

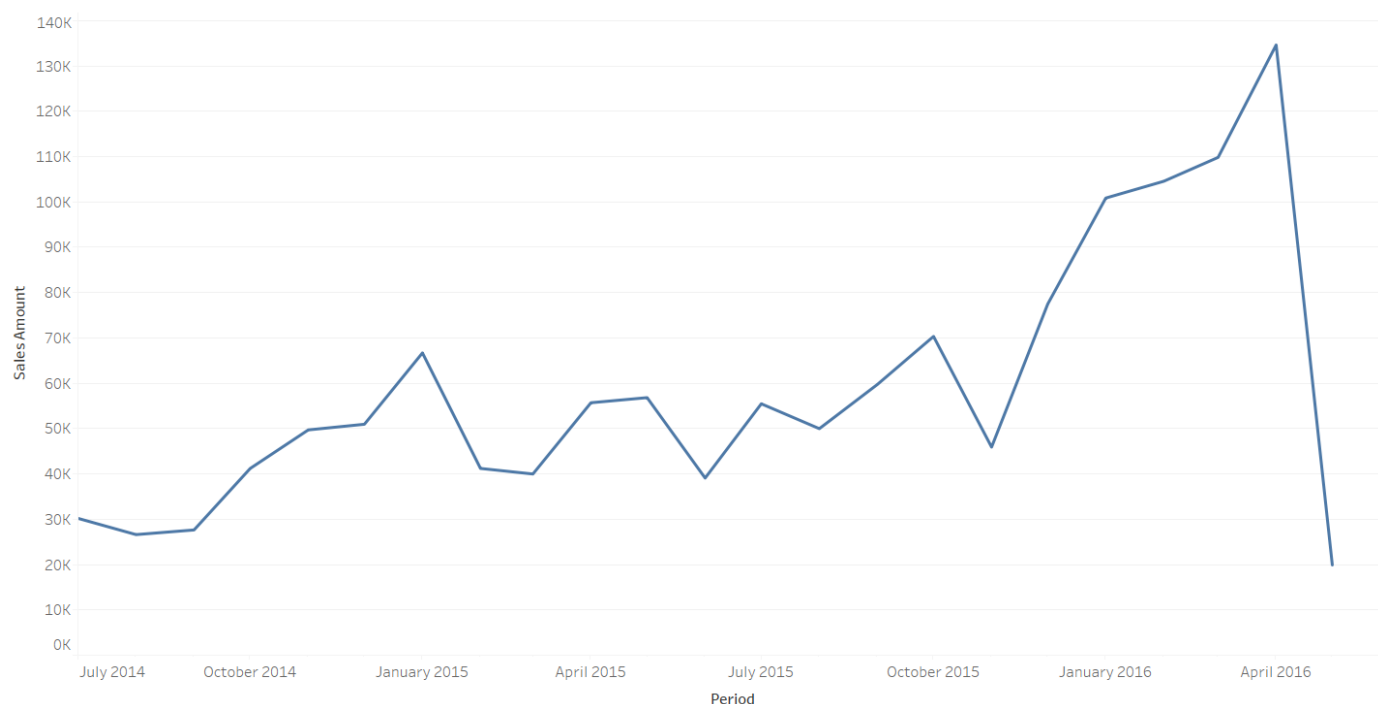
# Project: Create a report from a SQL database

## Introduction

This project is part of Udacity Business Analyst Nanodegree Program. The purpose of the project is to write SQL queries to extract and analyze data from a transactions database and prepare a set of visualizations.

## Sales trend

Sales trend



The trend of Sales Amount for Month of Period.

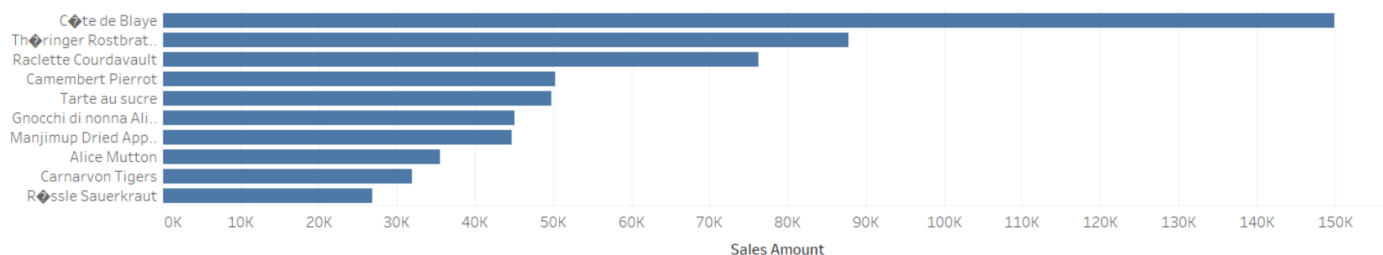
The line chart shows monthly sales from July 2014 till May 2016. Sales increased dramatically in Q1 2016 but they dropped in May 2016.

## SQL query

```
SELECT SUM (OrderDetails.UnitPrice * OrderDetails.Quantity) AS SalesAmount, STRFTIME('%m', Orders.OrderDate) AS Month, STRFTIME('%Y', Orders.OrderDate) AS Year, STRFTIME('%m-%Y', Orders.OrderDate) AS Period FROM OrderDetails JOIN Orders ON OrderDetails.OrderID = Orders.OrderId GROUP BY Month, Year ORDER BY Year, Month;
```

## Top 10 products

Top 10 products



Sum of Sales Amount for each Product Name.

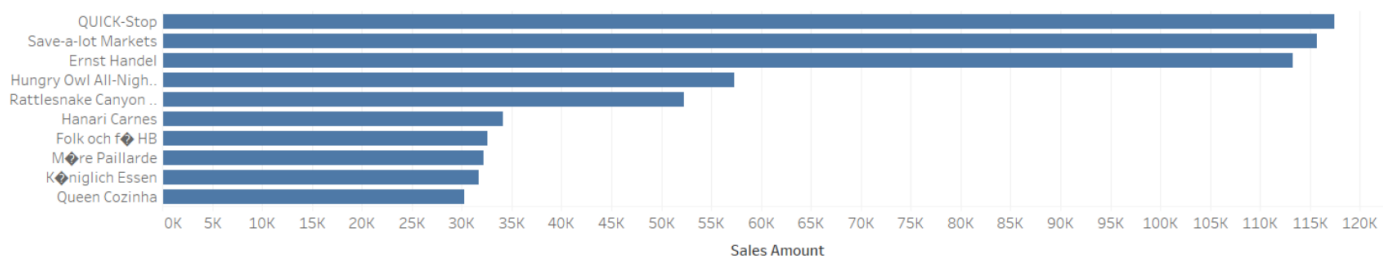
The bar chart shows the top 10 products by sales amount. Cote de Blaye and Thuringian sausage are the two most relevant products in terms of revenues

## SQL query

```
SELECT ProductName, SUM (OrderDetails.UnitPrice * OrderDetails.Quantity) AS SalesAmount
FROM Products
JOIN OrderDetails
    ON Products.ProductID = OrderDetails.ProductID
GROUP BY 1
ORDER BY 2 DESC
LIMIT 10;
```

## Top 10 customers

Top 10 customers



Sum of Sales Amount for each Company Name.

The bar chart shows the top 10 customers by sales amount. QUICK-Stop, Save-a-lot Markets and Ernst Handel are the key accounts.

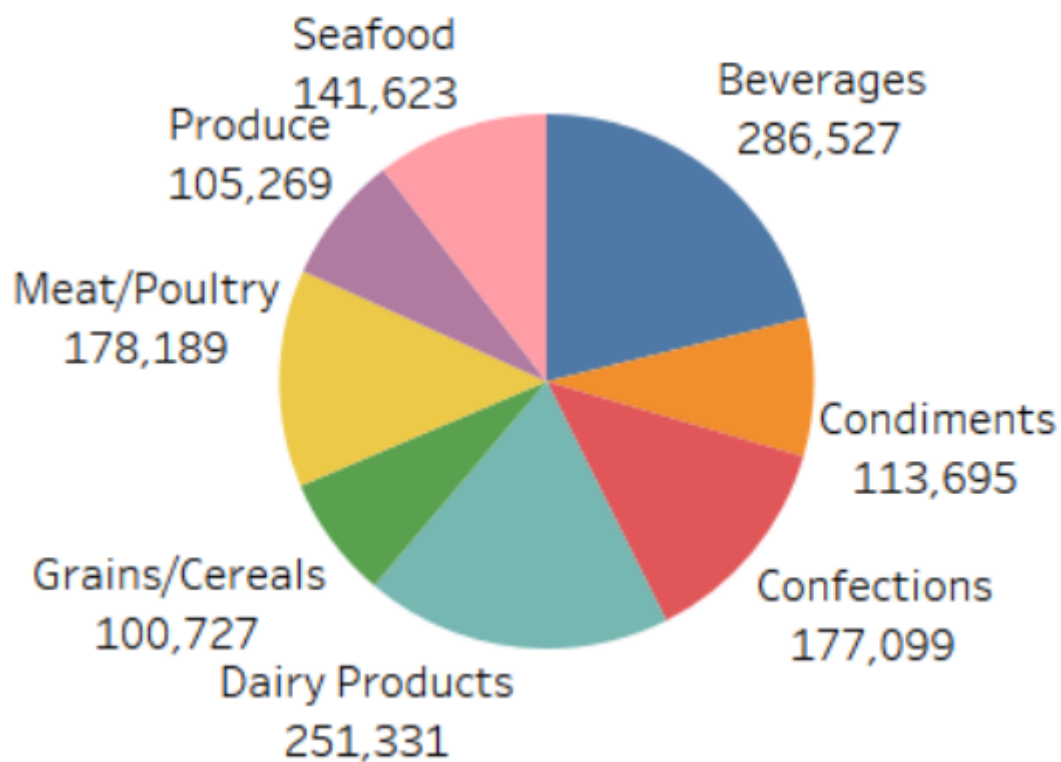
## SQL query

```
SELECT Customers.CompanyName, SUM (OrderDetails.UnitPrice * OrderDetails.Quantity)
AS SalesAmount
FROM Customers
JOIN Orders
```

```
ON Customers.CustomerID = Orders.CustomerID
JOIN OrderDetails
ON OrderDetails.OrderID = Orders.OrderId
GROUP BY CompanyName
ORDER BY SalesAmount DESC
LIMIT 10;
```

## Sales by product category

### Sales by product category



The pie chart shows the total sales amount split by product category. Beverages and Dairy Products have the highest impact on turnover.

## SQL query

```
SELECT ProductCategory, SalesAmount
FROM
    (SELECT Categories.CategoryName AS ProductCategory, SUM (OrderDetails.UnitPrice * OrderDetails.Quantity) AS SalesAmount
    FROM Categories
    JOIN Products
        ON Categories.CategoryID = Products.CategoryID
    JOIN OrderDetails
        ON OrderDetails.ProductID = Products.ProductID
    GROUP BY ProductCategory)
ORDER BY SalesAmount DESC;
```