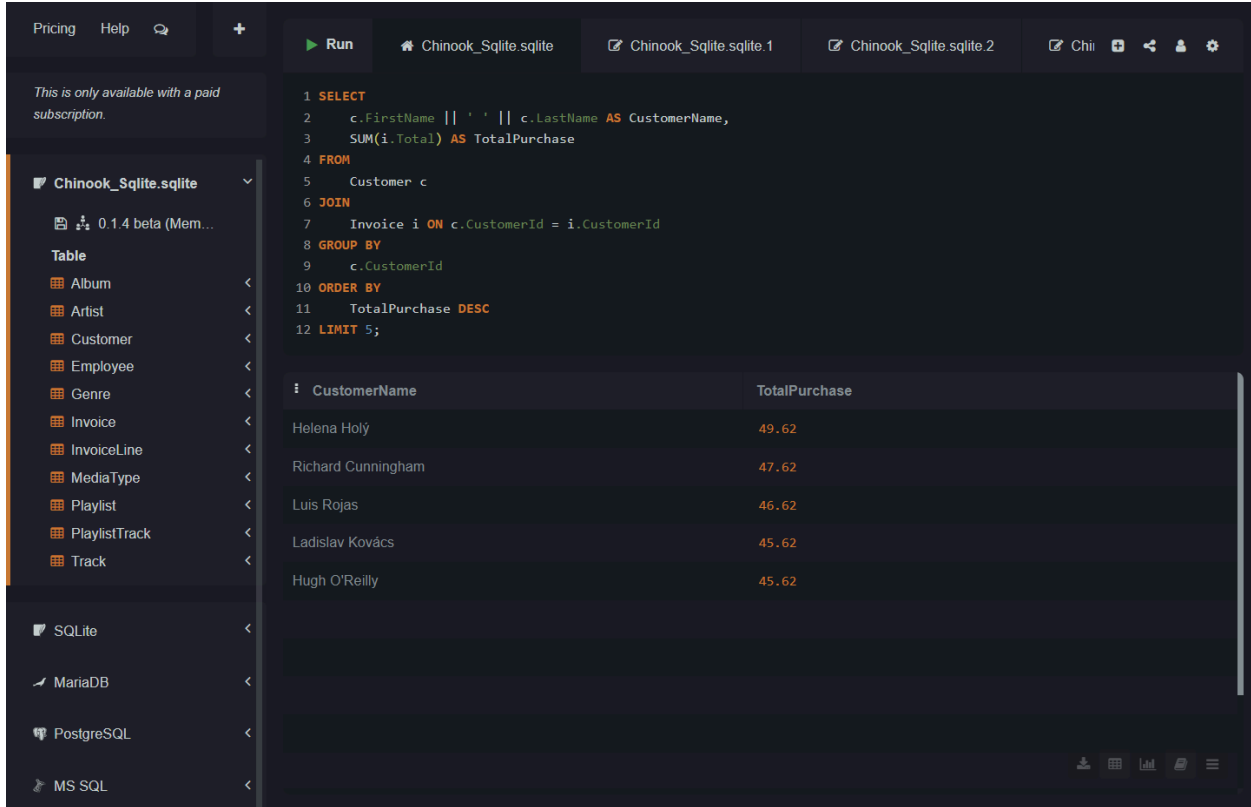


## Section 2 - SQL Assignment

1) List the top 5 customers by total purchase amount.



The screenshot shows a SQL IDE interface with a dark theme. On the left, a sidebar lists database tables: Album, Artist, Customer, Employee, Genre, Invoice, InvoiceLine, MediaType, Playlist, PlaylistTrack, and Track. The main area displays a SQL query and its results.

```
1 SELECT
2   c.FirstName || ' ' || c.LastName AS CustomerName,
3   SUM(i.Total) AS TotalPurchase
4 FROM
5   Customer c
6 JOIN
7   Invoice i ON c.CustomerId = i.CustomerId
8 GROUP BY
9   c.CustomerId
10 ORDER BY
11   TotalPurchase DESC
12 LIMIT 5;
```

CustomerName	TotalPurchase
Helena Holy	49.62
Richard Cunningham	47.62
Luis Rojas	46.62
Ladislav Kovács	45.62
Hugh O'Reilly	45.62

2) Find the most popular genre in terms of total tracks sold.

Pricing Help +

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Chinook\_Sqlite.sqlite

0.1.4 beta (Mem...)

Table

- Album
- Artist
- Customer
- Employee
- Genre
- Invoice
- InvoiceLine
- MediaType
- Playlist
- PlaylistTrack
- Track

SQLite

MariaDB

PostgreSQL

MS SQL

Run Chinook\_Sqlite.sqlite Chinook\_Sqlite.sqlite.1 Chinook\_Sqlite.sqlite.2 Chii

```

1 SELECT
2   g.Name AS Genre,
3   COUNT(il.TrackId) AS TracksSold
4 FROM
5   InvoiceLine il
6 JOIN
7   Track t ON il.TrackId = t.TrackId
8 JOIN
9   Genre g ON t.GenreId = g.GenreId
10 GROUP BY g.GenreId
11 ORDER BY TracksSold DESC
12 LIMIT 1;

```

Genre	TracksSold
Rock	835

3) Retrieve all employees who are managers along with their subordinates.

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Chinook\_Sqlite.sqlite

0.1.4 beta (Mem...)

Table

- Album
- Artist
- Customer
- Employee
- Genre
- Invoice
- InvoiceLine
- MediaType
- Playlist
- PlaylistTrack
- Track

SQLite

MariaDB

PostgreSQL

MS SQL

Run Chinook\_Sqlite.sqlite Chinook\_Sqlite.sqlite.1 Chinook\_Sqlite.sqlite.2 Chii

```

1 SELECT
2   m.EmployeeId AS ManagerID,
3   m.FirstName || ' ' || m.LastName AS ManagerName,
4   e.EmployeeId AS SubordinateID,
5   e.FirstName || ' ' || e.LastName AS SubordinateName
6 FROM
7   Employee e
8 JOIN
9   Employee m ON e.ReportsTo = m.EmployeeId;

```

ManagerID	ManagerName	SubordinateID	SubordinateName
1	Andrew Adams	2	Nancy Edwards
2	Nancy Edwards	3	Jane Peacock
2	Nancy Edwards	4	Margaret Park
2	Nancy Edwards	5	Steve Johnson
1	Andrew Adams	6	Michael Mitchell
6	Michael Mitchell	7	Robert King
6	Michael Mitchell	8	Laura Callahan

4) For each artist, find their most sold album.

The screenshot shows a database IDE interface with a dark theme. On the left, a sidebar lists database tables: Album, Artist, Customer, Employee, Genre, Invoice, InvoiceLine, MediaType, Playlist, PlaylistTrack, and Track. The main editor displays a SQL query that uses a subquery to find the maximum number of tracks sold for each artist and then joins this back to the main table to find the corresponding album.

```
1 SELECT
2   a.Name AS ArtistName,
3   al.Title AS AlbumTitle,
4   COUNT(il.TrackId) AS TracksSold
5 FROM Artist a
6 JOIN Album al ON a.ArtistId = al.ArtistId
7 JOIN Track t ON al.AlbumId = t.AlbumId
8 JOIN InvoiceLine il ON t.TrackId = il.TrackId
9 GROUP BY a.ArtistId, al.AlbumId
10 HAVING
11   COUNT(il.TrackId) = (
12     SELECT MAX(TrackCount)
13     FROM (
14       SELECT
15         COUNT(il2.TrackId) AS TrackCount
16       FROM
17         Album al2
18       JOIN
19         Track t2 ON al2.AlbumId = t2.AlbumId
20       JOIN
21         InvoiceLine il2 ON t2.TrackId = il2.TrackId
22       WHERE
23         al2.ArtistId = a.ArtistId
24       GROUP BY
25         al2.AlbumId
26     )
27   );
```

Below the query, the results are displayed in a table with three columns: ArtistName, AlbumTitle, and TracksSold.

ArtistName	AlbumTitle	TracksSold
AC/DC	For Those About To Rock We Salute You	10
Accept	Restless and Wild	3

5) Write a query to get monthly sales trends in the year 2013.

PricingHelp+

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Chinook\_Sqlite.sqlite

0.1.4 beta (Mem...)

Table

Album

Artist

Customer

Employee

Genre

Invoice

InvoiceLine

MediaType

Playlist

PlaylistTrack

Track

SQLite

MariaDB

PostgreSQL

MS SQL

Run

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Chinook\_Sqlite.sqlite.2

Chinook\_Sqlite.sqlite.3

Chinook\_Sqlite.sqlite.4

```
1 SELECT
2     STRFTIME('%Y-%m', InvoiceDate) AS Month,
3     SUM(Total) AS MonthlySales
4 FROM
5     Invoice
6 WHERE
7     STRFTIME('%Y', InvoiceDate) = '2013'
8 GROUP BY
9     STRFTIME('%Y-%m', InvoiceDate)
10 ORDER BY
11     Month;
12
```

Month	MonthlySales
2013-01	37.62
2013-02	27.72
2013-03	37.62
2013-04	33.66
2013-05	37.62
2013-06	37.62
2013-07	37.62
2013-08	37.62
2013-09	37.62
2013-10	37.62