
```
SELECT title
, numRentals
, byMonth
, byYear
, RowNumRK
FROM
(SELECT title
, count(*)numRentals
, DATE_PART('MONTH', rental_date) byMonth
, DATE_PART('YEAR', rental_date) byYear
, RANK()
    OVER(
        PARTITION BY DATE_PART('MONTH', rental_date), DATE_PART('YEAR', rental_date)
        ORDER BY COUNT(*) desc ) as RK
, DENSE_RANK()
    OVER(
        PARTITION BY DATE_PART('MONTH', rental_date), DATE_PART('YEAR', rental_date)
        ORDER BY COUNT(*) desc ) denseRK
, ROW_NUMBER()
    OVER(
        PARTITION BY DATE_PART('MONTH', rental_date), DATE_PART('YEAR', rental_date)
        ORDER BY COUNT(*) desc ) RowNumRK
FROM film
JOIN inventory on inventory.film_id = film.film_id
JOIN rental on rental.inventory_id = inventory.inventory_id
GROUP BY 1,3,4
ORDER BY byYear,byMonth, numRentals desc) tempTable
WHERE RowNumRk <= 3
```

```
SELECT film_id
, rental_rate
, SUM(rental_rate) OVER()
, round(rental_rate / SUM(rental_rate) OVER(),2) AS proportionofSales
, rental_rate / (select SUM(rental_rate) from film where film_id < 6) AS total
FROM film
WHERE film_id < 6
```

```
SELECT category.name
, COUNT(*) as numRentals
, (COUNT(*)*1.0) / (SELECT COUNT(*) FROM rental) * 100 proportionofRentalsPerCat
FROM category
JOIN film_category on film_category.category_id = category.category_id
JOIN film on film.film_id = film_category.film_id
JOIN inventory on inventory.film_id = film.film_id
JOIN rental on rental.inventory_id = inventory.inventory_id
GROUP BY 1
```

```
SELECT customer_id
, COUNT(*) totalNumMovies
FROM rental
GROUP BY 1
),
CTE_TABLE_2 as(
    SELECT *
    FROM customer
    WHERE store_id = 1)
SELECT AVG(totalNumMovies)
FROM CTE_TABLE
JOIN CTE_TABLE_2 on CTE_TABLE.customer_id = CTE_TABLE_2.customer_id
```

**

```
select temptable.storeNumber
,avg(numMoviesInventory)
,avg(numMovies)
from
    (select film.title as title
    ,count(inventory.inventory_id) numMoviesInventory
    ,store.store_id as storeNumber
    from store
    join staff on staff.store_id = store.store_id
    join rental on rental.staff_id = staff.staff_id
    join inventory on inventory.inventory_id = rental.inventory_id
    join film on film.film_id = inventory.film_id
    group by 1,3) temptable
join
    (select count(inventory.inventory_id) numMovies
    ,store.store_id as storeNumber
    from store
    join staff on staff.store_id = store.store_id
    join rental on rental.staff_id = staff.staff_id
    join inventory on inventory.inventory_id = rental.inventory_id
    join film on film.film_id = inventory.film_id
    group by 2)temptable2
ON temptable2.storeNumber = temptable.storeNumber
group by 1
```

```
select round(avg(numActor),1) avgNumActorPerFilm
, numActorInFilm.name
,numRentals
from
    (select category.name
    ,film.title
    ,COUNT(film_actor.actor_id) numActor
    from category
    join film_category on film_category.category_id = category.category_id
    join film on film.film_id = film_category.film_id
    join film_actor on film_actor.film_id = film.film_id
    where name in ('Animation', 'Family')
    group by 1,2) as numActorInFilm
join
    (select category.name
    ,count(rental_id) numRentals
    from category
    join film_category on film_category.category_id = category.category_id
    join film on film.film_id = film_category.film_id
    join inventory on inventory.film_id = film.film_id
    join rental on rental.inventory_id = inventory.inventory_id
    where name in ('Animation', 'Family')
    group by 1) countPerGenre
on countperGenre.name = numactorinFilm.name
group by 2,3
```

```
select customer.first_name
,customer.last_name
,count(distinct title) as Documentaries
,count(distinct comedies) as Comedies
from customer
join rental on rental.customer_id = customer.customer_id
join inventory on inventory.inventory_id = rental.inventory_id
join film on film.film_id = inventory.film_id
join film_category on film_category.film_id = film.film_id
join category on category.category_id = film_category.category_id
join(select first_name
,title as comedies
from customer
join rental on rental.customer_id = customer.customer_id
join inventory on inventory.inventory_id = rental.inventory_id
join film on film.film_id = inventory.film_id
join film_category on film_category.film_id = film.film_id
join category on category.category_id = film_category.category_id
where name in ('Comedy')) comedy
ON comedy.first_name = customer.first_name
where name in ('Documentary')
```

group by 1,2

```
select first_name
,last_name
,CASE WHEN loyalCustomer.customer_id is NOT NULL then 'Loyal'
WHEN loyalCustomer.customer_id is NULL then 'Not Loyal'
end LoyalorNot
,numRentals
from customer
left join
    (select customer_id
     ,count(*) as numRentals
     from rental
     group by 1
     having count(*) > 30) as loyalCustomer
on loyalCustomer.customer_id = customer.customer_id
```

```
select title
,length
from film
group by 1,2
having avg(length) < (
    select avg(length)
    from
        (select length
         from film) tempFilmTable)
```

```
select customer_id
,count(*) howmanyMovies
from rental
group by 1
having count(*) < (

select avg(howmanyMovies)
from

(select customer_id
,count(*) howmanyMovies
from rental
group by 1) tempTable)
```

```
select
sum(CASE WHEN active = 1 THEN 1 ELSE 0 end)as Active
,sum(CASE WHEN active = 0 THEN 1 ELSE 0 end) inactive
from customer
```

```
select name_
,sum(total) totalPayment
,contactInfo
from
    (select first_name as name_
    ,amount as total
    ,email as contactInfo
    from customer
    join payment on payment.customer_id = customer.customer_id) as foo
group by 1,3
order by sum(total) asc
```

```
select avg(numCustomers) as avgNumCust
from
    (select count(customer_id) numCustomers
    ,country
    from customer
    join address on address.address_id = customer.address_id
    join city on city.city_id = address.city_id
    join country on city.country_id = country.country_id
    group by 2) as custCountry
```

```
select avg(numRentals)
,dow
from
    (select count(rental_id) as numRentals
    ,CAST(rental_date as date) as date_
    ,EXTRACT(dow FROM rental_date) as dow
    from rental
    group by 2,3) as RentalPerday
group by 2
```

```
select count(*) numMovies_SpecialFeatures
,unnest(special_features)as SpecialFeatures
from film
group by 2
```

```
select special_features
,LEFT(CAST(special_features as varchar),POSITION('{ ' in CAST(special_features as varchar)) -3)
from film
```

```
select
last_name ||', '|| substring(first_name, 1, 1) ||'.'
,count(rental_id) as numRentals
from customer
join rental on rental.customer_id = customer.customer_id
WHERE EXTRACT(Month from rental_date) in (4,5,6)
AND EXTRACT(YEAR from rental_date) = 2005
group by 1
having count(rental_id) > 15
```

```
select split_part(title,' ',1) as titlePart1
,split_part(title,' ',2) as titlePart2
,split_part(CAST(rental_rate as varchar), '.',1) as dollars
,split_part(CAST(rental_rate as varchar), '.',2) as cents
,round((length * 1.0 / 60),1) as hours
,length
from film
```

```
select first_name
,count(rental_id) NumRentals
from customer
join rental on rental.customer_id = customer.customer_id
join inventory on inventory.inventory_id = rental.inventory_id
join film on film.film_id = inventory.film_id
join film_category on film_category.film_id = film.film_id
join category on category.category_id = film_category.category_id
group by 1
```

```
select count(*) as numRentals
,EXTRACT(YEAR FROM rental_date) || '-' || EXTRACT(MONTH FROM rental_date)
from rental
group by 2
```

```
\
select first_name
,count(rental_id) NumRentals
from customer
join rental on rental.customer_id = customer.customer_id
join inventory on inventory.inventory_id = rental.inventory_id
join film on film.film_id = inventory.film_id
join film_category on film_category.last_update = film.last_update
group by 1
```

```
select count(*) as numMovies
,CASE
WHEN length >= 90 AND rating in ('NC-17','PG-13','R') then 'AdultFeaturedfilm'
WHEN length < 90 and rating in ('PG-13','NC-17','R')then 'AdultTV'
WHEN length >= 90 and rating in ('G','PG') then 'ChildrenFeatured'
WHEN length < 90 and rating in ('PG','G') then 'ChildrenTV'
end movieCategory
from film
group by 2
```

```
select first_name
,last_name
,count(rental.rental_id) as numRentals
,count(payment_id) as paymentsMade
,count(rental.rental_id) - count(payment_id) as paymentsMissed
,CASE
WHEN count(rental.rental_id) - count(payment_id) = 2 then 'Two missed Payments'
WHEN count(rental.rental_id) - count(payment_id) >= 3 then 'Three or more missed Payments'
WHEN count(rental.rental_id) - count(payment_id) = 0 then 'Current'
WHEN count(rental.rental_id) - count(payment_id) = 1 then 'One missed Payment'
end PaymentStatus
from customer
join rental on rental.customer_id = customer.customer_id
left join payment on payment.rental_id = rental.rental_id
where first_name in ('Jessie','Marion','Terry')
group by 1,2
```
