

SEN-209: Designing and Implementing Databases Lab 2: Creating a Database

Name: Thanawin Pattanaphol

ID: 01324096

Date: 27th August 2025

Screenshot of PostgreSQL installation

```
[postgres@ ~]$ psql --version
psql (PostgreSQL) 16.9 (Ubuntu 16.9-0ubuntu0.24.04.1)
[postgres@ ~]$
```

DVD rental tables

```
[postgres@ ~]$ psql -U postgres -d dvdrental
psql (16.9 (Ubuntu 16.9-0ubuntu0.24.04.1))
Type "help" for help.

dvdrental=# \dt
                List of relations
 Schema |      Name      | Type  | Owner
-----+-----+-----+-----
 public | actor           | table | postgres
 public | address         | table | postgres
 public | category        | table | postgres
 public | city            | table | postgres
 public | country         | table | postgres
 public | customer        | table | postgres
 public | film            | table | postgres
 public | film_actor      | table | postgres
 public | film_category   | table | postgres
 public | inventory       | table | postgres
 public | language        | table | postgres
 public | payment         | table | postgres
 public | rental          | table | postgres
 public | staff           | table | postgres
 public | store           | table | postgres
(15 rows)

dvdrental=#
```

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Results of each SQL queries (Rows limited to 40 rows)

1. Display the first name and last name of all actors.

```
SELECT first_name, last_name FROM actor LIMIT 40;
```

```
dvdrental=# SELECT first_name, last_name FROM actor LIMIT 40;
 first_name | last_name
-----+-----
 Penelope  | Guinness
 Nick      | Wahlberg
 Ed        | Chase
 Jennifer  | Davis
 Johnny   | Lollobrigida
 Bette    | Nicholson
 Grace    | Mostel
 Matthew  | Johansson
 Joe      | Swank
 Christian| Gable
 Zero     | Cage
 Karl     | Berry
 Uma     | Wood
 Vivien   | Bergen
 Cuba    | Olivier
 Fred    | Costner
 Helen   | Voight
 Dan     | Torn
 Bob     | Fawcett
 Lucille | Tracy
 Kirsten | Paltrow
 Elvis   | Marx
 Sandra  | Kilmer
 Cameron | Streep
 Kevin   | Bloom
 Rip     | Crawford
 Julia   | Mcqueen
 Woody   | Hoffman
 Alec    | Wayne
 Sandra  | Peck
 Sissy   | Sobieski
 Tim     | Hackman
 Milla   | Peck
 Audrey  | Olivier
 Judy    | Dean
 Burt    | Dukakis
 Val     | Bolger
 Tom     | Mckellen
 Goldie  | Brody
 Johnny  | Cage
(40 rows)

dvdrental=#
```

2. Show the title and rental duration of all films.

```
SELECT title, rental_duration FROM film LIMIT 40;
```

```
dvdrental=# SELECT title, rental_duration FROM film LIMIT 40;
 title | rental_duration
-----+-----
 Chamber Italian | 7
 Grosse Wonderful | 5
 Airport Pollock | 6
 Bright Encounters | 4
 Academy Dinosaur | 6
 Ace Goldfinger | 3
 Adaptation Holes | 7
 Affair Prejudice | 5
 African Egg | 6
 Agent Truman | 3
 Airplane Sierra | 6
 Alabama Devil | 3
 Aladdin Calendar | 6
 Alamo Videotape | 6
 Alaska Phantom | 6
 Date Speed | 4
 Ali Forever | 4
 Alice Fantasia | 6
 Alien Center | 5
 Alley Evolution | 6
 Alone Trip | 3
 Alter Victory | 6
 Amadeus Holy | 6
 Amelie Hellfighters | 4
 American Circus | 3
 Amistad Midsummer | 6
 Anaconda Confessions | 3
 Analyze Hoosiers | 6
 Angels Life | 3
 Annie Identity | 3
 Anonymous Human | 7
 Anthem Luke | 5
 Antitrust Tomatoes | 5
 Anything Savannah | 4
 Apache Divine | 5
 Apocalypse Flamingos | 6
 Apollo Teen | 5
 Arabia Dogma | 6
 Arachnophobia Rollercoaster | 4
 Argonauts Town | 7
(40 rows)

dvdrental=#
```

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3. List the names and emails of all customers who live in the city “London.”

SQL command:

```
SELECT first_name, last_name, email
FROM customer CU
INNER JOIN address A ON A.address_id = CU.address_id
INNER JOIN city C ON C.city_id = A.city_id
WHERE C.city = 'London';
```

```
dvdrental=# SELECT first_name, last_name, email
FROM customer CU
INNER JOIN address A ON A.address_id = CU.address_id
INNER JOIN city C ON C.city_id = A.city_id
WHERE C.city = 'London';
 first_name | last_name |          email
-----+-----+-----
 Mattie     | Hoffman  | mattie.hoffman@sakilacustomer.org
 Cecil      | Vines    | cecil.vines@sakilacustomer.org
(2 rows)

dvdrental=# █
```

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4. Show the film titles that have a rental rate greater than \$4.00.

```
SELECT title FROM film WHERE
rental_rate > 4.00 LIMIT 40;
```

```
dvdrental=# SELECT title FROM film WHERE rental_rate > 4.00
          title
-----
Chamber Italian
Grosse Wonderful
Airport Pollock
Bright Encounters
Ace Goldfinger
Airplane Sierra
Aladdin Calendar
Ali Forever
Amelie Hellfighters
American Circus
Anthem Luke
Apache Divine
Apocalypse Flamingos
Dying Maker
Attacks Hate
Attraction Newton
Autumn Crow
Baby Hall
Backlash Undefeated
Casualties Encino
Beast Hunchback
Beauty Grease
Behavior Runaway
Betrayed Rear
Bikini Borrowers
Bilko Anonymous
Birch Antitrust
Bird Independence
Birds Perdition
Blindness Gun
Boiled Dares
Boogie Amelie
Born Spinal
Bowfinger Gables
Brannigan Sunrise
Breakfast Goldfinger
Brooklyn Desert
Bubble Grosse
Bucket Brotherhood
Calendar Gunfight
(40 rows)
```

5. Find all films that are in the “Comedy” category.

```
SELECT *
FROM film F
INNER JOIN film_category FC ON
FC.film_id = F.film_id
WHERE FC.category_id = 5
LIMIT 40;
```

```
dvdrental=# SELECT title, release_year, rating
FROM film F
INNER JOIN film_category FC ON FC.film_id = F.film_id
WHERE FC.category_id = 5
LIMIT 40;
          title          | release_year | rating
-----
Airplane Sierra         |          2006 | PG-13
Anthem Luke             |          2006 | PG-13
Dying Maker             |          2006 | PG
Bringing Hysterical     |          2006 | PG
Caper Motions           |          2006 | G
Cat Coneheads           |          2006 | G
Closer Bang             |          2006 | R
Connection Microcosmos |          2006 | G
Control Anthem          |          2006 | G
Crazy Home              |          2006 | PG
Daddy Pittsburgh        |          2006 | G
Doom Dancing            |          2006 | R
Downhill Enough         |          2006 | G
Element Freddy          |          2006 | NC-17
Ferris Mother           |          2006 | PG
Fireball Philadelphia   |          2006 | PG
Flintstones Happiness  |          2006 | PG-13
Frankenstein Stranger   |          2006 | NC-17
Freedom Cleopatra       |          2006 | PG-13
Gold River              |          2006 | R
Groundhog Uncut         |          2006 | PG-13
Gunfight Moon           |          2006 | NC-17
Hate Handicap           |          2006 | PG
Heaven Freedom          |          2006 | PG
Hedwig Alter            |          2006 | NC-17
Hurricane Affair        |          2006 | PG
Hustler Party           |          2006 | NC-17
Jaws Harry              |          2006 | G
Knock Warlock           |          2006 | PG-13
Life Twisted            |          2006 | NC-17
Lion Uncut              |          2006 | PG
Lonely Elephant         |          2006 | G
Mallrats United         |          2006 | PG
Memento Zoolander       |          2006 | NC-17
Mulan Moon              |          2006 | G
Mystic Truman           |          2006 | NC-17
Operation Operation     |          2006 | G
Paradise Sabrina        |          2006 | PG-13
Party Knock             |          2006 | PG
Perfect Groove          |          2006 | PG-13
(40 rows)

dvdrental=#
```