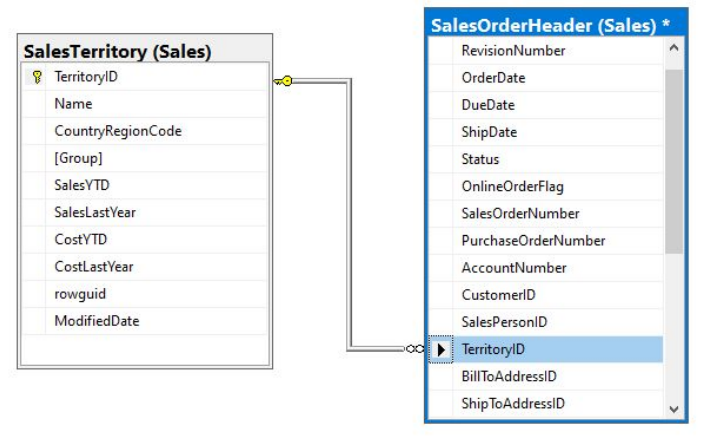
Question 3

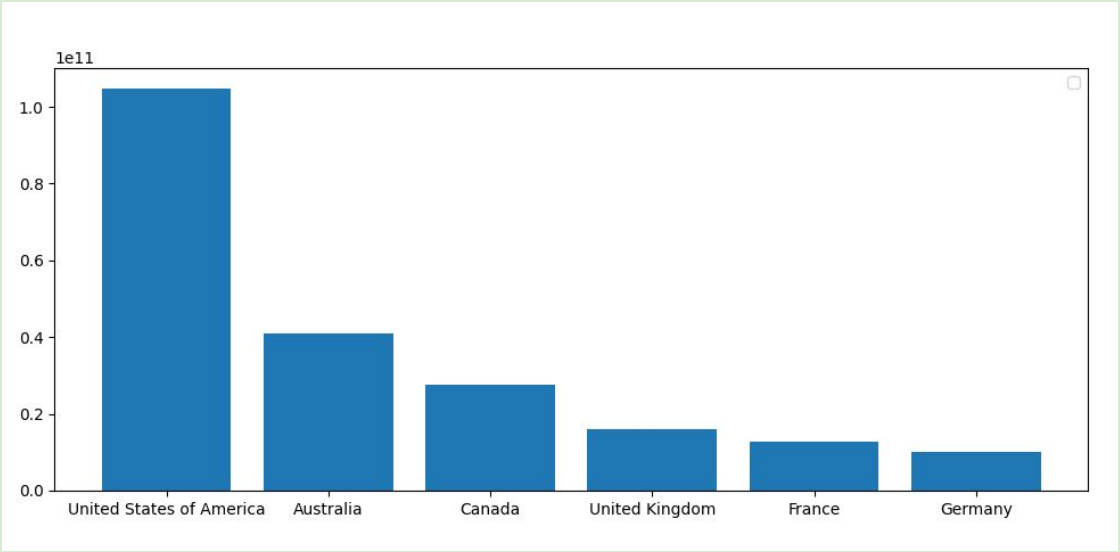
Relationship between country and revenue

Overview:

Inner join was used to link the ***SalesOrderHeader*** and ***SalesTerritory*** *tables.*

'Sales YTD' column values which represents revenue was grouped for each country. This comparison was done by using a subquery and CASE statement the subareas of United States were gathered into one group





Solution

First ***pypyodbc*** library was used to create a connection between MS server and VS code (using my server name, the database 'AdventureWorks22' , and the connection string), enabling to directly import the query into Python. Pandas library was used then to create a Dataframe from the query result, and finally Matplotlib was used to compare the values in the bar graph above.

Insights

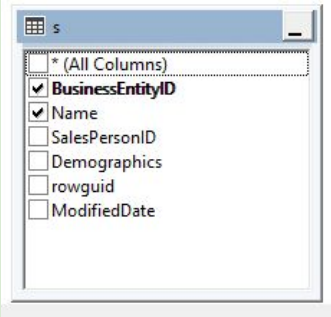
The US has the highest revenue from sales while European countries have very similar revenue numbers represented in United Kingdom, France and Germany . However there is no relationship between revenue and country.

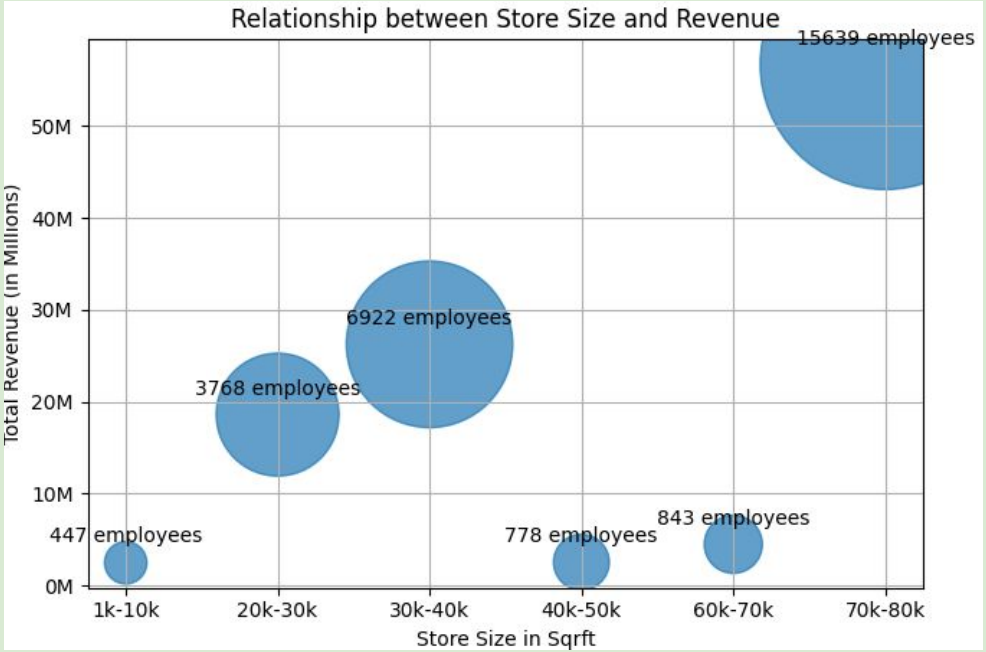
Question 6

Relationship between the size of the stores, number of employees and revenue

Overview:

relationship between annual revenue, total number of employees and store size : grouped the Store Names by area (in sqr ft). All columns are in the ***vStoreWithDemographics table.*** By doing so I categorized the shop sizes from 1000-8000 sq.ft





Insights

Store size has no relationship with the number of employees because stores with 60-75k sq ft in size have much less employees than stores within the 30-40k sqft size range. There is a positive correlation only between the total number of employees and the total revenue