

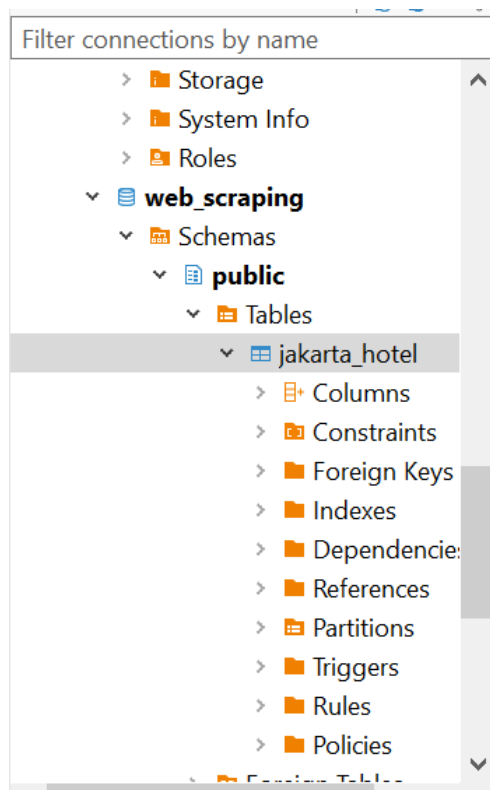
Web Scraping: SQL Query

Deskripsi Assignment

Dalam assignment ini, Anda diminta untuk melakukan web scraping pada sebuah website menggunakan BeautifulSoup untuk mengumpulkan data tentang akomodasi tempat penginapan di Indonesia dari website (**Oyo atau website lainnya, disarankan silahkan bisa di Oyo**). Ikuti saran task yang telah diberikan dibawah.

Instruksi (no 1, 2, 3, dan 6 ada di Jupyter Notebook):

4. Buatlah database di PostgreSQL dan tabel untuk menyimpan data hasil scraping.



Perlihatkan semua kolom di tabel 'jakarta_hotel':

```
--create database web_scraping;
select * from jakarta_hotel;
```

ikarta_hotel 1 ×

select * from jakarta_hotel

	Name	Price	Discount	Rating	Stars	Reputation	Location
1	Collection O Manggis Inn	Rp119.508	83% off	(735 Ratings)	4.6	Excellent	Near Jakarta History Museum, Jakarta
2	Capital O 90635 Tango Juliet Residence	Rp233.788	72% off	(132 Ratings)	4.6	Excellent	Daerah Khusus Ibukota Jakarta, Jakarta
3	Collection O 92130 Hotel Fiducia Kaji	Rp108.017	76% off	(672 Ratings)	4.6	Excellent	Daerah Khusus Ibukota Jakarta, Jakarta
4	Townhouse Oak Gunung Sahari Near Ancol	Rp144.094	79% off	(432 Ratings)	4.6	Excellent	14420, Jakarta
5	Hotel O Poris Residence Syariah	Rp103.405	70% off	(514 Ratings)	4.5	Excellent	Jl. Maulana hasanuddin no 32 RT 3 Rw 1 kel po
6	Super OYO Townhouse 1 Hotel Salemba	Rp171.018	78% off	(817 Ratings)	4.7	Excellent	Near Taman Ismail Marzuki, Jakarta
7	Capital O 141 Fatmawati Cozy Residence	Rp259.930	65% off	(704 Ratings)	4.9	Fabulous	Near MRT Cipete Raya Station , Jakarta
8	Super OYO Townhouse 2 Hotel Gunung Sahari	Rp169.880	78% off	(935 Ratings)	4.7	Excellent	Near Jakarta International Expo, Jakarta
9	Collection O Tanah Abang Near Stasiun Tanah Abang	Rp112.157	82% off	(288 Ratings)	3.9	Good	Daerah Khusus Ibukota Jakarta, Jakarta
10	Townhouse Oak J&b Gunung Sahari	Rp104.975	69% off	(1931 Ratings)	4	Very Good	Daerah Khusus Ibukota Jakarta 10720, Jakarta
11	Hotel O Mangga Besar Near Kota Tua Formerly Fresh H	Rp82.099	85% off	(74 Ratings)	3.7	Good	Indonesia, Jakarta
12	Collection O Mangga Besar Near Mangga Besar Station	Rp117.878	83% off	(407 Ratings)	3.9	Good	DKI Jakarta, Jakarta
13	Hotel O J&b Room Utan Kayu	Rp124.200	77% off	(1038 Ratings)	4.5	Excellent	Near utan kayu raya, Jakarta
14	Hotel O Point Inn	Rp120.808	75% off	(713 Ratings)	4.7	Excellent	Near Ukrida, Jakarta

Refresh Save Cancel Export data 200 20 20 row(s) fetched - 0.002s, on 2025-07-13 at 00:26:38

- Setelah data disimpan, lakukan query sederhana untuk menarik data dari PostgreSQL dan tampilkan beberapa contoh hasil query tersebut dalam bentuk Screen Shot yang bisa anda simpan di drive beserta file code scrapping yang telah anda kerjakan. Jelaskan bagaimana data ini dapat digunakan untuk analisis lebih lanjut atau aplikasi lainnya.

1st Query: Hotel harga terjangkau kualitas tinggi

```
-- Hotel harga terjangkau dengan kualitas tinggi
SELECT "Name", "Total_Rating", "Price_in_IDR", "Reputation", "Category"
FROM jakarta_hotel_jh
WHERE "Stars" >= 4.0
AND "Price_in_IDR" < 150000
ORDER BY "Price_in_IDR" ASC;
```

ikarta_hotel 1 ×

SELECT "Name", "Total_Rating", "Price_in_IDR"

	Name	Total_Rating	Price_in_IDR	Reputation	Category
1	Hotel O Poris Residence Syariah	514	103,405	Excellent	Saver Double
2	Townhouse Oak J&b Gunung Sahari	1,931	104,975	Very Good	Indonesia Standard Double
3	Collection O 92130 Hotel Fiducia Kaji	672	108,017	Excellent	Indonesia Deluxe Double
4	Collection O Manggis Inn	735	119,508	Excellent	Indonesia Standard Double
5	Hotel O Point Inn	713	120,808	Excellent	Indonesia Standard Double
6	Hotel O J&b Room Utan Kayu	1,038	124,200	Excellent	Indonesia Standard Double
7	Hotel O Gayatri Residence	181	130,308	Excellent	Indonesia Standard Double
8	Collection O Gambir Near Masjid Istiqlal Formerly Aleander Hotel	730	133,617	Very Good	Indonesia Deluxe Double
9	Hotel O Near Pasar Baru	517	135,000	Excellent	Indonesia Standard Double
10	Townhouse Oak Gunung Sahari Near Ancol	432	144,094	Excellent	Indonesia Deluxe Budget
11	Hotel O Puri Lotus	383	149,544	Excellent	Indonesia Standard Double

2nd Query: Berapa banyak uang yang dihemat?

-- How much money is saved from the discount

```

SELECT
  "Name",
  "Discount_in_%",
  "Original_Price",
  "Price_in_IDR",
  ("Original_Price" - "Price_in_IDR") AS money_saved
FROM jakarta_hotel_jh
ORDER BY money_saved DESC;

```

Name	Discount_in_%	Original_Price	Price_in_IDR	money_saved
Collection O Gambir Near Masjid Istiqlal Formerly Aleander Hotel	82	742,317	133,617	608,700
Super OYO Townhouse 1 Hotel Salemba	78	777,355	171,018	606,337
Super OYO Townhouse 2 Hotel Gunung Sahari	78	772,182	169,880	602,302
Capital O 90635 Tango Juliet Residence	72	834,957	233,788	601,169
Collection O Manggis Inn	83	702,988	119,508	583,480
Collection O Mangga Besar Near Mangga Besar Station	83	693,400	117,878	575,522
Townhouse Oak Gunung Sahari Near Ancol	79	686,162	144,094	542,068
Collection O Tanah Abang Near Stasiun Tanah Abang Formerly Hotel Bimo Slipi	82	623,094	112,157	510,937
Capital O 141 Fatmawati Cozy Residence	65	742,657	259,930	482,727
Collection O Mangga Besar Near Lokasari Square Formerly 45 Residence	75	634,444	158,611	475,833
Hotel O Mangga Besar Near Kota Tua Formerly Fresh Hotel	85	547,327	82,099	465,228
Hotel O Cempaka Place Homestay	72	637,396	178,471	458,925
Hotel O Gayatri Residence	77	566,557	130,308	436,249
Hotel O Puri Lotus	74	575,169	149,544	425,625
Hotel O J&b Room Utan Kayu	77	540,000	124,200	415,800

3rd Query: Jumlah hotel tiap lokasi unik (sayangnya input lokasi jelek dan perlu dibereskan)

-- Jumlah hotel per lokasi

```

SELECT "Location", COUNT(*) AS jumlah_hotel
FROM jakarta_hotel_jh
GROUP BY "Location"
ORDER BY jumlah_hotel DESC;

```

Location	jumlah_hotel
Daerah Khusus Ibukota Jakarta, Jakarta	3
Indonesia, Jakarta	2
Near utan kayu raya, Jakarta	1
Daerah Khusus Ibukota Jakarta 10720, Jakarta	1
Near Jakarta International Expo, Jakarta	1
DKI Jakarta, Jakarta	1
Near Pertamina Meeting Hall, Jakarta	1
Near Cinere Bellevue Mall, Jakarta	1
Near Taman Ismail Marzuki, Jakarta	1
Near Jakarta History Museum, Jakarta	1
Near Pasar Baru, Jakarta	1
Jl. Maulana hasanuddin no 32 RT 3 Rw 1 kel poris Gaga Kec Batu Ceper, Jakarta	1
Near Juanda Station, Jakarta	1
Near Ukrida, Jakarta	1
14420. Jakarta	1

4th Query: Rata-rata rating (jumlah reviewer) dan kategori hotel

```
-- Rata-rata rating dan harga per kategori hotel
SELECT "Category",
       ROUND(AVG("Total_Rating"), 2) AS avg_rating,
       ROUND(AVG("Price_in_IDR")) AS avg_price
FROM jakarta_hotel jh
GROUP BY "Category"
ORDER BY avg_rating DESC;
```

jakarta_hotel 1 ×

SELECT "Category", ROUND(AVG("Total_Rating"), 2) AS avg_rating, ROUND(AVG("Price_in_IDR")) AS avg_price

	A-Z Category	123 avg_rating	123 avg_price
1	Indonesia Standard Double	666.3	138,498
2	Indonesia Deluxe Double	538.75	153,103
3	Saver Double	514	103,405
4	Indonesia Deluxe Budget	432	144,094

5th Query: Hotel dengan Reputasi Tertinggi: Fabulous and Excellent

```
-- Hotel dengan reputasi tertinggi
SELECT "Name", "Reputation", "Stars"
FROM jakarta_hotel jh
WHERE "Reputation" IN ('Excellent', 'Fabulous')
and "Stars" > 4.0
order by "Stars" desc;
```

jakarta_hotel 1 ×

SELECT "Name", "Reputation", "Stars" FROM jakarta_hotel jh WHERE "Reputation" IN ('Excellent', 'Fabulous') and "Stars" > 4.0 order by "Stars" desc;

	A-Z Name	A-Z Reputation	123 Stars
1	Capital O 141 Fatmawati Cozy Residence	Fabulous	4.9
2	Super OYO Townhouse 2 Hotel Gunung Sahari	Excellent	4.7
3	Collection O Mangga Besar Near Lokasari Square Formerly 45 Residence	Excellent	4.7
4	Hotel O Point Inn	Excellent	4.7
5	Hotel O Cempaka Place Homestay	Excellent	4.7
6	Super OYO Townhouse 1 Hotel Salemba	Excellent	4.7
7	Collection O Manggis Inn	Excellent	4.6
8	Capital O 90635 Tango Juliet Residence	Excellent	4.6
9	Collection O 92130 Hotel Fiducia Kaji	Excellent	4.6
10	Townhouse Oak Gunung Sahari Near Ancol	Excellent	4.6
11	Hotel O Near Pasar Baru	Excellent	4.5
12	Hotel O J&b Room Utan Kayu	Excellent	4.5
13	Hotel O Puri Lotus	Excellent	4.5
14	Hotel O Poris Residence Syariah	Excellent	4.5

6th Query: Most Reviewed Hotel

```
-- hotel dg rating/review tertinggi, more frequently rated or visited
SELECT *
FROM (
  SELECT
    "Name",
    "Total_Rating",
    "Stars",
    "Price_in_IDR",
    DENSE_RANK() OVER (ORDER BY "Total_Rating" DESC) AS rank_rating
  FROM jakarta_hotel
) AS ranked
WHERE rank_rating <= 5;
```

jakarta_hotel 1 ×

SELECT * FROM (SELECT "Name", "Total_Ratir" Enter a SQL expression to filter results (use Ctrl+Space)

	Name	Total_Rating	Stars	Price_in_IDR	rank_rating
1	Townhouse Oak J&b Gunung Sahari	1,931	4	104,975	1
2	Hotel O J&b Room Utan Kayu	1,038	4.5	124,200	2
3	Super OYO Townhouse 2 Hotel Gunung Sahari	935	4.7	169,880	3
4	Super OYO Townhouse 1 Hotel Salemba	817	4.7	171,018	4
5	Collection O Manggis Inn	735	4.6	119,508	5

7th Query: Price Order for Each Hotel Category

```
-- urutkan hotel berdasarkan harga tiap kategori
SELECT *
FROM (
  SELECT
    "Name",
    "Category",
    "Price_in_IDR",
    ROW_NUMBER() OVER (PARTITION BY "Category" ORDER BY "Price_in_IDR" ASC) AS row_num
  FROM jakarta_hotel
) AS ranked
WHERE row_num <= 3;
```

karta_hotel 1 ×

ELECT * FROM (SELECT "Name", "Category" Enter a SQL expression to filter results (use Ctrl+Space)

	Name	Category	Price_in_IDR	row_num
1	Townhouse Oak Gunung Sahari Near Ancol	Indonesia Deluxe Budget	144,094	1
2	Collection O 92130 Hotel Fiducia Kaji	Indonesia Deluxe Double	108,017	1
3	Collection O Tanah Abang Near Stasiun Tanah Abang Formerly Hotel Bimo Slipi	Indonesia Deluxe Double	112,157	2
4	Collection O Mangga Besar Near Mangga Besar Station	Indonesia Deluxe Double	117,878	3
5	Hotel O Mangga Besar Near Kota Tua Formerly Fresh Hotel	Indonesia Standard Double	82,099	1
6	Townhouse Oak J&b Gunung Sahari	Indonesia Standard Double	104,975	2
7	Collection O Manggis Inn	Indonesia Standard Double	119,508	3
8	Hotel O Poris Residence Syariah	Saver Double	103,405	1

8th Query: Diskon tertinggi di tiap lokasi unik

```
-- Cek yang diskonnya paling tinggi di tiap lokasi tertentu/unik
SELECT *
FROM (
  SELECT
    "Name",
    "Location",
    "Discount_in_%",
    RANK() OVER (PARTITION BY "Location" ORDER BY "Discount_in_" DESC) AS rank_diskon
  FROM jakarta_hotel
) AS ranked
WHERE rank_diskon = 1;
```

	Name	Location	Discount_in_%	rank_diskon
1	Townhouse Oak Gunung Sahari Near Ancol	14420, Jakarta	79	1
2	Townhouse Oak J&b Gunung Sahari	Daerah Khusus Ibukota Jakarta 10720, Jakarta	69	1
3	Collection O Tanah Abang Near Stasiun Tanah Abang Formerly Hote	Daerah Khusus Ibukota Jakarta, Jakarta	82	1
4	Collection O Mangga Besar Near Mangga Besar Station	DKI Jakarta, Jakarta	83	1
5	Hotel O Mangga Besar Near Kota Tua Formerly Fresh Hotel	Indonesia, Jakarta	85	1
6	Hotel O Poris Residence Syariah	Jl. Maulana hasanuddin no 32 RT 3 Rw 1 kel poris Gaga Kec Batu Cep	70	1
7	Hotel O Puri Lotus	Near Cinere Bellevue Mall, Jakarta	74	1
8	Collection O Manggis Inn	Near Jakarta History Museum, Jakarta	83	1
9	Super OYO Townhouse 2 Hotel Gunung Sahari	Near Jakarta International Expo, Jakarta	78	1
10	Collection O Gambir Near Masjid Istiqlal Formerly Aleander Hotel	Near Juanda Station, Jakarta	82	1
11	Collection O Mangga Besar Near Lokasari Square Formerly 45 Reside	Near Mangga Dua Mall, Jakarta	75	1
12	Capital O 141 Fatmawati Cozy Residence	Near MRT Cipete Raya Station , Jakarta	65	1

9th Query: Price Category

```
-- Category of hotel price
WITH price_category AS (
  SELECT
    "Name",
    "Price_in_IDR",
    CASE
      WHEN "Price_in_IDR" < 100000 THEN 'Low'
      WHEN "Price_in_IDR" BETWEEN 100000 AND 200000 THEN 'Medium'
      ELSE 'High'
    END AS price_tier
  FROM jakarta_hotel
)
SELECT price_tier, COUNT(*) AS jumlah_hotel
FROM price_category
GROUP BY price_tier;
```

	price_tier	jumlah_hotel
1	High	2
2	Low	1
3	Medium	17