

1. Quel est la catégorie de film la plus louée, quel est son chiffre d'affaire.

```
dvdrental=# SELECT category.name AS genre, COUNT(inventory.film_id) AS total_loc,
dvdrental=# SUM(payment.amount) AS total_montant
dvdrental=# FROM payment
dvdrental=# JOIN rental
dvdrental=# ON rental.rental_id = payment.rental_id
dvdrental=# JOIN inventory
dvdrental=# ON inventory.inventory_id = rental.inventory_id
dvdrental=# JOIN film_category
dvdrental=# ON film_category.film_id = inventory.film_id
dvdrental=# JOIN category
dvdrental=# ON category.category_id = film_category.category_id
dvdrental=# GROUP BY genre
dvdrental=# ORDER BY total_loc
dvdrental=# DESC
dvdrental=# LIMIT 1
dvdrental=# ;
 genre | total_loc | total_montant
-----+-----+-----
 Sports |      1081 |      4892.19
(1 row)
```

2. Combien d'utilisateurs "distincte" ont loué des films d'actions.

```
dvdrental=# SELECT category.name AS genre, COUNT(DISTINCT customer.customer_id) AS nbr_users
dvdrental=# FROM customer
dvdrental=# JOIN rental
dvdrental=# ON rental.customer_id = customer.customer_id
dvdrental=# JOIN inventory
dvdrental=# ON inventory.inventory_id = rental.inventory_id
dvdrental=# JOIN film_category
dvdrental=# ON film_category.film_id = inventory.film_id
dvdrental=# JOIN category
dvdrental=# ON category.category_id = film_category.category_id
dvdrental=# WHERE category.name = 'Action'
dvdrental=# GROUP BY genre;
 genre | nbr_users
-----+-----
 Action |         510
(1 row)
```

3. Déterminer la moyenne de revenu par catégorie ordonnée dans l'ordre décroissant.

```
dvdrental=# SELECT category.name AS genre, ROUND(AVG(payment.amount), 2) AS moyenne
dvdrental=# FROM payment
dvdrental=# JOIN rental
dvdrental=# ON payment.rental_id = rental.rental_id
dvdrental=# JOIN inventory
dvdrental=# ON rental.inventory_id = inventory.inventory_id
dvdrental=# INNER JOIN film_category
dvdrental=# ON inventory.film_id = film_category.film_id
dvdrental=# INNER JOIN category
dvdrental=# ON film_category.category_id = category.category_id
dvdrental=# GROUP BY genre
dvdrental=# ORDER BY moyenne
dvdrental=# DESC;
```

genre	moyenne
Comedy	4.70
New	4.59
Sports	4.53
Games	4.44
Horror	4.40
Sci-Fi	4.34
Drama	4.32
Travel	4.22
Foreign	4.13
Music	4.10
Documentary	4.00
Animation	3.99
Action	3.90
Classics	3.90
Family	3.88
Children	3.84

(16 rows)

4. Quels sont les films qui sont retournés en retard.

```
dvdrental=# SELECT film.title, COUNT(DATE_PART('day', rental.return_date - rental.rental_date))
dvdrental=# AS nbr_jour_retard
dvdrental=# FROM rental
dvdrental=# JOIN inventory
dvdrental=# ON inventory.inventory_id = rental.inventory_id
dvdrental=# JOIN film
dvdrental=# ON film.film_id = inventory.film_id
dvdrental=# WHERE DATE_PART('day', rental.return_date - rental.rental_date) > film.rental_duration
dvdrental=# GROUP BY film.title
dvdrental=# ORDER BY title;
```

title	nbr_jour_retard
Academy Dinosaur	4
Ace Goldfinger	4
Adaptation Holes	1
Affair Prejudice	9
African Egg	9
Agent Truman	16
Airplane Sierra	2
Airport Pollock	7
Alabama Devil	9
Aladdin Calendar	6
Alamo Videotape	3
Alaska Phantom	9
Ali Forever	3
Alien Center	8
Alley Evolution	4
Alone Trip	11
Alter Victory	4
Amadeus Holy	6
Amelie Hellfighters	5
American Circus	13
Amistad Midsummer	5
Anaconda Confessions	12
Analyze Hoosiers	7
Angels Life	14
Annie Identity	12
Anonymous Human	3
Anthem Luke	4
Antitrust Tomatoes	3
Anything Savannah	5
Apache Divine	8
Arabia Dogma	3
Arachnophobia Rollercoaster	15
Arizona Bang	13
Armageddon Lost	10
Army Flintstones	8
Artist Coldblooded	7
Atlantis Cause	7
Attacks Hate	8
Attraction Newton	9

;

5. Déterminer le nombre de client par pays

```
dvdrental=# SELECT country.country AS pays, COUNT(customer_id) AS nbr_client_pays
dvdrental=# FROM customer
dvdrental=# JOIN address
dvdrental=# ON address.address_id = customer.address_id
dvdrental=# JOIN city
dvdrental=# ON city.city_id = address.city_id
dvdrental=# JOIN country
dvdrental=# ON country.country_id = city.country_id
dvdrental=# GROUP BY country.country
dvdrental=# ORDER BY nbr_client_pays
dvdrental=# DESC
dvdrental=# LIMIT 20;
```

pays	nbr_client_pays
India	60
China	53
United States	36
Japan	31
Mexico	30
Russian Federation	28
Brazil	28
Philippines	20
Turkey	15
Indonesia	14
Nigeria	13
Argentina	13
South Africa	11
Taiwan	10
United Kingdom	9
Iran	8
Poland	8
Venezuela	7
Italy	7
Germany	7
(20 rows)	

6. Trouver les 5 clients qui génèrent le plus de profits pour la sociétés.

```
dvdrental=# SELECT DISTINCT payment.customer_id,  
dvdrental=# SUM(amount) AS montant_total_achat, customer.first_name, customer.last_name  
dvdrental=# FROM customer  
dvdrental=# JOIN payment  
dvdrental=# ON payment.customer_id = customer.customer_id  
dvdrental=# GROUP BY customer.first_name, customer.last_name, payment.customer_id  
dvdrental=# ORDER BY montant_total_achat  
dvdrental=# DESC  
[dvdrental=# LIMIT 5;  
customer_id | montant_total_achat | first_name | last_name  
-----+-----+-----+-----  
148 | 211.55 | Eleanor | Hunt  
526 | 208.58 | Karl | Seal  
178 | 194.61 | Marion | Snyder  
137 | 191.62 | Rhonda | Kennedy  
144 | 189.60 | Clara | Shaw  
(5 rows)
```

7. Quel est le tarif de location moyen pour chaque genre ? (du plus élevé au plus bas)

```
dvdrental=# SELECT category.name AS genre, AVG(film.rental_rate) AS revenu_moyen  
dvdrental=# FROM film  
dvdrental=# JOIN film_category  
dvdrental=# ON film_category.film_id = film.film_id  
dvdrental=# JOIN category  
dvdrental=# ON category.category_id = film_category.category_id  
dvdrental=# GROUP BY genre  
dvdrental=# ORDER BY revenu_moyen  
[dvdrental=# DESC;  
genre | revenu_moyen  
-----+-----  
Games | 3.2522950819672131  
Travel | 3.2356140350877193  
Sci-Fi | 3.2195081967213115  
Comedy | 3.1624137931034483  
Sports | 3.1251351351351351  
New | 3.1169841269841270  
Foreign | 3.0995890410958904  
Horror | 3.0257142857142857  
Drama | 3.0222580645161290  
Music | 2.9507843137254902  
Children | 2.8900000000000000  
Animation | 2.8081818181818182  
Family | 2.7581159420289855  
Classics | 2.7443859649122807  
Documentary | 2.6664705882352941  
Action | 2.6462500000000000  
(16 rows)
```

8. Peut-on savoir combien d'utilisateurs distincts ont loué chaque genre?

```
dvdrental=# SELECT category.name AS genre,  
dvdrental=# COUNT(DISTINCT rental.customer_id) AS nbr_client_genre  
dvdrental=# FROM payment  
dvdrental=# JOIN rental  
dvdrental=# ON rental.rental_id = payment.rental_id  
dvdrental=# JOIN inventory  
dvdrental=# ON inventory.inventory_id = rental.inventory_id  
dvdrental=# JOIN film_category  
dvdrental=# ON film_category.film_id = inventory.film_id  
dvdrental=# JOIN category  
dvdrental=# ON category.category_id = film_category.category_id  
dvdrental=# GROUP BY genre  
dvdrental=# ORDER BY nbr_client_genre  
dvdrental=# DESC;  
genre | nbr_client_genre  
-----+-----  
Sports | 507  
Action | 498  
Sci-Fi | 490  
Animation | 480  
Comedy | 477  
Foreign | 476  
Drama | 475  
Family | 475  
Documentary | 465  
Children | 462  
Games | 456  
Classics | 450  
New | 446  
Horror | 436  
Music | 431  
Travel | 428  
(16 rows)
```

9. Combien de films loués ont été retournés tard, tôt et à temps ?

```
dvdrental=# SELECT  
dvdrental=# COUNT(CASE WHEN rental_duration > DATE_PART('day', return_date - rental_date)  
dvdrental=# THEN 'Retourne en avance' END) AS retourne_avance,  
dvdrental=# COUNT(CASE WHEN rental_duration = DATE_PART('day', return_date - rental_date)  
dvdrental=# THEN 'Rendu a temps' END) AS retourne_a_temps,  
dvdrental=# COUNT(CASE WHEN rental_duration < DATE_PART('day', return_date - rental_date)  
dvdrental=# THEN 'Retourne en retard' END) AS retourne_en_retard  
dvdrental=# FROM film  
dvdrental=# JOIN inventory  
dvdrental=# ON film.film_id = inventory.film_id  
dvdrental=# JOIN rental  
dvdrental=# ON inventory.inventory_id = rental.inventory_id;  
retourne_avance | retourne_a_temps | retourne_en_retard  
-----+-----+-----  
7738 | 1720 | 6403  
(1 row)
```