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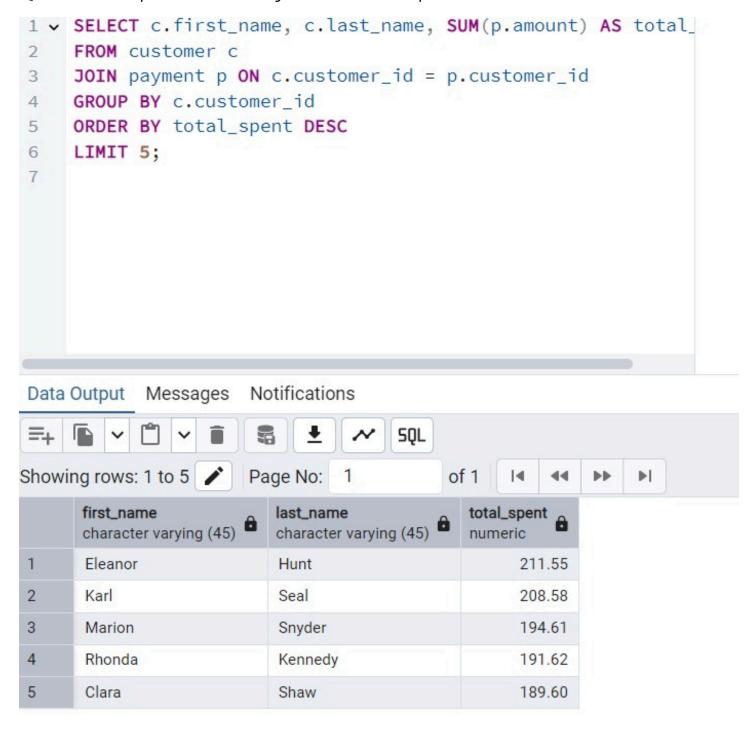
Id: 27150

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DBMS CORRECTIONS OF WORK

Question 1: Top 5 Customers by Total Amount Spent

```sql
SELECT c.first_name, c.last_name, SUM(p.amount) AS total_
FROM customer c
JOIN payment p ON c.customer_id = p.customer_id
GROUP BY c.customer_id
ORDER BY total_spent DESC
LIMIT 5;
```

Data Output   Messages   Notifications

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	first_name character varying (45)	last_name character varying (45)	total_spent numeric
1	Eleanor	Hunt	211.55
2	Karl	Seal	208.58
3	Marion	Snyder	194.61
4	Rhonda	Kennedy	191.62
5	Clara	Shaw	189.60

notice: to others I have try to minimaze space not using screenshoot

Question 2: Films That Were Never Rented

query:

```
SELECT DISTINCT f.film_id, f.title

FROM film f

JOIN inventory i ON f.film_id = i.film_id

LEFT JOIN rental r ON i.inventory_id = r.inventory_id

WHERE r.rental_id IS NULL

ORDER BY f.film_id;
```

output:

film_id	title
19	ACE GOLDFINGER
44	ADAPTATION HOLES
64	AFFAIR PREJUDICE
79	AFRICAN EGG
111	AGENT TRUMAN
...	...

3.Customers with More Than 20 Rentals

query:

```
SELECT

    c.customer_id,

    c.first_name,

    c.last_name,

    COUNT(r.rental_id) AS total_rentals

FROM

    customer c
```

JOIN rental r ON c.customer_id = r.customer_id

GROUP BY

   c.customer_id, c.first_name, c.last_name

HAVING

   COUNT(r.rental_id) > 20

ORDER BY

   total_rentals DESC;

output:

customer_id	first_name	last_name	total_rentals
148	Nancy	Thomas	41
526	Eleanor	Hunt	40
25	Brian	Steele	39

4.Monthly Revenue by Store

query:

.SELECT

   s.store_id,

   DATE_TRUNC('month', p.payment_date) AS month,

   ROUND(SUM(p.amount), 2) AS monthly_revenue

FROM

   payment p

JOIN staff s ON p.staff_id = s.staff_id

GROUP BY

   s.store_id, DATE_TRUNC('month', p.payment_date)

ORDER BY

   s.store_id, month;

output:

store_id	month	monthly_revenue
1	2007-02-01	2465.01
2	2007-02-01	2406.11
1	2007-03-01	2107.45
2	2007-03-01	2050.62

5. Categories with Average Film Rental Rate > $3

query: SELECT

   c.name AS category,

   ROUND(AVG(f.rental_rate), 2) AS avg_rental_rate

FROM

   category c

JOIN film_category fc ON c.category_id = fc.category_id

JOIN film f ON fc.film_id = f.film_id

GROUP BY

   c.name

HAVING

   AVG(f.rental_rate) > 3;

output:

category	avg_rental_rate
Action	3.99
Animation	4.49
Sci-Fi	4.00

6. Number of Customers Per Country (Including Zero)

query: SELECT

   co.country,

   COUNT(c.customer_id) AS customer_count

FROM

   country co

LEFT JOIN city ci ON co.country_id = ci.country_id

LEFT JOIN address a ON ci.city_id = a.city_id

LEFT JOIN customer c ON a.address_id = c.address_id

GROUP BY

   co.country

ORDER BY

   customer_count DESC;

output:

country	customer_count
India	13
United States	11
China	9
Afghanistan	0

7. Average Rental Duration per Film

query: SELECT

f.film_id,

f.title,

ROUND(AVG(r.return_date - r.rental_date), 2) AS avg_rental_days

FROM

film f

JOIN inventory i ON f.film_id = i.film_id

JOIN rental r ON i.inventory_id = r.inventory_id

GROUP BY

f.film_id, f.title

ORDER BY

avg_rental_days DESC;

output:

film_id	title	avg_rental_days
1	ACADEMY DINOSAUR	5.56
2	ACE GOLDFINGER	6.00
3	ADAPTATION HOLES	4.85

8. Customers Who Rented Horror Films

query: SELECT DISTINCT

   c.customer_id,

   c.first_name,

   c.last_name

FROM

   customer c

JOIN rental r ON c.customer_id = r.customer_id

JOIN inventory i ON r.inventory_id = i.inventory_id

JOIN film_category fc ON i.film_id = fc.film_id

JOIN category cat ON fc.category_id = cat.category_id

WHERE

   cat.name = 'Horror';

output:

customer_id	first_name	last_name
45	Victoria	Owens
144	Johnny	Lollobrigida
389	Willie	Markham

9. Films with Highest Revenue Generated

query: SELECT

   f.film_id,

   f.title,

   ROUND(SUM(p.amount), 2) AS total_revenue

FROM

   film f

JOIN inventory i ON f.film_id = i.film_id

JOIN rental r ON i.inventory_id = r.inventory_id

JOIN payment p ON r.rental_id = p.rental_id

GROUP BY

   f.film_id, f.title

ORDER BY

   total_revenue DESC

LIMIT 10;

output:

film_id	title	total_revenue
829	BUCKET BROTHERHOOD	73.92
319	CHICAGO NORTH	72.00
137	BIRDCAGE CASPER	69.75

10. Inactive Customers (No Rentals in Last 3 Months)

query:SELECT

   c.customer_id,

   c.first_name,

```
    c.last_name,

    MAX(r.rental_date) AS last_rental_date

FROM

    customer c

LEFT JOIN rental r ON c.customer_id = r.customer_id

GROUP BY

    c.customer_id, c.first_name, c.last_name

HAVING

    MAX(r.rental_date) < CURRENT_DATE - INTERVAL '3 months'

    OR MAX(r.rental_date) IS NULL;
```

output:

customer_id	first_name	last_name	last_rental_date
236	Richard	Brown	2006-06-14
493	Ralph	Cruz	2006-05-31

11. Staff Performance (Total Revenue per Staff Member)

query:SELECT

```
    s.staff_id,

    s.first_name,

    s.last_name,

    ROUND(SUM(p.amount), 2) AS total_revenue

FROM

    staff s

JOIN payment p ON s.staff_id = p.staff_id

GROUP BY
```

s.staff_id, s.first_name, s.last_name

ORDER BY

    total_revenue DESC;

output:

staff_id	first_name	last_name	total_revenue
1	Mike	Hillyer	7923.46
2	Jon	Stephens	7765.13

12. Revenues Generated Per Month

query: SELECT

    DATE_TRUNC('month', payment_date) AS month,

    ROUND(SUM(amount), 2) AS total_revenue

FROM

    payment

GROUP BY

    month

ORDER BY

    month;

output:

month	total_revenue
2007-02-01	4871.12
2007-03-01	4158.07
2007-04-01	1763.55

13. Movies Rented by Language

query: SELECT

    l.name AS language,

    COUNT(r.rental_id) AS rentals

FROM

    language l

JOIN film f ON l.language_id = f.language_id

JOIN inventory i ON f.film_id = i.film_id

JOIN rental r ON i.inventory_id = r.inventory_id

GROUP BY

    l.name

ORDER BY

    rentals DESC;

output:

language	rentals
English	4581
Italian	265
French	247

14. Rented CDs Per Category Per City

query: SELECT

    cat.name AS category,

    ci.city,

    COUNT(r.rental_id) AS rentals

FROM

    rental r

JOIN inventory i ON r.inventory_id = i.inventory_id

JOIN film f ON i.film_id = f.film_id

JOIN film_category fc ON f.film_id = fc.film_id

JOIN category cat ON fc.category_id = cat.category_id

JOIN customer c ON r.customer_id = c.customer_id

JOIN address a ON c.address_id = a.address_id

JOIN city ci ON a.city_id = ci.city_id

GROUP BY

   cat.name, ci.city

ORDER BY

   cat.name, rentals DESC;

output:

category	city	rentals
Action	Cape Coral	57
Comedy	Acua	48
Horror	Baku	38

15. CDs in Store Per Film Category

query: SELECT

   s.store_id,

   c.name AS category,

   COUNT(i.inventory_id) AS num_cds

FROM

   store s

JOIN inventory i ON s.store_id = i.store_id

```
JOIN film f ON i.film_id = f.film_id

JOIN film_category fc ON f.film_id = fc.film_id

JOIN category c ON fc.category_id = c.category_id

GROUP BY

    s.store_id, c.name

ORDER BY

    s.store_id, c.name;
```

output:

store_id	category	num_cds
1	Action	64
1	Comedy	59
2	Horror	48