Unit 05 Problem Set Submission Form

Overview

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Instructions

Put your name and SU email at the top. Answer these questions all from the lab. When asked to include screenshots, please follow the screen shot guidelines from the first lab.

Remember as you complete the problem sets it is not only about getting it right / correct. We will discuss the answers in class so it's important to articulate anything you would like to contribute to the discussion in your answer:

- If you feel the question is vague, include any assumptions you've made.
- If you feel the answer requires interpretation or justification provide it.
- If you do not know the answer to the question, articulate what you tried and how you are stuck.

This how you receive credit for answering questions which might not be correct.

Questions

Answer these questions using the problem set submission template. You will need to consult the logical model in the overview section for details. For any screenshots provided, please follow the guidelines for submitting a screenshot.

Write the following as SQL queries. If the query is ambiguous, fill in the gaps yourself and justify your reasoning. For each, include the SQL as a screenshot with the output of the query.

1. The GIS department would like to get a list of latitudes and longitudes of those vBay users who make valid bids on items and review users also. These are considered active participants in the platform and they would like to plot them on a map for a real-time dashboard.

2. Northwind Traders would like to send out holiday cards to its Employees, Customers and Suppliers. Create a single mailing list from these sources. The mailing address should have 4 lines:

0) a label of the source of the address: Employee, Customer, or Supplier

1) customer name and title,

2) company,

3) address, City, Region, Country, postal code

3. vBay would like a list of items with item id name and type along with a count of bids with bid type (ok, low_bid, item_seller). There should be a column for each of the bid types.

4. Northwind traders has 3 different shippers. For each customer ID and CompanyName list the total amount of shipping freight paid for each of the three different shippers. There should be a column for each shipper.

5. Unpivot all the dates in the Northwind orders table, creating a table output with three columns: order id, type of date (ship date, require date, order date) and the date itself.

```
1   SELECT o.OrderID, o.Date, o.[Type of Date]
2       FROM dbo.Orders od
3   UNPIVOT(
4       Date for [Type of Date] in (ShippedDate, RequiredDate, OrderDate)
5   ) o;
6
```

Results   Messages

	OrderID ∨	Date ∨	Type of Date ∨
1	10248	1996-07-16 00:00:00.000	ShippedDate
2	10248	1996-08-01 00:00:00.000	RequiredDate
3	10248	1996-07-04 00:00:00.000	OrderDate
4	10249	1996-07-10 00:00:00.000	ShippedDate
5	10249	1996-08-16 00:00:00.000	RequiredDate
6	10249	1996-07-05 00:00:00.000	OrderDate
7	10250	1996-07-12 00:00:00.000	ShippedDate
8	10250	1996-08-05 00:00:00.000	RequiredDate
9	10250	1996-07-08 00:00:00.000	OrderDate
10	10251	1996-07-15 00:00:00.000	ShippedDate
11	10251	1996-08-05 00:00:00.000	RequiredDate
12	10251	1996-07-08 00:00:00.000	OrderDate
13	10252	1996-07-11 00:00:00.000	ShippedDate
14	10252	1996-08-06 00:00:00.000	RequiredDate
15	10252	1996-07-09 00:00:00.000	OrderDate
16	10253	1996-07-16 00:00:00.000	ShippedDate
17	10253	1996-07-24 00:00:00.000	RequiredDate

Ln 6, Col 1   Spaces:

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6. Unpivot the FudgeFlix titles which are just Movies so that is it easier to query titles which are available in different formats such as instant, DVD, and Blu-ray. Flatten these three columns into a single column with types, but only include a row when the value is 1 in the column.

7. Get a list of the employees from the payroll database as they were on May 31, 2018.

Screenshot: Notes app displaying SQLQuery_5 - localhost.payroll (sa) in a SQL editor.

Query:
```
1  select * from EMPLOYEES for
2  SYSTEM_TIME AS OF '2018-05-31'
```
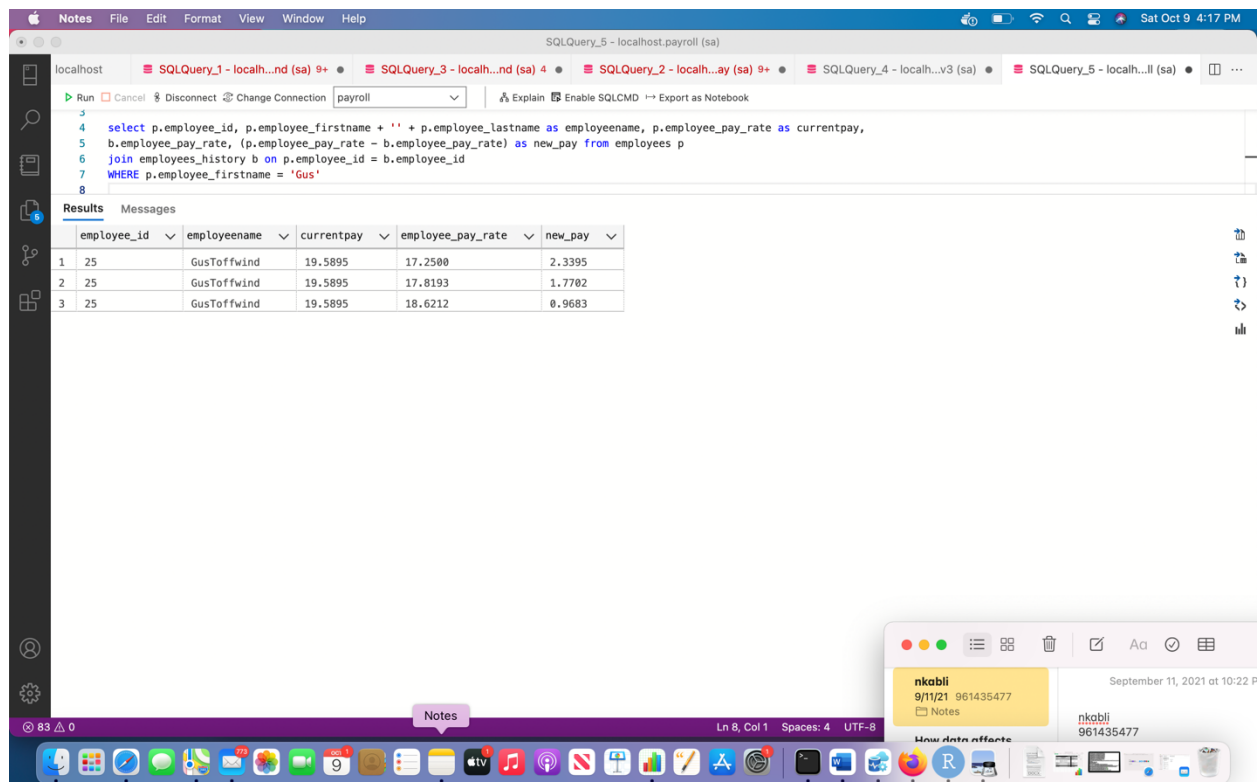
Results:

	employee_id	employee_ssn	employee_...	employee_...	employee_...	employee_...	employee_...	employee_...	employee_...	employee_...	va
1	46	991-56-0931	June	Nipper	2017-05-01 00...	NULL	Sales Associa...	Customer Serv...	17.0940	5	
2	54	777-43-2728	Alma	Frienzergon	2015-07-01 00...	NULL	Sales Associa...	Customer Serv...	18.4778	5	
3	27	520-62-3750	Artie	Choke	2015-07-01 00...	NULL	Sales Associa...	Customer Serv...	18.5940	5	
4	5	151-91-9536	Willie	Pas-D'course	2013-12-01 00...	NULL	Department Ma...	Customer Serv...	1020.0961	3	
5	47	817-49-5922	Sue	Mii	2014-05-01 00...	NULL	Sales Associa...	Hardware	18.8705	7	
6	1	123-45-6789	Michael	Fudge	2010-04-01 00...	NULL	Owner	Customer Serv...	2480.7693	NULL	
7	22	369-37-9012	Aiden	Knowone	2016-04-01 00...	NULL	Sales Associa...	Sporting Goods	18.1125	9	
8	7	363-47-6635	Eileen	Touda-Left	2013-10-01 00...	NULL	Department Ma...	Hardware	1045.9616	2	
9	36	140-63-5030	Ally	Gator	2013-06-01 00...	NULL	Sales Associa...	Toys	17.3195	10	
1...	43	495-41-3173	Eura	Lyre	2014-02-01 00...	NULL	Sales Associa...	Clothing	19.4250	4	
1...	52	151-82-5640	Jin	Netics	2015-06-01 00...	NULL	Sales Associa...	Customer Serv...	17.8020	5	
1...	6	189-32-2043	Bob	Enweave	2013-02-01 00...	NULL	Department Ma...	Electronics	1042.9327	3	
1...	55	781-00-9353	Adam	Antium	2016-06-01 00...	NULL	Sales Associa...	Electronics	19.1660	6	
1...	26	415-79-2532	Anita	Favor	2016-10-01 00...	NULL	Sales Associa...	Sporting Goods	17.9055	9	
1...	30	098-24-5706	Sandy	Beeches	2015-06-01 00...	NULL	Sales Associa...	Hardware	16.3170	7	
1...	33	093-29-8015	Hugh	Japple	2016-09-01 00...	NULL	Sales Associa...	Toys	18.6840	10	
1...	39	512-08-0512	Tim	Idd	2014-06-01 00...	NULL	Sales Associa...	Sporting Goods	17.5270	9	
1...	34	041-48-3728	Misty	Meadows	2014-07-01 00...	NULL	Sales Associa...	Toys	18.1125	10	
1...	48	842-53-5067	Willow	Wisp	2014-05-01 00...	NULL	Sales Associa...	Housewares	18.1125	8	
2...	21	137-92-4533	Isabelle	Gunnering	2015-04-01 00...	NULL	Sales Associa...	Hardware	17.3195	7	
2...	2	958-76-7513	Amber	Wavesofgrain	2012-05-01 00...	NULL	Store Manager				
2...	49	434-67-0804	Ty	Anott	2016-04-01 00...	NULL	Sales Associa...				
2...	24	778-63-2969	Anita	Sandwich	2016-07-01 00...	NULL	Sales Associa...				
2...	20	084-91-2754	Gail	Forcewynds	2017-03-01 00...	NULL	Sales Associa...				
2...	19	825-09-0393	Val	Idation	2013-05-01 00...	NULL	Department Ma...				

8. Produce a report of Gus Toffwind's pay increases from the payroll database. Include the id, name SSN of the employee along with pay rate, previous pay rate and pay increase (difference between the current and previous pay rates).

Reflection

Use this section to reflect on your learning. To achieve the highest grade on the assignment you must be as descriptive and personal as possible with your reflection.

1. What are the key things you learned through the process of completing this assignment?

   The key takeaways I learnt from this assignment were:

   - Usage of aggregate functions with groupby and having clauses
   - Using the WITH statement to reduce query complexity for various databases for example northwind to list the total amount of shipping freight for each shipper
   - Using Window functions in addition to PIVOT, UNPIVOT operations which were implemented during the experiment, for example to unpivot the dates and then display the table output with only three specific columns, one of which was type of date that reflected the ship date, order date and require date.

2. What were the challenges or roadblocks (if any) you encountered on the way to completing it?

   There were no challenges faced as such during the lab, and I was able to rectify and troubleshoot some minor errors I faced while unpivoting the data with the detailed explanation from the textbook on how to unpivot our data.

3. Were you prepared for this assignment? What can you do to be better prepared?

   Yes, I was prepared for the assignment as before beginning I made sure to watch the required video lesson plus read the complete chapter from the textbook, then go through the lab overview

and finally start implementing which is why the whole assignment ,parts with the pivoting, unpivoting went smoothly for me.

4. Now that you have completed the assignment rate your comfort level with this week's material. This should be an honest assessment: (choose one)

<mark>4 ==> I understand this material and can explain it to others.</mark>
3 ==> I understand this material.
2 ==> I somewhat understand the material but sometimes need guidance from others.
1 ==> I understand very little of this material and need extra help.