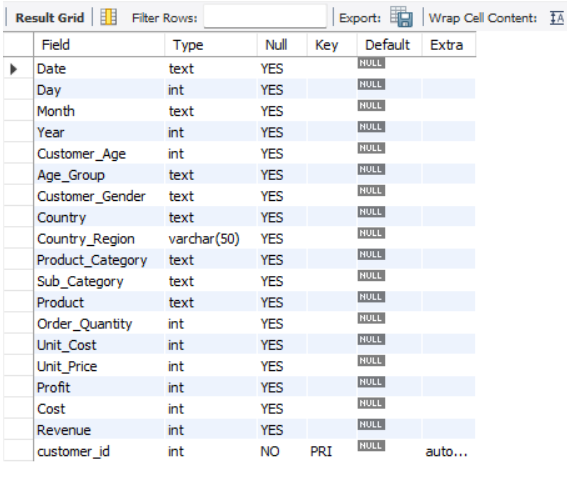
""""""" **Understanding the data** """"""

SHOW COLUMNS FROM sales

SELECT \* FROM sales;

DESCRIBE sales;



""""""" **Data Preparing** """"""

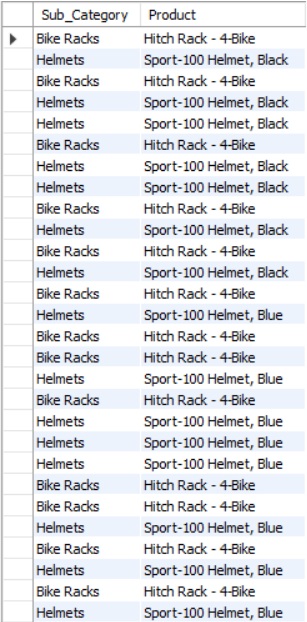
create table salesbackup as select \* from sales

ALTER TABLE sales ADD customer\_id INT NOT NULL AUTO\_INCREMENT PRIMARY KEY;

UPDATE sales SET Customer\_Gender = CASE WHEN Customer\_Gender = 'M' THEN 'Male' WHEN Customer\_Gender = 'F' THEN 'Female' ELSE Customer\_Gender END

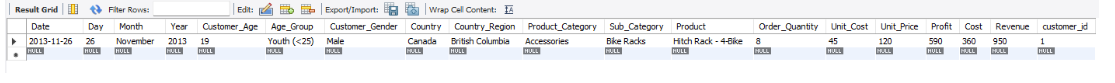
UPDATE sales SET Order\_Quantity = 0, Unit\_Price = 0 WHERE Order\_Quantity IS NULL OR Unit\_Price IS NULL;

ALTER TABLE sales CHANGE State Country\_Region varchar(50);



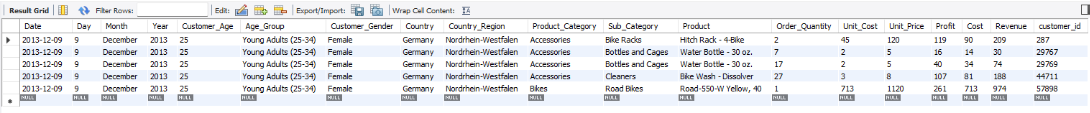
**-- Selecting Specific Customer ID**

SELECT \* FROM sales WHERE customer\_id IN (1);



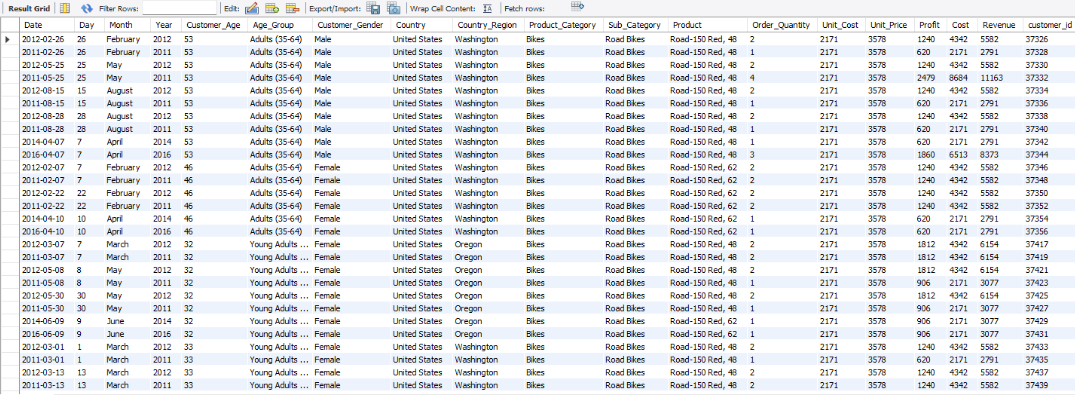
**-- Select sales of a 25-year-old customer in Germany on 2013-12-09**

SELECT \* FROM sales WHERE date = '2013-12-09' AND Customer\_Age = 25 AND Country = "Germany";



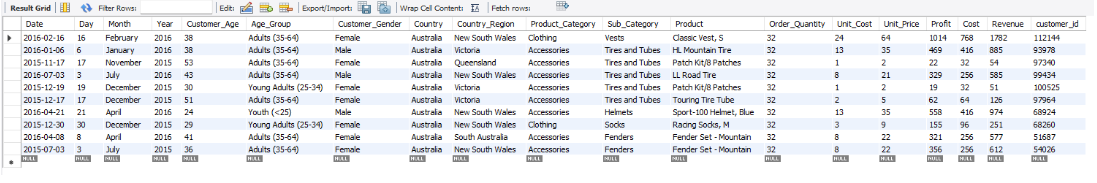
**-- Select 'Road-150' products in the 'Bikes' category**

SELECT \* FROM sales WHERE Product\_Category = 'Bikes' AND Product LIKE '%Road-150%';



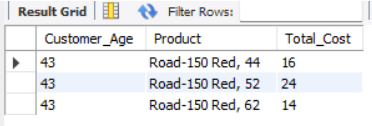
**-- Select sales in Australia, ordered by Order\_Quantity in descending order, and limit to the top 10**

SELECT \* FROM sales WHERE Country = 'Australia' ORDER BY Order\_Quantity DESC LIMIT 10;



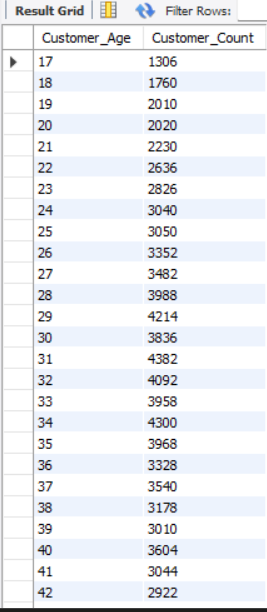
\*-- Display the total cost of 'Road-150' products in the United States for 43-year-old female customers

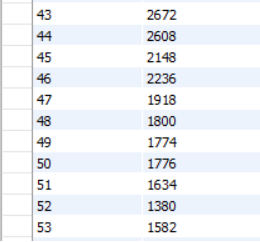
\*\* SELECT Customer\_Age, Product, COUNT(Cost) AS Total\_Cost FROM sales WHERE Customer\_Gender = 'Female' AND Customer\_Age = 43 AND Country = 'United States' AND Product LIKE 'Road-150%' GROUP BY Customer\_Age, Product;



**-- What is the age distribution of customers?**

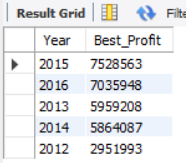
SELECT Customer\_Age, COUNT(\*) as Customer\_Count FROM sales GROUP BY Customer\_Age ORDER BY Customer\_Age;





**-- What is the most 5 profitable year?**

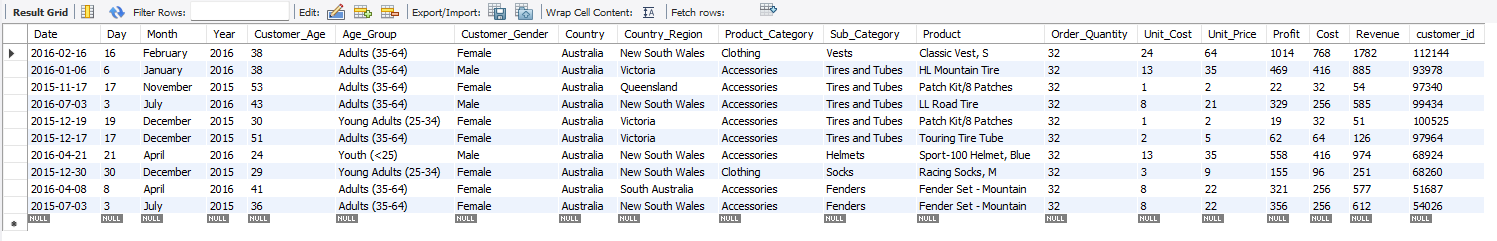
SELECT Year, SUM(Profit) as Best\_Profit FROM sales GROUP BY Year ORDER BY Best\_Profit DESC LIMIT 5;



""""""" **Data Analysis** """"""

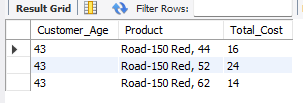
**-- Select sales in Australia, ordered by Order\_Quantity in descending order, and limit to the top 10**

SELECT \* FROM sales WHERE Country = 'Australia' ORDER BY Order\_Quantity DESC LIMIT 10;



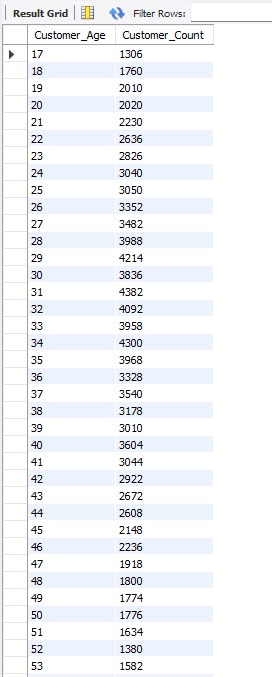
\*\*-- Display the total cost of 'Road-150' products in the United States for 43-year-old female customers

\*\* SELECT Customer\_Age, Product, COUNT(Cost) AS Total\_Cost FROM sales WHERE Customer\_Gender = 'Female' AND Customer\_Age = 43 AND Country = 'United States' AND Product LIKE 'Road-150%' GROUP BY Customer\_Age, Product;



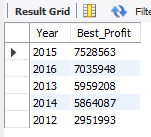
**-- What is the age distribution of customers?**

SELECT Customer\_Age, COUNT(\*) as Customer\_Count FROM sales GROUP BY Customer\_Age ORDER BY Customer\_Age;



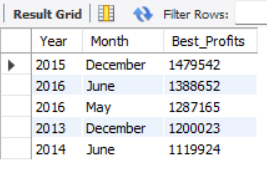
**-- What is the most 5 profitable year?**

SELECT Year, SUM(Profit) as Best\_Profit FROM sales GROUP BY Year ORDER BY Best\_Profit DESC LIMIT 5;



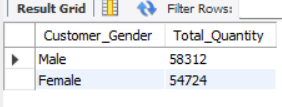
-- What are the 5 most profitable months?

SELECT Year,Month, SUM(Profit) as Best\_Profits FROM sales GROUP BY Year,Month ORDER BY Best\_Profits DESC LIMIT 5;



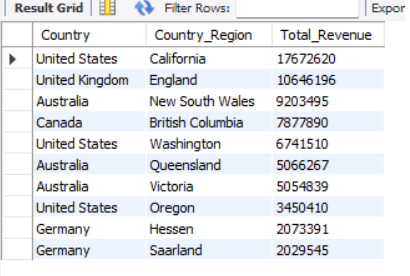
**- Which gender receives the most orders?**

SELECT Customer\_Gender, COUNT(\*) as Total\_Quantity FROM sales GROUP BY Customer\_Gender



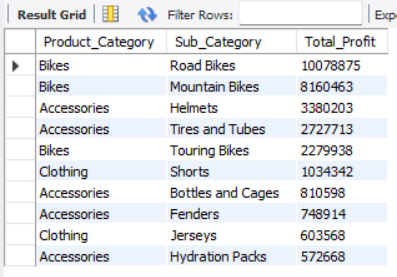
**-- Which 10 countries/country regions earn the highest income?**

SELECT Country,Country\_Region, SUM(Revenue) as Total\_Revenue FROM sales GROUP BY Country, Country\_Region ORDER BY Total\_Revenue DESC LIMIT 10;



**-- Which 10 categories/subcategories are the most profitable?**

SELECT Product\_Category, Sub\_Category, SUM(Profit) as Total\_Profit FROM sales GROUP BY Product\_Category, Sub\_Category ORDER BY Total\_Profit DESC LIMIT 10;



**- Which product categories or subcategories brought more profit?**

SELECT Product\_Category, SUM(Revenue) as Total\_Revenue FROM sales GROUP BY Product\_Category ORDER BY Total\_Revenue DESC;

