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- **Title:** DB Assignment 2
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- **Date: 10/11/2024**

Query 1: List names and sellers of products that are no longer available (quantity=0)

Query lists names and sellers of the products. It does this by join the two tables products, merchants, and sell together and uses the where to filter out products with a quantity of 0.

Result Grid | Filter Rows:

product	merchant
Router	Acer
Network Card	Acer
Printer	Apple
Router	Apple
Router	HP
Super Drive	HP
Laptop	HP
Router	Dell
Ethernet Adapter	Lenovo

Query 2: List names and descriptions of products that are not sold.

Query list the names of products and descriptions not sold by left joining the products and sell table. Then using where clause to find where quantity available is null. This shows products not sold.

name	description
Super Drive	External CD/DVD/RW
Super Drive	UInternal CD/DVD/RW

Query 3: How many customers bought SATA drives but not any routers?

Query finds all customers who bought a SATA drive with the WITH clause, specifying product pid as 4 and 5 since those said they were SATA drives in the description. Then use except and do the same query but instead of product pid, use product name and filter out products with category “router”.

Customers

Query 4: HP has a 20% sale on all its Networking products.

Query derives prices by multiplying all network products by 0.8 to represent 20% off. Use where clause to filter just HP products, with product pid = 3

name	OldPrice	NewPrice
Network Card	1154.68	923.7440000000001
Network Card	345.01	276.008
Network Card	262.2	209.76
Monitor	822.33	657.864
Printer	358.01	286.408
Ethernet Adapter	1260.45	1008.3600000000001
Desktop	1490.37	1192.296
Router	205.56	164.448
Router	1474.87	1179.896
Router	552.02	441.616
Super Drive	658.52	526.816
Router	100.95	80.76
Laptop	1209.59	967.672
Laptop	585.27	468.216
Printer	856.22	684.9760000000001
Network Card	1179.01	943.2080000000001
Hard Drive	939.55	751.64
Printer	1408.8	1127.04
Super Drive	280.91	224.72800000000004
Super Drive	343.18	274.54400000000004

Query 5: What did Uriel Whitney order from Acer? (make sure to at least retrieve product names and prices).

Query list product names of prices and joins all tables. Then use where to specify customer id and merchant id as 1 as both are Uriel and Acer respectively.

name	price
Monitor	1435.38
Router	521.07
Router	1256.57
Monitor	1103.47
Super Drive	356.13
Printer	1345.37
Super Drive	671.75
Super Drive	1135.3
Super Drive	356.13
Super Drive	1015.95
Network C...	405.4
Hard Drive	836.99
Super Drive	1124.26
Network C...	609.2
Printer	1345.37
Network C...	405.4
Super Drive	671.75
Super Drive	1135.3
Router	945.51
Hard Drive	333.71

Query 6: List the annual total sales for each company (sort the results along the company and the year attributes).

Query uses the year function to categorize each sale by year and sum all sell prices to get sales each year. Group and order by company and year.

name	year	sales
Acer	2011	152986.29999999993
Acer	2016	60291.140000000014
Acer	2017	176722.76999999987
Acer	2018	262059.28999999998
Acer	2019	208815.79999999993
Acer	2020	182311.14999999994
Apple	2011	166822.90999999995
Apple	2016	64748.45999999995
Apple	2017	179560.78000000003
Apple	2018	300413.22999999986
Apple	2019	231573.17000000007
Apple	2020	216461.06000000006
Dell	2011	181730.34999999998
Dell	2016	71462.86999999998
Dell	2017	182288.60999999996
Dell	2018	315004.82
Dell	2019	221391.82999999975
Dell	2020	208063.07999999987
HP	2011	141030.1499999999
HP	2016	56986.12000000002

Query 7: Which company had the highest annual revenue and in what year?

Query uses the year function to categorize each sale by year and sum all sell prices to get sales each year. Group and order by company and year. Use the limit function to output only 1 result from descending order, thus getting the top answer.

name	year	sales
Lenovo	2018	324291.59000000067

Query 8: On average, what was the cheapest shipping method used ever?

Query the shipping method and find the avg of shipping cost. Group it by shipping method and in a query update. Use a subquery with having to filter out each group and get the lowest average shipping cost.

shipping_method	avg(orders.shipping_cost)
USPS	7.455760869565214

Query 9: What is the best sold ($) category for each company?

Create a temporary table that creates the total sales of each company with each category. Afterwards, use that temporary table and get the max of each row. Finally, join the category table and total spent table and find where the max sales of each company with its respective category. List out the name, category, and total sales.

MerchantName	category	TotalSales
Acer	Peripheral	648729.5700000011
Apple	Peripheral	613620.9500000009
Dell	Peripheral	593504.3799999994
Lenovo	Peripheral	608137.2700000023
HP	Networking	417320.0000000019

Query 10: For each company find out which customers have spent the most and the least amounts.

Create a temporary table and find how much each person spent at each company. Then create two separate tables, one is for finding the max and one finding the min. You do this by taking the temporary table and using the where clause to find the max or min and linking which max and min by its merchant name. Union both of these tables to get both max and min spenders of each company.

merchant_name	spender	spent
Lenovo	Haviva Stewart	83030.25999999997
Apple	Clementine Travis	84551.10999999997
HP	Clementine Travis	66628.05999999995
Dell	Clementine Travis	85611.54999999999
Acer	Dean Heath	75230.28999999998
Acer	Inez Long	31901.019999999993
Apple	Inez Long	32251.099999999988
HP	Inez Long	26062.89
Dell	Inez Long	31135.74000000001
Lenovo	Inez Long	33948.909999999996