

SQL Project Queries

1. What is the most popular music genre (the one with the highest total sales)? what are the overall sales figures for each musical genre?

```
SELECT G.Name AS genre_name,  
       SUM(IL.UnitPrice*IL.Quantity) AS total_sales  
FROM Genre G  
JOIN Track T ON G.GenreId=T.GenreId  
JOIN InvoiceLine IL ON T.TrackId=IL.TrackId  
GROUP BY 1  
ORDER BY 2 DESC
```

2. Write a query that returns the contribution percentage of each sales agent in the earned revenues

First option: this query will return the name and sales percentage for each agent.

```
WITH t1 AS
(
    SELECT E.EmployeeId,
           E.FirstName || ' ' || E.LastName AS emp_name,
           SUM(I.Total) AS emp_sales
    FROM Employee E
    JOIN Customer C ON E.EmployeeId=C.SupportRepId
    JOIN Invoice I ON C.CustomerId=I.CustomerId
    GROUP BY 1),
    t2 AS
(
    SELECT SUM(I.Total) AS total
    FROM Invoice I)
SELECT t1.emp_name,
       ROUND (t1.emp_sales / t2.total *100) AS sales_percent
FROM t1,
     t2
```

second option: the following query return only the sales amount achieved by each sale agent; these figures will be converted to percentage when using the option of Pie chart.

```
SELECT E.EmployeeId,
       E.FirstName || ' ' || E.LastName AS emp_name,
       SUM(I.Total) AS emp_sales
FROM Employee E
JOIN Customer C ON E.EmployeeId=C.SupportRepId
JOIN Invoice I ON C.CustomerId=I.CustomerId
GROUP BY 1
```

3. show the changes in annual total sales of all genres compared to the annual sales of the most demanded genre (which is 'Rock music') throughout all business years

```
SELECT t2.year,
       total_sales,
       Rock_sales
FROM
  (SELECT STRFTIME('%Y', I.InvoiceDate) YEAR,
          SUM(IL.UnitPrice*IL.Qu
antity) AS Rock_sales
   FROM Invoice I
  JOIN InvoiceLine IL ON I.InvoiceId=IL.InvoiceId
  JOIN Track T ON T.TrackId=IL.TrackId
  JOIN Genre G ON T.GenreId=G.GenreId
  WHERE G.Name =
    (SELECT Name
     FROM
      (SELECT G.Name,
              SUM(IL.UnitPrice*IL.Quantity)
        FROM Genre G
       JOIN Track T ON T.GenreId=G.GenreId
       JOIN InvoiceLine IL ON T.TrackId=IL.TrackId
      GROUP BY 1
     ORDER BY 2 DESC
     LIMIT 1) AS t1)
   GROUP BY 1) AS t2
JOIN
  (SELECT STRFTIME('%Y', I.InvoiceDate) YEAR,
          SUM(IL.UnitPrice*IL.Qu
antity) AS total_sales
   FROM Invoice I
```

```
JOIN InvoiceLine IL ON I.InvoiceId=IL.InvoiceId
GROUP BY 1) AS t3 ON t2.year=t3.year
```

4. define the customer who has spent the most on music for each country, as well as how much each of them has spent?

The following code will return all information about the customers' names who spent the most, the country, as well as the amount spent of each.

```
WITH t1 AS
(
  (SELECT C.CustomerId,
          C.FirstName,
          C.LastName,
          C.Country,
          SUM(I.Total) AS TotalSpent
   FROM Customer C
   JOIN Invoice I ON C.CustomerId = I.CustomerId
   GROUP BY 1)
SELECT t1.*
FROM t1
JOIN
  (
    (SELECT Country,
            MAX(TotalSpent) AS MaxTotalSpent,
            FirstName,
            LastName,
            CustomerId
     FROM t1
     GROUP BY Country) t2 ON t1.Country = t2.Country
WHERE t1.TotalSpent = t2.MaxTotalSpent
```

ORDER BY TotalSpent **DESC**

The previous solution will give us five separate columns (CustomerId, FirstName, LastName, Country and Total Amount spent) for each

Then we'll concatenate the columns of (FirstName, LastName & Country) all in one column so we can create two columns: one that return all information about the customer and the country he represents and the second column will return the amount spent by these customers:

Our final code for this question will be as follows

WITH t1 **AS**

```
(SELECT C.CustomerId,  
      C.FirstName,  
      C.LastName,  
      C.Country,  
      SUM(I.Total) AS TotalSpent
```

```
FROM Customer C
```

```
JOIN Invoice I ON C.CustomerId = I.CustomerId
```

```
GROUP BY 1),
```

```
  t2 AS
```

```
(SELECT t1.*
```

```
FROM t1
```

```
JOIN
```

```
(SELECT Country,  
      MAX(TotalSpent) AS MaxTotalSpent,  
      FirstName,  
      LastName,  
      CustomerId
```

```
FROM t1
```

```
GROUP BY Country) t3 ON t1.Country = t3.Country
```

```
WHERE t1.TotalSpent = t3.MaxTotalSpent
ORDER BY TotalSpent DESC)
SELECT FirstName || ' ' || LastName || ' from ' || Co
untry AS Name_Country,
        TotalSpent
FROM t2
```
