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تمرین ۱۳

سوال یک:

- تمام جدول های ثبت شده در دیتابیس را نمایش دهید.

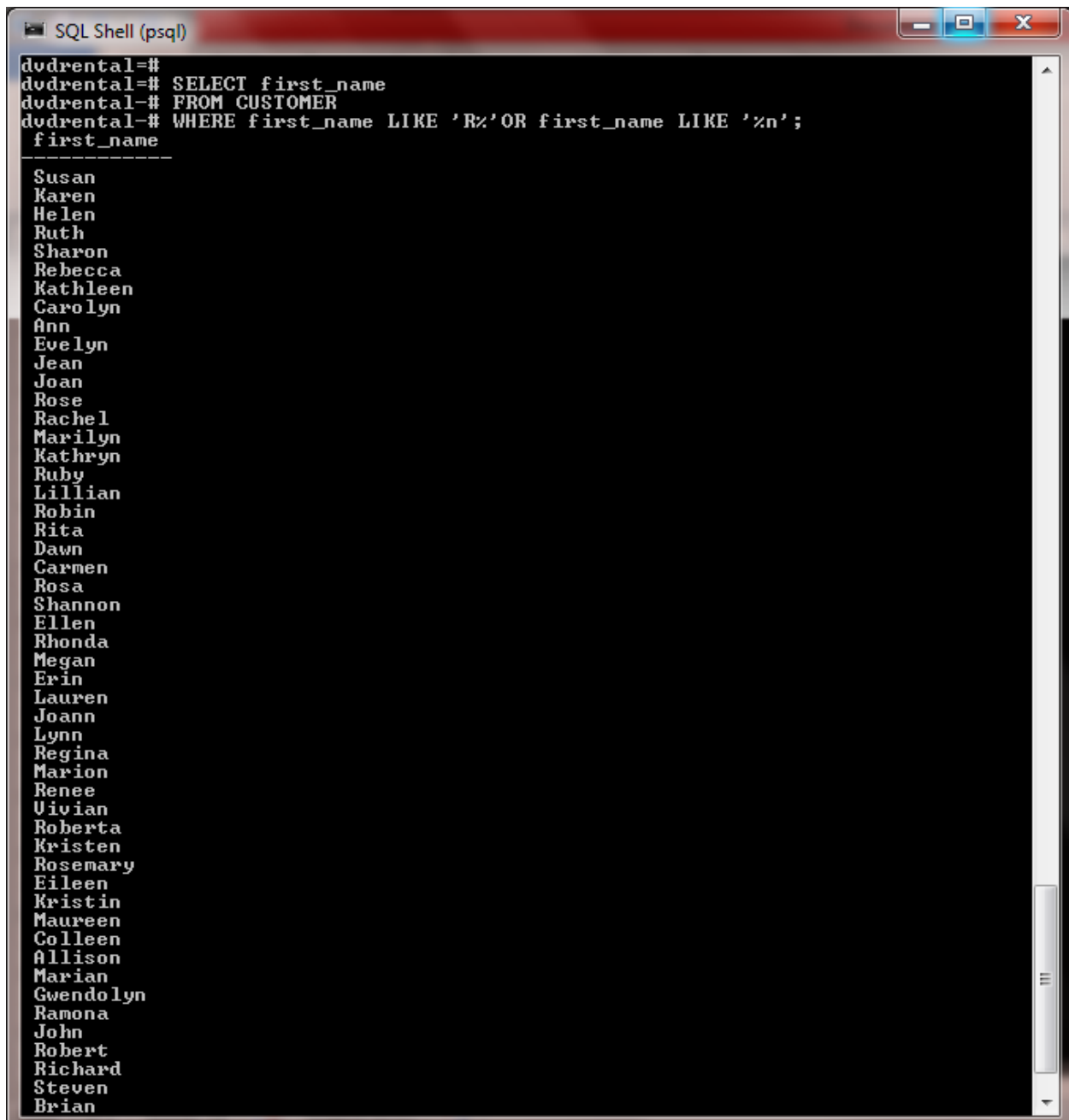
```
-- part 1  
\dt
```



```
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-#
```

- تمام مشتریانی که حرف اول آنها با R شروع شده یا با N تمام شده.

```
-- part 2
SELECT
    first_name
FROM
    customer
WHERE
    first_name LIKE 'R%' OR first_name LIKE '%n';
```



The screenshot shows a terminal window titled "SQL Shell (psql)". The prompt is "dvdrental=#". The user enters the following SQL query:


```
dvdrental=# SELECT first_name
dvdrental=# FROM CUSTOMER
dvdrental=# WHERE first_name LIKE 'R%' OR first_name LIKE '%n';
first_name
```

The query returns a list of 40 customer first names, separated by a dashed line. The names are:

- Susan
- Karen
- Helen
- Ruth
- Sharon
- Rebecca
- Kathleen
- Carolyn
- Ann
- Evelyn
- Jean
- Joan
- Rose
- Rachel
- Marilyn
- Kathryn
- Ruby
- Lillian
- Robin
- Rita
- Dawn
- Carmen
- Rosa
- Shannon
- Ellen
- Rhonda
- Megan
- Erin
- Lauren
- Joann
- Lynn
- Regina
- Marion
- Renee
- Uivian
- Roberta
- Kristen
- Rosemary
- Eileen
- Kristin
- Maureen
- Colleen
- Allison
- Marian
- Gwendolyn
- Ramona
- John
- Robert
- Richard
- Steven
- Brian

- تعداد مشتریانی که آدرس آیدی آنها بزرگتر از 20 است.

```
-- part 3
SELECT
    count(customer_id)
FROM
    customer
WHERE
    customer_id > 20;
```



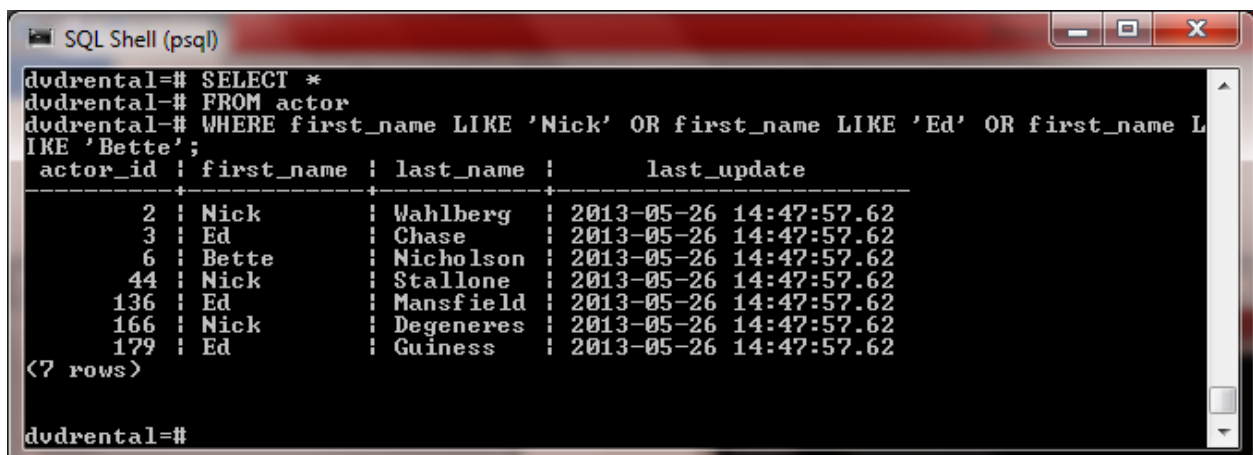
The screenshot shows a terminal window titled "SQL Shell (psql)". The prompt is "dvdrental=#". The user enters the query: "SELECT count(customer_id) FROM CUSTOMER WHERE customer_id > 20;". The output shows a single row with the count 579.

```
dvdrental=# SELECT count(customer_id)
dvdrental=# FROM CUSTOMER
dvdrental=# WHERE customer_id > 20;
count
-----
  579
<1 row>

dvdrental=#
```

- لیست بازیگرانی که نام کوچک آنها Nick-Bette-Ed

```
-- part 4
SELECT
    *
FROM
    actor
WHERE
    first_name LIKE 'Nick' OR first_name LIKE 'Ed' OR first_name LIKE 'Bette';
```



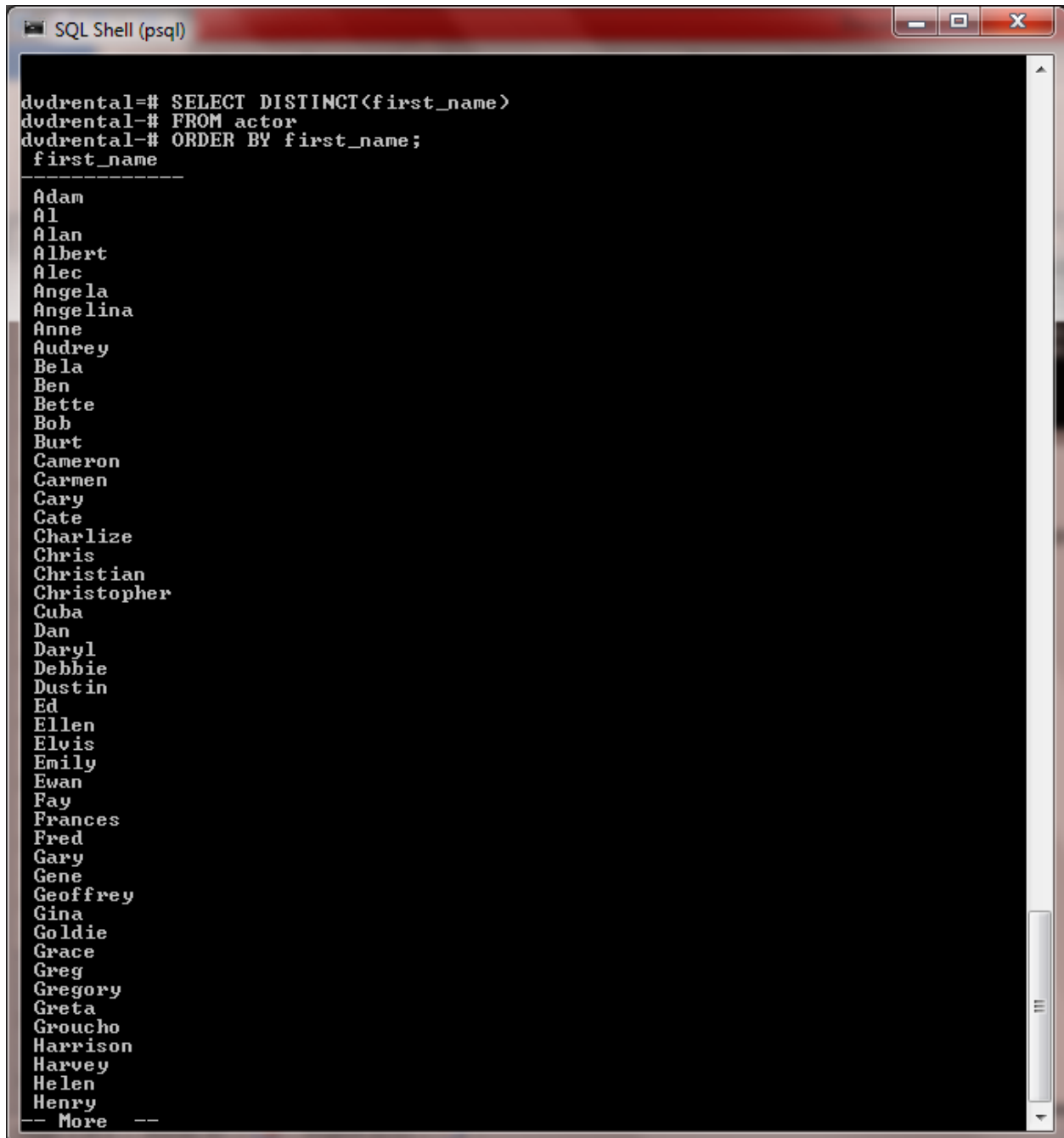
The screenshot shows a terminal window titled "SQL Shell (psql)". The prompt is "dvdrental=#". The user enters the query: "SELECT * FROM actor WHERE first_name LIKE 'Nick' OR first_name LIKE 'Ed' OR first_name LIKE 'Bette';". The output shows a table with 7 rows of actor information.

```
dvdrental=# SELECT *
dvdrental=# FROM actor
dvdrental=# WHERE first_name LIKE 'Nick' OR first_name LIKE 'Ed' OR first_name L
LIKE 'Bette';
 actor_id | first_name | last_name | last_update
-----+-----+-----+-----
        2 | Nick      | Wahlberg | 2013-05-26 14:47:57.62
        3 | Ed        | Chase   | 2013-05-26 14:47:57.62
        6 | Bette     | Nicholson | 2013-05-26 14:47:57.62
       44 | Nick      | Stallone | 2013-05-26 14:47:57.62
      136 | Ed        | Mansfield | 2013-05-26 14:47:57.62
      166 | Nick      | Degeneres | 2013-05-26 14:47:57.62
      179 | Ed        | Guinness | 2013-05-26 14:47:57.62
<7 rows>

dvdrental=#
```

- نمایش نام کوچک بازیگران با اسامی کوچک منحصر به فرد به ترتیب الفبا

```
-- part 5
SELECT
    DISTINCT(first_name)
FROM
    actor
ORDER BY first_name;
```



The screenshot shows a terminal window titled "SQL Shell (psql)". The prompt is "dvdrental=#". The user has entered the following SQL query:

```
SELECT DISTINCT(first_name)
FROM actor
ORDER BY first_name;
```

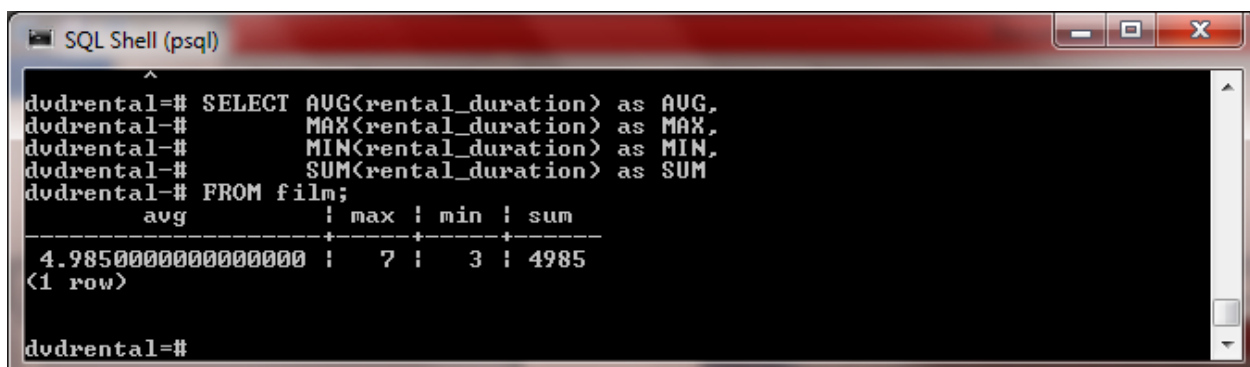
The output of the query is a list of first names, sorted alphabetically. The list is as follows:

first_name
Adam
Al
Alan
Albert
Alec
Angela
Angelina
Anne
Audrey
Bela
Ben
Bette
Bob
Burt
Cameron
Carmen
Cary
Cate
Charlize
Chris
Christian
Christopher
Cuba
Dan
Daryl
Debbie
Dustin
Ed
Ellen
Elvis
Emily
Ewan
Fay
Frances
Fred
Gary
Gene
Geoffrey
Gina
Goldie
Grace
Greg
Gregory
Greta
Groucho
Harrison
Harvey
Helen
Henry

The prompt is now "-- More --".

- بدست آوردن میانگین - بیشترین - کمترین - مجموع مدت اجاره و نامگذاری شخصی به ستون از جدول فیلم

```
-- part 6
SELECT
    AVG(rental_duration) AS avg,
    MAX(rental_duration) AS max,
    MIN(rental_duration) AS min,
    SUM(rental_duration) AS sum
FROM
    film;
```



The screenshot shows a terminal window titled "SQL Shell (psql)". The user is at the "dvdrental=#" prompt. They enter a SQL query to calculate the average, maximum, minimum, and sum of rental durations from the "film" table. The query is: `SELECT AVG(rental_duration) as AVG, MAX(rental_duration) as MAX, MIN(rental_duration) as MIN, SUM(rental_duration) as SUM FROM film;`. The terminal displays the results in a table format with headers: avg, max, min, and sum. The values are: avg = 4.9850000000000000, max = 7, min = 3, and sum = 4985. Below the results, it says "<1 row>". The prompt "dvdrental=#" is visible at the bottom.

```
dvdrental=# SELECT AVG(rental_duration) as AVG,
dvdrental=#           MAX(rental_duration) as MAX,
dvdrental=#           MIN(rental_duration) as MIN,
dvdrental=#           SUM(rental_duration) as SUM
dvdrental=# FROM film;
      avg      | max | min | sum
-----+-----+-----+-----
4.9850000000000000 | 7 | 3 | 4985
<1 row>

dvdrental=#
```

- زمان بازگشت و مقدار پرداختی متناسب با هر مشتری را در یک جدول نمایش دهید

```
-- part 7
SELECT
    first_name,
    last_name,
    amount,
    return_date
FROM
    customer
INNER JOIN rental
    ON customer.customer_id = rental.customer_id
INNER JOIN payment
    ON payment.customer_id = rental.customer_id;
```

SQL Shell (psql)

```
dvdrental=#
dvdrental=# SELECT first_name,
dvdrental=#         last_name,
dvdrental=#         amount,
dvdrental=#         return_date
dvdrental=# From customer
dvdrental=# INNER JOIN rental
dvdrental=# ON customer.customer_id=rental.customer_id
dvdrental=# INNER JOIN payment
dvdrental=# ON payment.customer_id=rental.customer_id;
```

first_name	last_name	amount	return_date
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	6.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	10.99	2005-05-28 19:40:33
Tommy	Collazo	9.99	2005-05-28 19:40:33
Tommy	Collazo	6.99	2005-05-28 19:40:33
Tommy	Collazo	5.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	6.99	2005-05-28 19:40:33
Tommy	Collazo	3.99	2005-05-28 19:40:33
Tommy	Collazo	0.99	2005-05-28 19:40:33
Tommy	Collazo	0.99	2005-05-28 19:40:33
Tommy	Collazo	3.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	0.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	5.99	2005-05-28 19:40:33
Tommy	Collazo	3.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	10.99	2005-05-28 19:40:33
Tommy	Collazo	7.99	2005-05-28 19:40:33
Tommy	Collazo	6.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	7.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	6.99	2005-05-28 19:40:33
Tommy	Collazo	9.99	2005-05-28 19:40:33
Tommy	Collazo	0.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	0.99	2005-05-28 19:40:33
Tommy	Collazo	4.99	2005-05-28 19:40:33
Tommy	Collazo	2.99	2005-05-28 19:40:33
Tommy	Collazo	0.99	2005-05-28 19:40:33
Manuel	Murrell	4.99	2005-06-01 22:12:39
Manuel	Murrell	0.99	2005-06-01 22:12:39
Manuel	Murrell	6.99	2005-06-01 22:12:39
Manuel	Murrell	3.99	2005-06-01 22:12:39
Manuel	Murrell	4.99	2005-06-01 22:12:39
Manuel	Murrell	4.99	2005-06-01 22:12:39
Manuel	Murrell	4.99	2005-06-01 22:12:39
Manuel	Murrell	2.99	2005-06-01 22:12:39

- در جدول آدرس، آدرس هایی موجود است که مربوط به شخص منحصر به فرد و شهر و کشور هایی متفاوت است همه آنها را با ذکر نام و نام خانوادگی با هم و آدرس و کد شهر و نام شهر و کشور بر اساس نام کشور به ترتیب حروف الفبا نمایش دهید

```
-- part 8
SELECT
    CONCAT(first_name , ' ', last_name),
    address,
    city,
    city.city_id,
    country
FROM
    customer
INNER JOIN address
    ON customer.address_id = address.address_id
INNER JOIN city
    ON city.city_id = address.city_id
INNER JOIN country
    ON country.country_id = city.country_id
ORDER BY country;
```

SQL Shell (psql)

```
dvdrental=# SELECT CONCAT(first_name, ' ', last_name) as name,
dvdrental=# address,
dvdrental=# city.city_id,
dvdrental=# city,
dvdrental=# country
dvdrental=# FROM customer
dvdrental=# INNER JOIN address
dvdrental=# ON customer.address_id=address.address_id
dvdrental=# INNER JOIN city
dvdrental=# ON city.city_id=address.city_id
dvdrental=# INNER JOIN country
dvdrental=# ON country.country_id=city.country_id
dvdrental=# ORDER BY country;
```

name	address	city_id	city
Vera Mccoy	1168 Najafabad Parkway	251	Kabu
June Carroll	Afghanistan	483	Skik
Mario Cheatham	757 Rustenburg Avenue	59	Batn
Judy Gray	1924 Shimonoseki Drive	63	Bcha
Anthony Schwab	1031 Daugavpils Parkway	516	Tafu
Claude Herzog	1892 Naberezhnyje Telnj Lane	67	Beng
Martin Bales	486 Ondo Parkway	360	Nami
Bobby Boudreau	Angola	493	Sout
Kimberly Lee	1368 Maracabo Boulevard	128	Crdo
Florence Woods	96 Tafuna Way	334	Merl
Jordan Archuleta	Anguilla	43	Avel
Willie Howell	1229 Uaranasi <Benares> Manor	567	Vice
Julia Flores	1244 Allappuzha <Alleppey> Place	289	La P
Darryl Ashcraft	Anguilla	165	Ezei