("SELECT*FROM FAUNA WHERE asal='Sumatera' OR jml_skrng > 500 ")
#tampilkan dalam bentuk baris
baris_tabel=kursor.fetchall()
#membuat format tabel dengan method format()
print("data fauna 2023")
print("="*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

7. Soal 7 (SELECT SUM)

```python
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
conn = sqlite3.connect('database_fauna.db')
cursor = conn.cursor()

# Menjalankan query SUM
cursor.execute("SELECT SUM(jml_skrng) FROM FAUNA")
jml_skrng = cursor.fetchone()[0]

print(f"Total Populasi hewan langka saat ini: {jml_skrng}")

# Menutup koneksi
conn.close()
```

8. Soal 8 (SELECT ORDER BY)
- orderby1

```python
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
fauna = sqlite3.connect('database_fauna.db')
kursor = fauna.cursor()

# Menjalankan query SELECT dengan ORDER BY
kursor.execute("SELECT * FROM FAUNA ORDER BY nama_fauna ASC") #ASC|DESC
baris_tabel = kursor.fetchall()

print("Data Pegawai:")
print("-"*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
```

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

- orderby2

```
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
fauna = sqlite3.connect('database_fauna.db')
kursor = fauna.cursor()

# Menjalankan query SELECT dengan ORDER BY
kursor.execute("SELECT * FROM FAUNA ORDER BY jml_skrng DESC") #ASC|DESC
baris_tabel = kursor.fetchall()

print("Data Pegawai:")
print("-"*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

- orderby3

```
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
fauna = sqlite3.connect('database_fauna.db')
kursor = fauna.cursor()

# Menjalankan query SELECT dengan ORDER BY
kursor.execute("SELECT * FROM FAUNA ORDER BY thn_ditemukan ASC") #ASC|DESC
baris_tabel = kursor.fetchall()

print("Data Pegawai:")
print("-"*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

9. Soal 9 (SELECT LIKE)

```
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
fauna = sqlite3.connect('database_fauna.db')
kursor = fauna.cursor()
```

```python
# Menjalankan query SELECT dengan ORDER BY
nama_fauna = 'B%'
kursor.execute(f"SELECT * FROM FAUNA WHERE nama_fauna LIKE ?", (nama_fauna,))
baris_tabel = kursor.fetchall()

print("Data Fauna:")
print("-"*105)
print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format("id_fauna","nama_fauna","jenis",
"asal","jml_skrng","thn_ditemukan"))
print("-"*105)
#tampilkan data sesuai format dng perulangan
for fun in baris_tabel:
    print("{:<10}{:<20}{:<20}{:<20}{:<20}{:<20}".format(fun[0],fun[1],fun[2],fun[3],
fun[4],fun[5]))
fauna.close()
```

10. Soal 10 (UPDATE SET)
- update1

```python
# UPDATE table_name
# SET column1 = value1, column2 = value2, ...
# WHERE condition;
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
conn = sqlite3.connect('database_fauna.db')
cursor = conn.cursor()

# Data yang ingin diubah
id_fauna = 10
jml_skrng = 650

# Menjalankan query UPDATE
cursor.execute(f"UPDATE FAUNA SET jml_skrng = {jml_skrng} WHERE id_fauna  =
{id_fauna}")
conn.commit()

# Menampilkan pesan setelah update berhasil
if cursor.rowcount > 0:
    print(f"Data Fauna {id_fauna} berhasil diupdate.")
else:
    print(f"Tidak ada data fauna dengan ID {id_fauna}.")

# Menutup koneksi
conn.close()
```

- update2

```python
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
conn = sqlite3.connect('database_fauna.db')
cursor = conn.cursor()
```

```python
# Data yang ingin diubah
id_fauna = 4

# Menjalankan query UPDATE
cursor.execute(f"UPDATE FAUNA SET asal = 'Kalimantan Timur' WHERE id_fauna = {id_fauna}")
conn.commit()

# Menampilkan pesan setelah update berhasil
if cursor.rowcount > 0:
    print(f"Data Fauna {id_fauna} berhasil diupdate.")
else:
    print(f"Tidak ada data Fauna dengan ID {id_fauna}.")

# Menutup koneksi
conn.close()
```

11. Soal 11 (DELETE FROM)

```python
import sqlite3

# Membuat koneksi ke database atau membuat database baru jika belum ada
conn = sqlite3.connect('database_fauna.db')
cursor = conn.cursor()

# Menjalankan query DELETE
asal = "Kalimantan"  # ID pegawai yang akan dihapus
cursor.execute(f"DELETE FROM FAUNA WHERE asal = ?", (asal,))
conn.commit()

# Menampilkan pesan setelah penghapusan berhasil
if cursor.rowcount > 0:
    print(f"Data pegawai dengan ID {asal} berhasil dihapus.")
else:
    print(f"Tidak ada data pegawai dengan ID {asal}.")

# Menutup koneksi
conn.close()
```
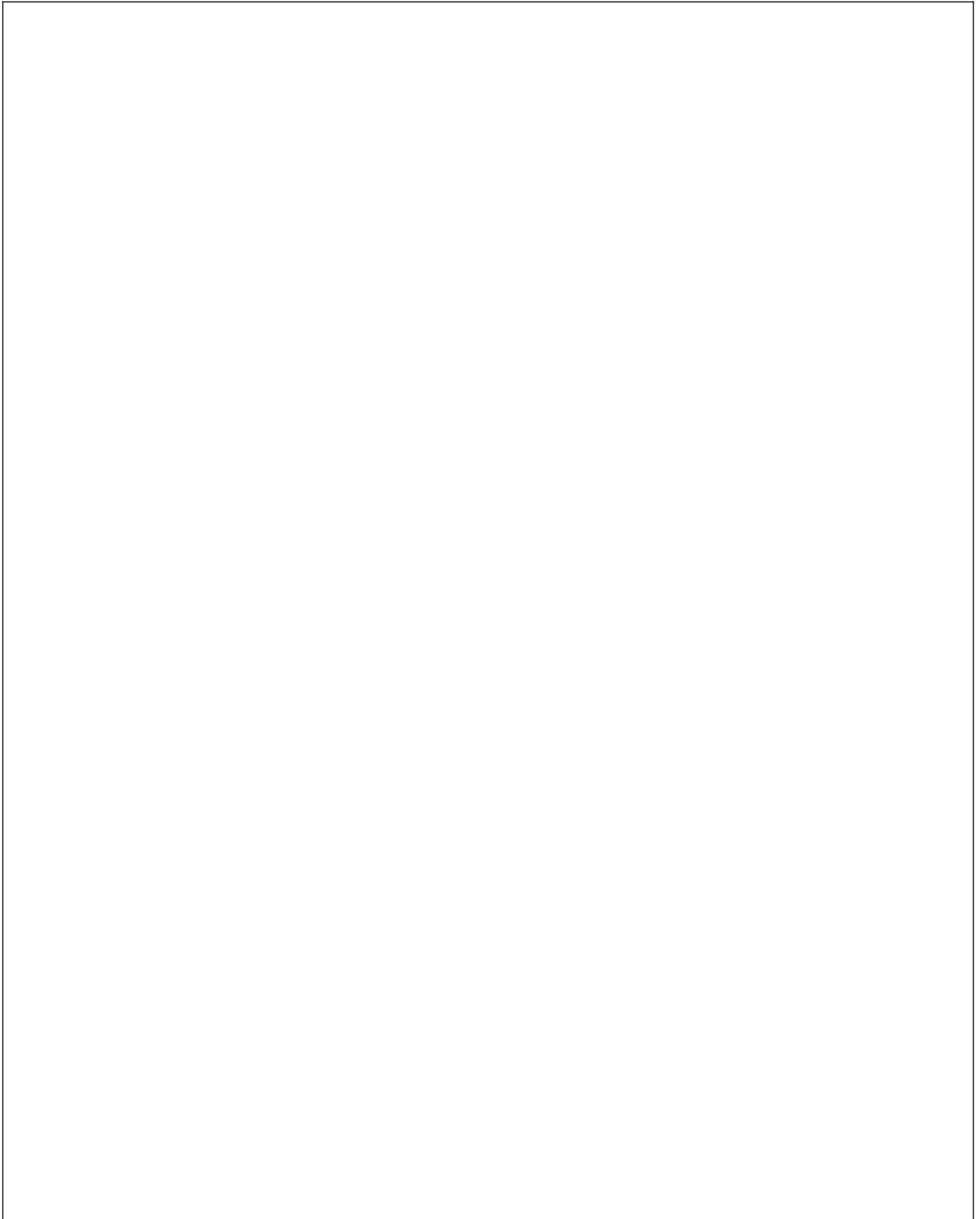
Screenshot Hasil Program:

1. Soal 1 (CREATE)

```
PS C:\Users\ASUS TUF\Documents\projek pertemuan 12> & "C:/Users/ASUS TUF/AppData/Local/Programs/Python/Python311/python.exe" "c:/Us
ers/ASUS TUF/Documents/projek pertemuan 12/1-create-fauna.py"
PS C:\Users\ASUS TUF\Documents\projek pertemuan 12>
```

2. Soal 2 (INSERT INTO)

```
PS C:\Users\ASUS TUF\Documents\projek pertemuan 12> & "C:/Users/ASUS TUF/AppData/Local/Programs/Python/Python311/python.exe" "c:/Us
ers/ASUS TUF/Documents/projek pertemuan 12/2-insert-fauna.py"
PS C:\Users\ASUS TUF\Documents\projek pertemuan 12>
```

3. Soal 3 (SELECT ALL)

```
id_fauna  nama_fauna        jenis        asal          jml_skrng        thn_ditemukan
==================================================================================================
1         Harimau Jawa      Mamalia      Jawa          40               2019
2         Kuskus Beruang    Mamalia      Sulawesi      30               2021
3         Beruang Madu      Mamalia      Sumatra       1000             2020
4         Pesut Mahakam     Mamalia      Kalimantan    100              2021
5         Burung Maleo      Burung       Sulawesi      7000             2023
6         Macan Dahan       Mamalia      Sumatra       400              2020
7         Kancil            Mamalia      Jawa          60               2022
8         Gajah Kalimantan  Mamalia      Kalimantan    1500             2021
9         Elang Jawa        Burung       Jawa          200              2021
10        Katak Borneo      Amfibi       Kalimantan    2000             2023
```

4. Soal 4 (SELECT WHERE)

- Select Where Jenis

```
id_fauna  nama_fauna        jenis        asal          jml_skrng        thn_ditemukan
--------------------------------------------------------------------------------------------------
1         Harimau Jawa      Mamalia      Jawa          40               2019
2         Kuskus Beruang    Mamalia      Sulawesi      30               2021
3         Beruang Madu      Mamalia      Sumatra       1000             2020
4         Pesut Mahakam     Mamalia      Kalimantan    100              2021
6         Macan Dahan       Mamalia      Sumatra       400              2020
7         Kancil            Mamalia      Jawa          60               2022
8         Gajah Kalimantan  Mamalia      Kalimantan    1500             2021
```

- Select Where Jumlah

```
data fauna 2023
==================================================================================================
id_fauna  nama_fauna        jenis        asal          jml_skrng        thn_ditemukan
--------------------------------------------------------------------------------------------------
1         Harimau Jawa      Mamalia      Jawa          40               2019
2         Kuskus Beruang    Mamalia      Sulawesi      30               2021
3         Beruang Madu      Mamalia      Sumatra       1000             2020
4         Pesut Mahakam     Mamalia      Kalimantan    100              2021
6         Macan Dahan       Mamalia      Sumatra       400              2020
7         Kancil            Mamalia      Jawa          60               2022
9         Elang Jawa        Burung       Jawa          200              2021
```

5. Soal 5 (SELECT WHERE AND)

```
data fauna 2023
==================================================================================================
id_fauna  nama_fauna        jenis        asal          jml_skrng        thn_ditemukan
--------------------------------------------------------------------------------------------------
2         Kuskus Beruang    Mamalia      Sulawesi      30               2021
```

6. Soal 6 (SELECT WHERE OR)

```
data fauna 2023
==================================================================================================
id_fauna  nama_fauna        jenis        asal          jml_skrng        thn_ditemukan
--------------------------------------------------------------------------------------------------
3         Beruang Madu      Mamalia      Sumatra       1000             2020
5         Burung Maleo      Burung       Sulawesi      7000             2023
8         Gajah Kalimantan  Mamalia      Kalimantan    1500             2021
10        Katak Borneo      Amfibi       Kalimantan    2000             2023
```

7. Soal 7 (SELECT SUM)

```
Total Populasi hewan langka saat ini: 12330
```

8. Soal 8 (SELECT ORDER BY)

- orderby1

```
Data Pegawai:
-------------------------------------------------------------------------------------------
id_fauna  nama_fauna         jenis        asal           jml_skrng        thn_ditemukan
-------------------------------------------------------------------------------------------
3         Beruang Madu       Mamalia      Sumatra        1000             2020
5         Burung Maleo       Burung       Sulawesi       7000             2023
9         Elang Jawa         Burung       Jawa           200              2021
8         Gajah Kalimantan   Mamalia      Kalimantan     1500             2021
1         Harimau Jawa       Mamalia      Jawa           40               2019
7         Kancil             Mamalia      Jawa           60               2022
10        Katak Borneo       Amfibi       Kalimantan     2000             2023
2         Kuskus Beruang     Mamalia      Sulawesi       30               2021
6         Macan Dahan        Mamalia      Sumatra        400              2020
4         Pesut Mahakam      Mamalia      Kalimantan     100              2021
```

- orderby2

```
Data Pegawai:
-------------------------------------------------------------------------------------------
id_fauna  nama_fauna         jenis        asal           jml_skrng        thn_ditemukan
-------------------------------------------------------------------------------------------
5         Burung Maleo       Burung       Sulawesi       7000             2023
10        Katak Borneo       Amfibi       Kalimantan     2000             2023
8         Gajah Kalimantan   Mamalia      Kalimantan     1500             2021
3         Beruang Madu       Mamalia      Sumatra        1000             2020
6         Macan Dahan        Mamalia      Sumatra        400              2020
9         Elang Jawa         Burung       Jawa           200              2021
4         Pesut Mahakam      Mamalia      Kalimantan     100              2021
7         Kancil             Mamalia      Jawa           60               2022
1         Harimau Jawa       Mamalia      Jawa           40               2019
2         Kuskus Beruang     Mamalia      Sulawesi       30               2021
```

- orderby3

```
Data Pegawai:
-------------------------------------------------------------------------------------------
id_fauna  nama_fauna         jenis        asal           jml_skrng        thn_ditemukan
-------------------------------------------------------------------------------------------
1         Harimau Jawa       Mamalia      Jawa           40               2019
3         Beruang Madu       Mamalia      Sumatra        1000             2020
6         Macan Dahan        Mamalia      Sumatra        400              2020
2         Kuskus Beruang     Mamalia      Sulawesi       30               2021
4         Pesut Mahakam      Mamalia      Kalimantan     100              2021
8         Gajah Kalimantan   Mamalia      Kalimantan     1500             2021
9         Elang Jawa         Burung       Jawa           200              2021
7         Kancil             Mamalia      Jawa           60               2022
5         Burung Maleo       Burung       Sulawesi       7000             2023
10        Katak Borneo       Amfibi       Kalimantan     2000             2023
```

9. Soal 9 (SELECT LIKE)

```
-------------------------------------------------------------------------------------------
id_fauna  nama_fauna         jenis        asal           jml_skrng        thn_ditemukan
-------------------------------------------------------------------------------------------
3         Beruang Madu       Mamalia      Sumatra        1000             2020
5         Burung Maleo       Burung       Sulawesi       7000             2023
```

- update1
- update2

10. Soal 10 (UPDATE SET)

```
Data Fauna 10 berhasil diupdate.
```

```
id_fauna  nama_fauna        jenis           asal                jml_skrng           thn_ditemukan
==================================================================================================
1         Harimau Jawa      Mamalia         Jawa                40                  2019
2         Kuskus Beruang    Mamalia         Sulawesi            30                  2021
3         Beruang Madu      Mamalia         Sumatra             1000                2020
4         Pesut Mahakam     Mamalia         Kalimantan          100                 2021
5         Burung Maleo      Burung          Sulawesi            7000                2023
6         Macan Dahan       Mamalia         Sumatra             400                 2020
7         Kancil            Mamalia         Jawa                60                  2022
8         Gajah Kalimantan  Mamalia         Kalimantan          1500                2021
9         Elang Jawa        Burung          Jawa                200                 2021
10        Katak Borneo      Amfibi          Kalimantan          650                 2023
```

```
Data Fauna 4 berhasil diupdate.
```

```
id_fauna  nama_fauna        jenis           asal                jml_skrng           thn_ditemukan
==================================================================================================
1         Harimau Jawa      Mamalia         Jawa                40                  2019
2         Kuskus Beruang    Mamalia         Sulawesi            30                  2021
3         Beruang Madu      Mamalia         Sumatra             1000                2020
4         Pesut Mahakam     Mamalia         Kalimantan Timur    100                 2021
5         Burung Maleo      Burung          Sulawesi            7000                2023
6         Macan Dahan       Mamalia         Sumatra             400                 2020
7         Kancil            Mamalia         Jawa                60                  2022
8         Gajah Kalimantan  Mamalia         Kalimantan          1500                2021
9         Elang Jawa        Burung          Jawa                200                 2021
10        Katak Borneo      Amfibi          Kalimantan          650                 2023
```

11. Soal 11 (DELETE FROM)

```
id_fauna  nama_fauna        jenis           asal                jml_skrng           thn_ditemukan
==================================================================================================
1         Harimau Jawa      Mamalia         Jawa                40                  2019
2         Kuskus Beruang    Mamalia         Sulawesi            30                  2021
3         Beruang Madu      Mamalia         Sumatra             1000                2020
4         Pesut Mahakam     Mamalia         Kalimantan Timur    100                 2021
5         Burung Maleo      Burung          Sulawesi            7000                2023
6         Macan Dahan       Mamalia         Sumatra             400                 2020
7         Kancil            Mamalia         Jawa                60                  2022
9         Elang Jawa        Burung          Jawa                200                 2021
```