Question: All the orders issued by the salesman 'Paul Adam'.

Queries used:

CREATE TABLE salesman (salesman_id INT Primary Key, name VARCHAR NOT NULL,
            city VARCHAR, commission FLOAT);

INSERT INTO salesman VALUES(5001, "James Hoog", "New York", 0.15);
INSERT INTO salesman VALUES(5002, "Nail Knite", "Paris", 0.13);
INSERT INTO salesman VALUES(5005, "Pit Alex", "London", 0.11);
INSERT INTO salesman VALUES(5006, "Mc Lyon", "Paris", 0.14);
INSERT INTO salesman VALUES(5003, "Lauson Hen", "San Jose", 0.12);
INSERT INTO salesman VALUES(5007, "Paul Adam", "Rome", 0.13);

CREATE TABLE orders (ord_no INT UNIQUE, purch_amt FLOAT, ord_date
 DATE, customer_id INT, salesman_id INT);
INSERT INTO orders VALUES(70001, 150.5, "5-10-2012", 3005, 5002);
INSERT INTO orders VALUES(70009, 270.65, "10-9-2012", 3001, 5005);
INSERT INTO orders VALUES(70002, 65.26, "5-10-2012", 3002, 5001);
INSERT INTO orders VALUES(70004, 110.5, "17-8-2012", 3009, 5003);
INSERT INTO orders VALUES(70007, 948.5, "10-9-2012", 3005, 5002);
INSERT INTO orders VALUES(70005, 2400.6, "27-7-2012", 3007, 5001);
INSERT INTO orders VALUES(70008, 5760, "10-9-2012", 3002, 5001);
INSERT INTO orders VALUES(70010, 1983.43, "10-10-2012", 3004, 5006);
INSERT INTO orders VALUES(70003, 2480.4, "10-10-2012", 3009, 5003);
INSERT INTO orders VALUES(70012, 250.45, "27-6-2012", 3008, 5002);
INSERT INTO orders VALUES(70011, 75.29, "17-8-2012", 3003, 5007);
INSERT INTO orders VALUES(70013, 3045.6, "25-4-2012", 3002, 5001);

SELECT * from orders where salesman_id =
(select salesman_id from salesman where name = "Paul Adam");

```
1 SELECT * FROM orders WHERE salesman_id =
2 (SELECT salesman_id FROM salesman WHERE name = "Paul Adam");
3
```

ord_no	purch_amt	ord_date	customer_id	salesman_id
70011	75.29	17-8-2012	3003	5007

Question: Find all the orders generated in New York city.

SELECT * from orders where salesman_id = (SELECT salesman_id from salesman where city = 'New York');

⌂ SQLite

```
1 SELECT * FROM orders WHERE salesman_id =
2 (SELECT salesman_id FROM salesman WHERE city = 'New York');
3
```

ord_no	purch_amt	ord_date	customer_id	salesman_id
70002	65.26	5-10-2012	3002	5001
70005	2400.6	27-7-2012	3007	5001
70008	5760	10-9-2012	3002	5001
70013	3045.6	25-4-2012	3002	5001

Question: Find the order values greater than the average order value

select * from orders where purch_amt > (select AVG(purch_amt) from orders);

```
SQLite

1 SELECT * FROM orders WHERE
2   purch_amt > (SELECT AVG(purch_amt) FROM orders);
3
```

ord_no	purch_amt	ord_date	customer_id	salesman_id
70005	2400.6	27-7-2012	3007	5001
70008	5760	10-9-2012	3002	5001
70010	1983.43	10-10-2012	3004	5006
70003	2480.4	10-10-2012	3009	5003
70013	3045.6	25-4-2012	3002	5001

Question: Return all the salesperson details where commission is greater than 0.12.

select * from salesman where commission > 0.12;

```
1 SELECT * FROM salesman WHERE commission > 0.12;
```

salesman_id	name	city	commission
5001	James Hoog	New York	0.15
5002	Nail Knite	Paris	0.13
5006	Mc Lyon	Paris	0.14
5007	Paul Adam	Rome	0.13

Question: Count no of orders where purch is greater than 150.5.

select COUNT(ord_no) from orders where purch_amt > 150.5;

DB ▶ Run ⬇ Export ▾ ⬆ Import

⌂ SQLite

```
1 SELECT COUNT(ord_no) FROM orders WHERE purch_amt > 150.5;
```

❗ COUNT(ord_no)

8
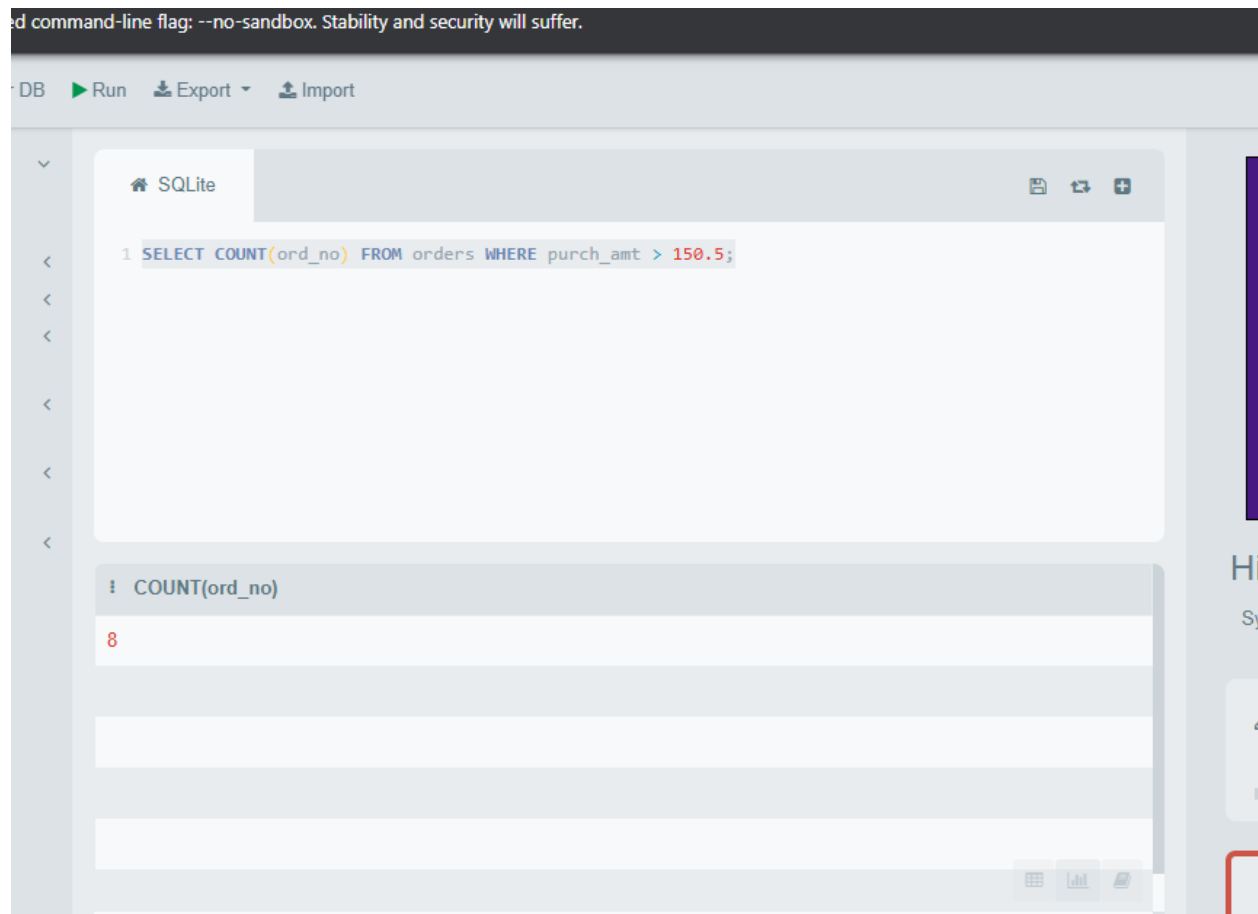
Dataset: Timesdata

Question: Select the universities from the USA.

SELECT university_name, country, income, total_score, num_students, student_staff_ratio, international_students, female_male_ratio, year FROM timesdata where country = 'United States of America';

```sql
1 SELECT  university_name, country, income, total_score, num_students,
2 student_staff_ratio, international_students, female_male_ratio, year
3 FROM timesdata WHERE country = 'United States of America';
4
```

univ...	country	income	total_s...	num_s...	studen...	intern...	female...	year
Harvard...	United ...	34.5	96.1	20,152	8.9	25%		2011
Californ...	United ...	83.7	96.0	2,243	6.9	27%	33 : 67	2011
Massac...	United ...	87.5	95.6	11,074	9	33%	37 : 63	2011
Stanfor...	United ...	64.3	94.3	15,596	7.8	22%	42 : 58	2011
Princet...	United ...	-	94.2	7,929	8.4	27%	45 : 55	2011
Universi...	United ...	-	91.1	36,186	16.4	15%	50 : 50	2011

Question: Find income of universities where income is more than 100.

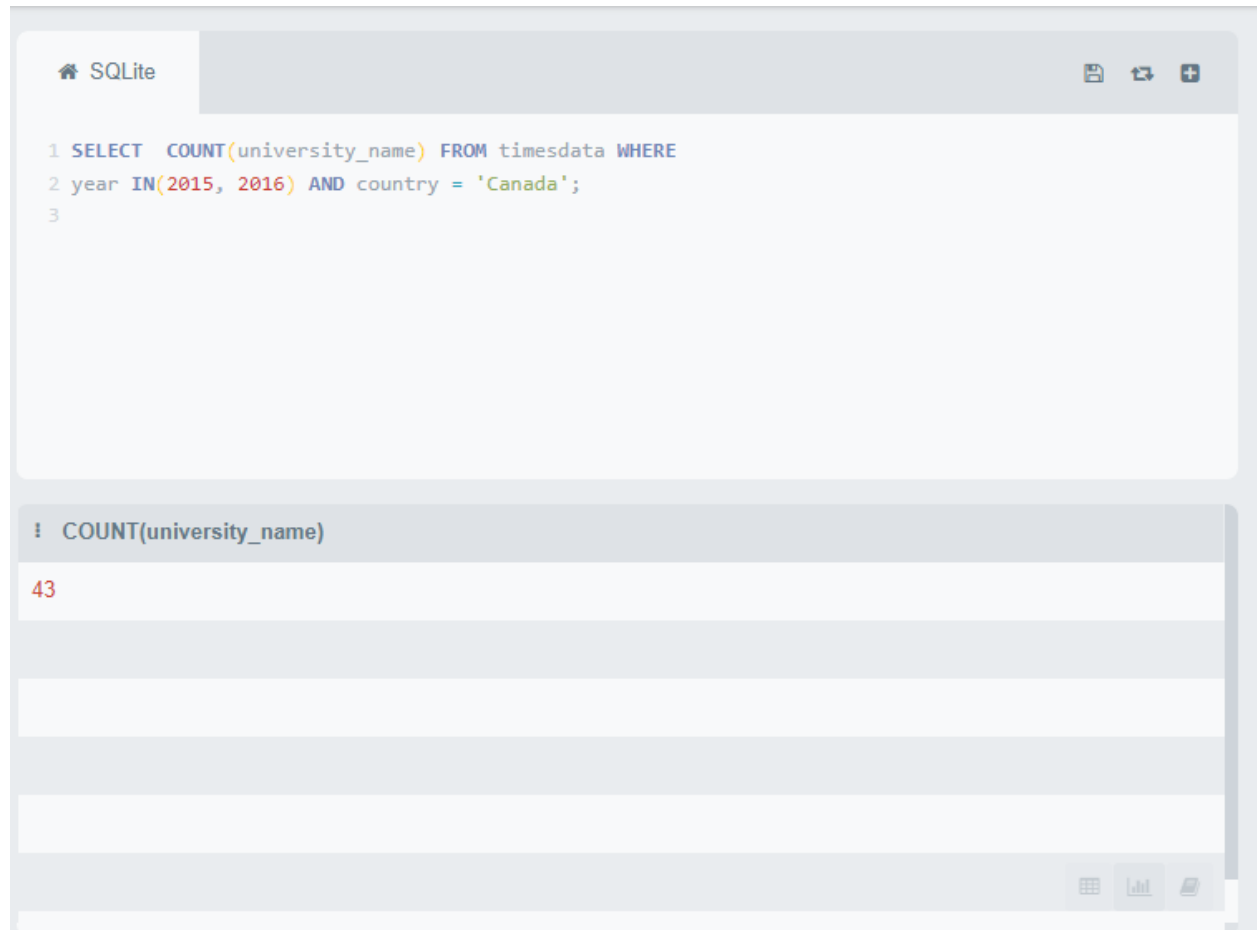SELECT university_name, country, income, year FROM timesdata where income > 100;

```sql
1 SELECT  university_name, country, income, year FROM timesdata
2 WHERE income > 100;
3
```

university_name	country	income	year
Harvard University	United States of America	34.5	2011
California Institute of Tec...	United States of America	83.7	2011
Massachusetts Institute ...	United States of America	87.5	2011
Stanford University	United States of America	64.3	2011
University of Cambridge	United Kingdom	57.0	2011
University of Oxford	United Kingdom	73.5	2011

Question: Return the number of universities in 2015 & 2016 in Canada

SELECT COUNT(university_name) FROM timesdata where year IN(2015, 2016) AND country = 'Canada';

```
  SQLite                                                        💾  ⇅  ➕

1 SELECT  COUNT(university_name) FROM timesdata WHERE
2 year IN(2015, 2016) AND country = 'Canada';
3
```

⁝ COUNT(university_name)
43

Question: Return No of students, student staff ratio, university name and country for 2014

SELECT num_students, student_staff_ratio, university_name, country FROM timesdata where year = 2014;

```
1 SELECT num_students, student_staff_ratio, university_name, country FROM timesdata
2 WHERE year = 2014;
3
```

num_students	student_staff_ratio	university_name	country
2,243	6.9	California Institute of Tec...	United States of America
20,152	8.9	Harvard University	United States of America
19,919	11.6	University of Oxford	United Kingdom
15,596	7.8	Stanford University	United States of America
11,074	9	Massachusetts Institute ...	United States of America
7,929	8.4	Princeton University	United States of America

Dataset: Chinook

Question: Return name, company, email, total and invoice date from customers & invoices where total is between 3 & 9.

select c.firstname, c.company, c.email, i.total, i.InvoiceDate from customers c, invoices i where c.CustomerId=i.customerid AND i.total BETWEEN 3 AND 9;

```
1 SELECT c.firstname, c.company, c.email, i.total, i.InvoiceDate FROM customers c, invoices i
2 WHERE c.CustomerId=i.customerid AND i.total BETWEEN 3 AND 9;
3
```

FirstName	Company	Email	Total	InvoiceDate
Luís	Embraer - Empres...	luisg@embraer.co...	3.98	2010-03-11 00:00:00
Luís	Embraer - Empres...	luisg@embraer.co...	3.96	2010-06-13 00:00:00
Luís	Embraer - Empres...	luisg@embraer.co...	5.94	2010-09-15 00:00:00
Luís	Embraer - Empres...	luisg@embraer.co...	8.91	2013-08-07 00:00:00
Leonie	NULL	leonekohler@surfe...	8.91	2009-10-12 00:00:00
Leonie	NULL	leonekohler@surfe...	3.96	2011-08-21 00:00:00

Question: Return name, quantity, composer, unitprice inner join oninvoice items and tracks.

```
 🏠 chinook.db                                          💾  ⟳  ➕

1 SELECT t.name, t.composer, i.quantity, i.unitprice FROM invoice_items i
2 INNER JOIN tracks t ON i.trackid=t.TrackId;
3
```

Name	Composer	Quantity	UnitPrice
Balls to the Wall	NULL	1	0.99
Restless and Wild	F. Baltes, R.A. Smith-Die...	1	0.99
Put The Finger On You	Angus Young, Malcolm Y...	1	0.99
Inject The Venom	Angus Young, Malcolm Y...	1	0.99
Evil Walks	Angus Young, Malcolm Y...	1	0.99
Breaking The Rules	Angus Young, Malcolm Y...	1	0.99

Question: Return name, composer, milliseconds from track and genre where unitprice = 0.99

select t.name, t.composer, t.milliseconds from genres g, tracks t where t.genreid= g.GenreId AND unitprice = 0.99;

```
1 SELECT t.name, t.composer, t.milliseconds FROM genres g, tracks t WHERE
2 t.genreid= g.GenreId AND unitprice = 0.99;
3
```

Name	Composer	Milliseconds
For Those About To Rock (We Sal...	Angus Young, Malcolm Young, Bria...	343719
Balls to the Wall	NULL	342562
Fast As a Shark	F. Baltes, S. Kaufman, U. Dirkscnei...	230619
Restless and Wild	F. Baltes, R.A. Smith-Diesel, S. Ka...	252051
Princess of the Dawn	Deaffy & R.A. Smith-Diesel	375418
Put The Finger On You	Angus Young, Malcolm Young, Bria...	205662

Question: No of customers where billing country is germany

SELECT DISTINCT count(invoiceid) from invoices where billingcountry = 'Germany';

```
 chinook.db

1 SELECT DISTINCT COUNT(invoiceid) FROM invoices
2 WHERE billingcountry = 'Germany';
3
```

⋮ count(invoiceid)
28
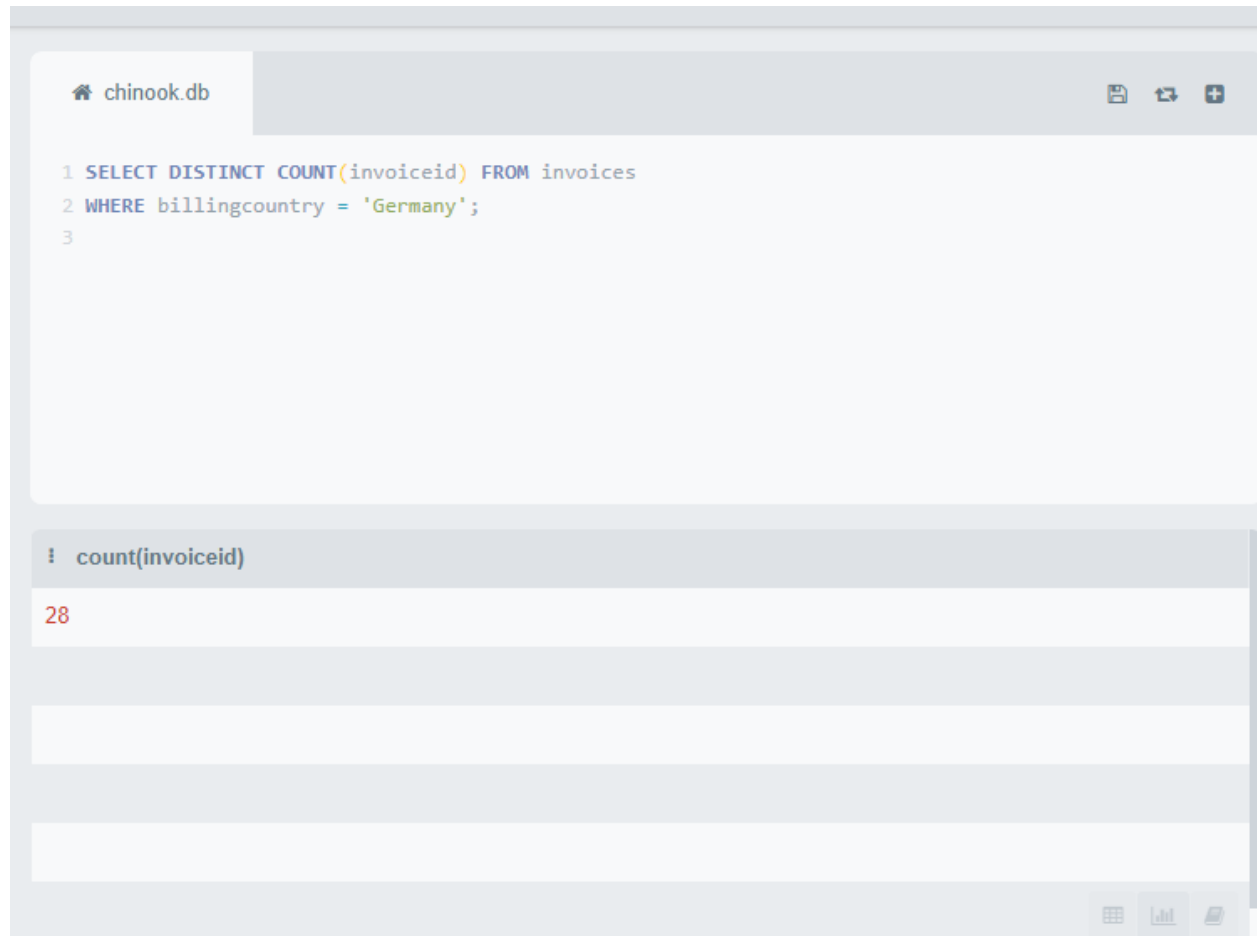
Question: Find list of customers where billing country is USA

SELECT c.firstname, c.company, c.phone, c.email, i.invoicedate from customers c, invoices i WHERE billingcountry = 'USA';

```
1  SELECT c.firstname, c.company, c.phone, c.email, i.invoicedate FROM customers c, invoices i
2  WHERE billingcountry = 'USA';
3
```

⋮ FirstName	Company	Phone	Email	InvoiceDate
Luís	Embraer - Empres...	+55 (12) 3923-5555	luisg@embraer.co...	2009-01-11 00:00:00
Leonie	NULL	+49 0711 2842222	leonekohler@surfe...	2009-01-11 00:00:00
François	NULL	+1 (514) 721-4711	ftremblay@gmail.c...	2009-01-11 00:00:00
Bjørn	NULL	+47 22 44 22 22	bjorn.hansen@yah...	2009-01-11 00:00:00
František	JetBrains s.r.o.	+420 2 4172 5555	frantisekw@jetbrai...	2009-01-11 00:00:00
Helena	NULL	+420 2 4177 0449	hholy@gmail.com	2009-01-11 00:00:00

Question: Retrieve firstname, lastname, reportsto, birthdate, hiredate, city, email, phone from the employee table and sort the output in ascending order on lastname.

SELECT firstname, lastname, reportsto, birthdate, hiredate, city, email, phone from employees ORDER BY lastname;

```
1 SELECT firstname, lastname, reportsto, birthdate, hiredate, city, email, phone FROM employees
2 ORDER BY lastname;
3
```

FirstN...	LastName	ReportsTo	BirthDate	HireDate	City	Email	Phone
Andrew	Adams	NULL	1962-02-...	2002-08-...	Edmonton	andrew@...	+1 (780) 428-9...
Laura	Callahan	6	1968-01-...	2004-03-...	Lethbridge	laura@ch...	+1 (403) 467-3...
Nancy	Edwards	1	1958-12-...	2002-05-...	Calgary	nancy@c...	+1 (403) 262-3...
Steve	Johnson	2	1965-03-...	2003-10-...	Calgary	steve@ch...	1 (780) 836-9987
Robert	King	6	1970-05-...	2004-01-...	Lethbridge	robert@c...	+1 (403) 456-9...
Michael	Mitchell	1	1973-07-...	2003-10-...	Calgary	michael@...	+1 (403) 246-9...

Question: Find the number of employees who reports to 2

SELECT DISTINCT Count(employeeid) from employees where reportsto = 2;

```sql
1 SELECT DISTINCT COUNT(employeeid) FROM employees WHERE reportsto = 2;
```

⋮ Count(employeeid)
3

Question: Left Join on albums and artists

SELECT al.title, a.name from albums al LEFT Join artists a ON al.ArtistId=a.ArtistId;

```
1 SELECT al.title, a.name FROM albums al LEFT JOIN artists a ON al.ArtistId=a.ArtistId;
```

Title	Name
For Those About To Rock We Salute You	AC/DC
Balls to the Wall	Accept
Restless and Wild	Accept
Let There Be Rock	AC/DC
Big Ones	Aerosmith
Jagged Little Pill	Alanis Morissette
Facelift	Alice In Chains

Question: the list of tracks where composer is Angus Young, Malcolm Young, Brian Johnson and order by millisecond

SELECT * from tracks WHERE composer = 'Angus Young, Malcolm Young, Brian Johnson' order BY milliseconds;

```sql
1 SELECT * FROM tracks WHERE composer = 'Angus Young, Malcolm Young, Brian Johnson'
2 ORDER BY milliseconds;
3
```

⋮ Trac...	Name	AlbumId	Media...	GenreId	Comp...	Millise...	Bytes	UnitPrice
11	C.O.D.	1	1	1	Angus Y...	199836	6566314	0.99
9	Snowba...	1	1	1	Angus Y...	203102	6599424	0.99
6	Put The...	1	1	1	Angus Y...	205662	6713451	0.99
13	Night Of...	1	1	1	Angus Y...	205688	6706347	0.99
8	Inject T...	1	1	1	Angus Y...	210834	6852860	0.99
7	Let's G...	1	1	1	Angus Y...	233926	7636561	0.99

Question: Get the media type for the tracks and rename the column as file type

SELECT m.name AS File_Type, t.name, t.milliseconds from media_types m, tracks t WHERE m.mediatypeid = t.mediatypeid;

```
chinook.db

1  SELECT m.name AS File_Type, t.name, t.milliseconds FROM media_types m, tracks t
2  WHERE m.mediatypeid = t.mediatypeid;
3
```

| File_Type	Name	Milliseconds
MPEG audio file	For Those About To Rock (We Sal...	343719
MPEG audio file	Put The Finger On You	205662
MPEG audio file	Let's Get It Up	233926
MPEG audio file	Inject The Venom	210834
MPEG audio file	Snowballed	203102
MPEG audio file	Evil Walks	263497

Question: find those employees who were hired between 2002-08-14 &
2005-08-14

SELECT firstname AS Fname, lastname AS Lname, title, birthdate, phone,
email, hiredate from employees where hiredate BETWEEN "2002-08-14" AND
"2005-08-14";

```
1 SELECT  firstname AS Fname, lastname AS Lname, title, birthdate, phone, email, hiredate
2 FROM employees WHERE hiredate BETWEEN "2002-08-14" AND "2005-08-14";
3
```

! Fname	Lname	Title	BirthDate	Phone	Email	HireDate
Andrew	Adams	General Ma...	1962-02-18...	+1 (780) 42...	andrew@ch...	2002-08-14 00:00...
Margaret	Park	Sales Supp...	1947-09-19...	+1 (403) 26...	margaret@...	2003-05-03 00:00...
Steve	Johnson	Sales Supp...	1965-03-03...	1 (780) 836...	steve@chin...	2003-10-17 00:00...
Michael	Mitchell	IT Manager	1973-07-01...	+1 (403) 24...	michael@c...	2003-10-17 00:00...
Robert	King	IT Staff	1970-05-29...	+1 (403) 45...	robert@chi...	2004-01-02 00:00...
Laura	Callahan	IT Staff	1968-01-09...	+1 (403) 46...	laura@chin...	2004-03-04 00:00...

Dataset:

CREATE TABLE IMDB (Title VARCHAR, Genre VARCHAR, Director VARCHAR, Actors VARCHAR, Year INT, Runtime INT, Rating FLOAT, Votes INT, Revenue INT, Metascore INT);

Question: Find the movie that was released in 2016

SELECT title, director from IMDB where year = 2010;

```
1 SELECT title, director FROM IMDB WHERE year = 2016;
```

SQLite

Title	Director
Split	M. Night Shyamalan
Sing	Christophe Lourdelet
Suicide Squad	David Ayer
The Great Wall	Yimou Zhang
La La Land	Damien Chazelle
Split	M. Night Shyamalan
Sing	Christophe Lourdelet

Question: find those movies, which were released before 2016.

SELECT DISTINCT title from IMDB where year < 2016;

```
1 SELECT DISTINCT title FROM IMDB WHERE year < 2016;
```

Title
Guardians of the Galaxy
Prometheus
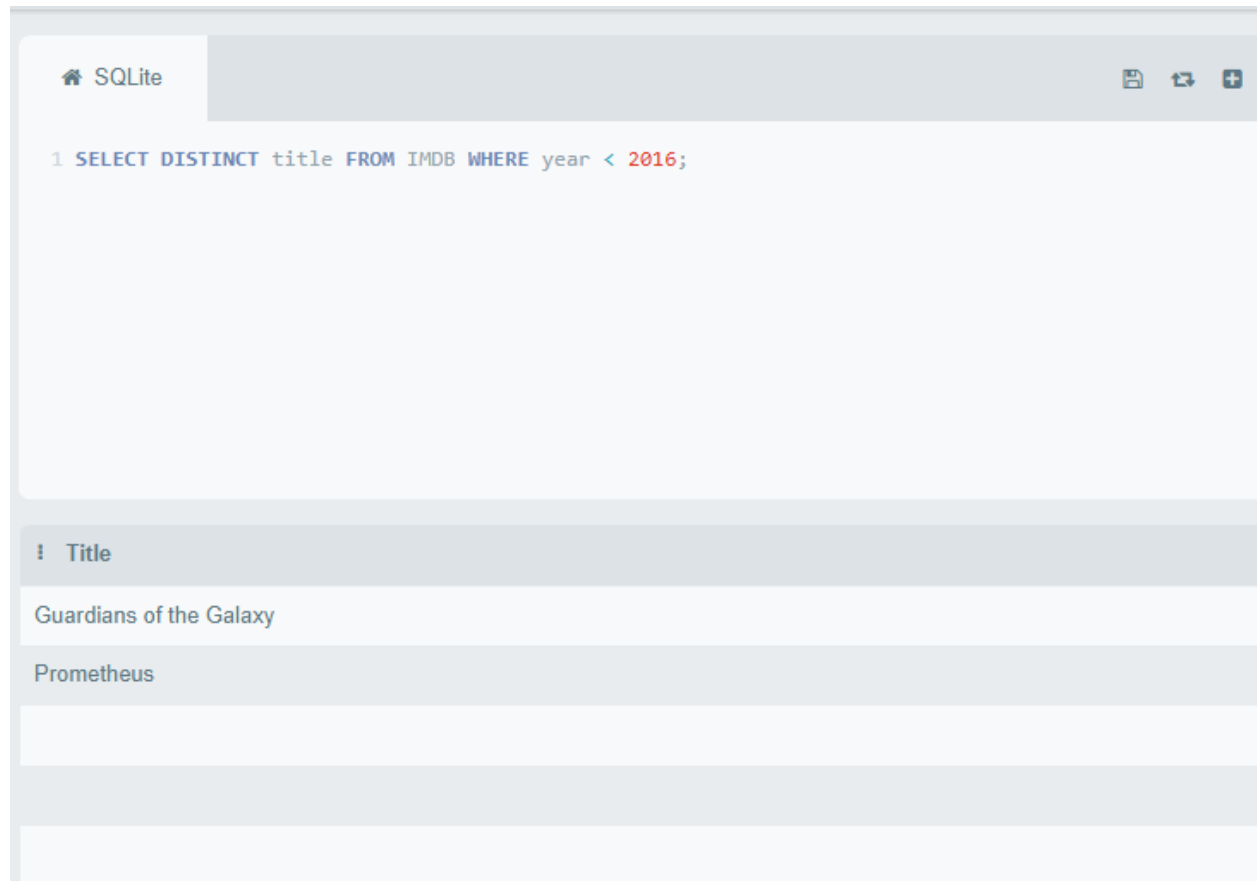
Question: Find the movie titles that is of action genre

SELECT DISTINCT title from IMDB where genre LIKE '%Action%' ORDER BY title;

```sql
1 SELECT DISTINCT title FROM IMDB WHERE genre LIKE '%Action%' ORDER BY title;
```

Title
Colossal
Guardians of the Galaxy
Jason Bourne
Rogue One
Suicide Squad
The Great Wall
The Lost City of Z

Question: Find the details of the movie without any metascore

select title from IMDB where metascore = 0;

```
1 SELECT title FROM IMDB WHERE metascore = 0;
```

⋮ Title
10 Years
5- 25- 77
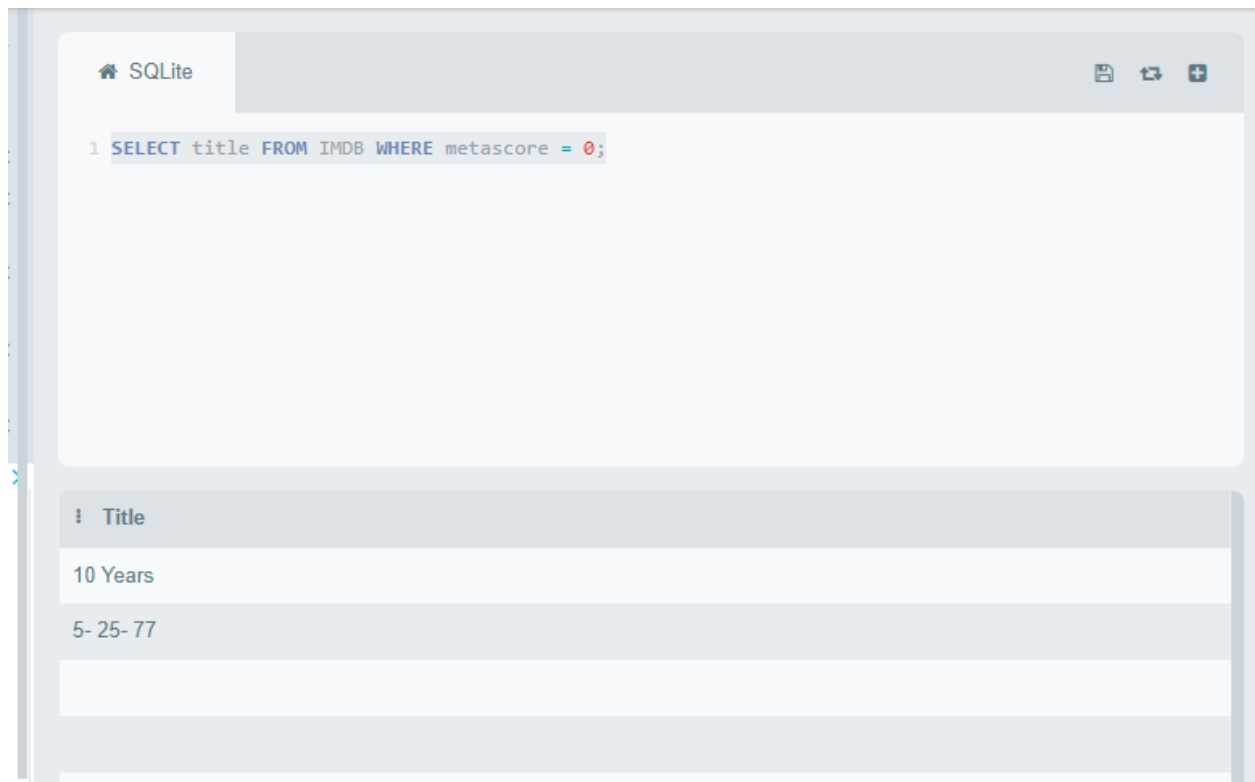
Question: Find Maximum runtime for the year 2013

select title, director, MAX(runtime) from IMDB where year = 2013;

⌂ SQLite   🖫 ⇄ ➕

```
1 SELECT title, director, MAX(runtime) FROM IMDB WHERE year = 2013;
```

⁞ Title	Director	MAX(runtime)
12 Years a Slave	Steve McQueen	134

Dataset: World Population

Question: Return Continent, growth rate, and population% where area is greater than 5000

SELECT continent, growth_rate, world_population_percentage FROM world_population where area_ > 5000;

```sql
1 SELECT continent, growth_rate, world_population_percentage FROM world_population
2 WHERE area > 5000;
3
```

Continent	Growth_Rate	World_Population_Percentage
Asia	1.0257	0.52
Europe	0.9957	0.04
Africa	1.0164	0.56
Africa	1.0315	0.45
South America	1.0052	0.57
Asia	0.9962	0.03

Question: Return all the values where city area is greater than 600

SELECT * from cities_test WHERE city_area>600;

```
1 SELECT * FROM cities_test WHERE city_area>600;
```

city_name	country	city_population	city_area
Tokyo	Japan	13515271	2191
Delhi	India	16753235	1484
Shanghai	China	24870895	6341
Sao Paulo	Brazil	12252023	1521
Mexico City	Mexico	9209944	1485
Cairo	Egypt	9500000	3085
Mumbai	India	12478447	603

Question: Select the maximum population

SELECT MAX(city_population) from cities_test;

```
1 SELECT MAX(city_population) FROM cities_test;
```

⋮ MAX(city_population)

32054159

Question: Show the name and population in millions for the countries

SELECT city_name, city_population/1000000 from cities_test;

SQLite

```
1 SELECT city_name, city_population/1000000 FROM cities_test;
```

city_name	city_population/1000000
Tokyo	13
Delhi	16
Shanghai	24
Sao Paulo	12
Mexico City	9
Cairo	9
Mumbai	12

Question: return all data where population is greater 9500000 or area less than 1600.

SELECT * from cities_test where city_population > 9500000 OR city_area < 1600;

SQLite

```sql
1 SELECT * FROM cities_test WHERE city_population > 9500000 OR city_area < 1600;
```

city_name	country	city_population	city_area
Tokyo	Japan	13515271	2191
Delhi	India	16753235	1484
Shanghai	China	24870895	6341
Sao Paulo	Brazil	12252023	1521
Mexico City	Mexico	9209944	1485
Mumbai	India	12478447	603
Beijing	China	21893095	16411