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

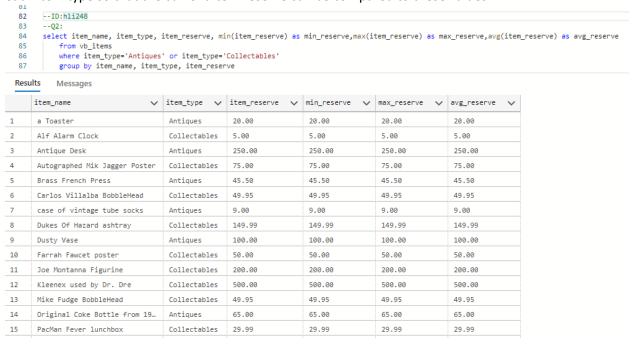
Answer these questions using the problem set submission template. You will need to consult the logical model in the overview section for details. For any screenshots provided, please follow the guidelines for submitting a screenshot.

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. How many item types are there? Perform an analysis of each item type. For each item type, provide the count of items in that type, the minimum, average, and maximum item reserve prices for that type. Sort the output by item type.

```
-- TD:h1i248
     --Q1:
     select item_type, min(item_reserve) as min_reserve,max(item_reserve) as max_reserve,avg(item_reserve) as avg_reserve, count(item_type) as item_sum
        from vb_items
75
       group by item_type order by item_type
Results Messages
  All Other
                 0.99
                                10000000.00
                                              2500004.86
                                              81.5833
    Books
                 4.50
                                10.99
                                              8.48
                                500.00
                                              105.3828
    Collectables
                 5.00
                                                             14
   Electronics
                                15.00
                 15.00
                                              15.00
                                                             1
 Jewelry
                 6.95
                                599.99
                                              303.47
                                12.75
 Sporting Goods 12.50
                                              12.625
                                                             2
 Tickets
                5.00
                                750.00
                                              377.50
```

2. Perform an analysis of each item in the "Antiques" and "Collectables" item types. For each item display the name, item type and item reserve. Include the min, max and average item reserve over each item type so that the current item reserve can be compared to these values.



3. Write a query to include the names, counts (number of ratings) and average seller ratings (as a decimal) of users. For reference, User Carrie Dababbbi has 4 seller ratings and an average rating of



4. Create a list of "Collectable" item types with more than 1 bid. Include the name of the item and the number of bids making sure the item with the most bids appear first.

```
100
 101
        --ID:h1i248
 102
        --Q4:
     with c_item_bid as(
 103
     v select i.item_name, count(*) as sum_of_bids
 104
 105
             from vb_items i
                join vb_bids b on i.item_id=b.bid_item_id
 106
 107
                where i.item_type='Collectables'
 108
                group by i.item name
 109
 110
        select * from c_item_bid
 111
 112
        where sum_of_bids>1
        order by sum_of_bids desc
 113
 114
 Results
           Messages
      item_name
                                      sum_of_bids
1
      Dukes Of Hazard ashtray
                                       9
2
      Autographed Mik Jagger Poster
                                       6
3
                                       5
      Shatner's old Toupee
4
      Rare Mint Snow Globe
                                       3
5
      Farrah Fawcet poster
                                       3
6
      Pez dispensers
                                       2
```

5. Generate a valid bidding history for any given item of your choice. Display the item id, item name a number representing the order the bid was placed, the bid amount and the bidder's name. Here's an example showing the first 3 bids on item 11.

item_id	item_name	bid_order	bid_amount	bidder
11	Dukes Of Hazard ashtray	1	150.0000	Dan Delyons
11	Dukes Of Hazard ashtray	2	175.0000	Al Fresco
11	Dukes Of Hazard ashtray	3	200.0000	Carrie Dababbi

```
116
117 --ID:hli248
118 --Q5:
119 select i.item_name,i.item_id, RANK() OVER (ORDER BY b.bid_amount) bid_order , b.bid_amount, s.user_firstname+' '+ s.user_lastname as bidder
120 from vb_bids b
121 join vb_items i on i.item_id=b.bid_item_id
122 join vb_items i on i.item_id=b.bid_item_id
123 where b.bid_status='ok' and item_id='11'
124
```

Res	Results Messages							
	item_name	item_id 🗸	bid_order 🗸	bid_amount 🗸	bidder 🗸			
1	Dukes Of Hazard ashtray	11	1	150.00	Dan Delyons			
2	Dukes Of Hazard ashtray	11	2	175.00	Al Fresco			
3	Dukes Of Hazard ashtray	11	3	200.00	Carrie Dababbi			
4	Dukes Of Hazard ashtray	11	4	225.00	Gus Toffwind			
5	Dukes Of Hazard ashtray	11	5	250.00	Isabelle Gunnering			
6	Dukes Of Hazard ashtray	11	6	275.00	Dan Delyons			
7	Dukes Of Hazard ashtray	11	7	300.00	Carrie Dababbi			
8	Dukes Of Hazard ashtray	11	8	325.00	Isabelle Gunnering			

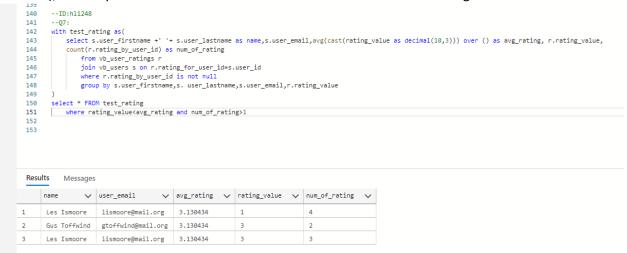
6. Re-Write your query in the previous question to include the names of the next and previous bidders, like this example again showing the first 3 bids for item 11.

item_name	bid_order	bid_amount	prev_bidder	bidder	next_bidder
Dukes Of Hazard ashtray	1	150.0000	NULL	Dan Delyons	Al Fresco
Dukes Of Hazard ashtray	2	175.0000	Dan Delyons	Al Fresco	Carrie Dababbi
Dukes Of Hazard ashtray	3	200.0000	Al Fresco	Carrie Dababbi	Gus Toffwind

```
--ID:hli248
--Q6:
select i.item_name,i.item_id, RANK() OVER (ORDER BY b.bid_amount) bid_order , b.bid_amount,
lag(s.user_firstname+' '+ s.user_lastname) over (ORDER BY b.bid_amount) prev_bidder,
s.user_firstname+' '+ s.user_lastname as bidder,
lead(s.user_firstname+' '+ s.user_lastname) over (ORDER BY b.bid_amount) prev_bidder
from vb_bids b
join vb_users s on b.bid_user_id=s.user_id
join vb_items i on i.item_id=b.bid_item_id
where b.bid_status='ok' and item_id='11'
```

item_name	item_id 🗸	bid_order 🗸	bid_amount 🗸	prev_bidder 🗸	bidder 🗸	prev_bidder 🗸
Dukes Of Hazard ashtray	11	1	150.00	NULL	Dan Delyons	Al Fresco
Dukes Of Hazard ashtray	11	2	175.00	Dan Delyons	Al Fresco	Carrie Dababbi
Dukes Of Hazard ashtray	11	3	200.00	Al Fresco	Carrie Dababbi	Gus Toffwind
Dukes Of Hazard ashtray	11	4	225.00	Carrie Dababbi	Gus Toffwind	Isabelle Gunnerin
Dukes Of Hazard ashtray	11	5	250.00	Gus Toffwind	Isabelle Gunnering	Dan Delyons
Dukes Of Hazard ashtray	11	6	275.00	Isabelle Gunnering	Dan Delyons	Carrie Dababbi
Dukes Of Hazard ashtray	11	7	300.00	Dan Delyons	Carrie Dababbi	Isabelle Gunnering
Dukes Of Hazard ashtray	11	8	325.00	Carrie Dababbi	Isabelle Gunnering	NULL

7. Find the names and emails of the users who give out the worst ratings (lower than the overall average rating) to either buyers or sellers (no need to differentiate whether the user rated a buyer or seller), and only include those users who have submitted more than 1 rating.



8. Produce a report of the KPI (key performance indicator) user bids per item. Show the user's name and email total number of valid bids, total count of items bid upon and then the ratio of bids to items. As a check, Anne Dewey's bids per item ratio is 1.666666

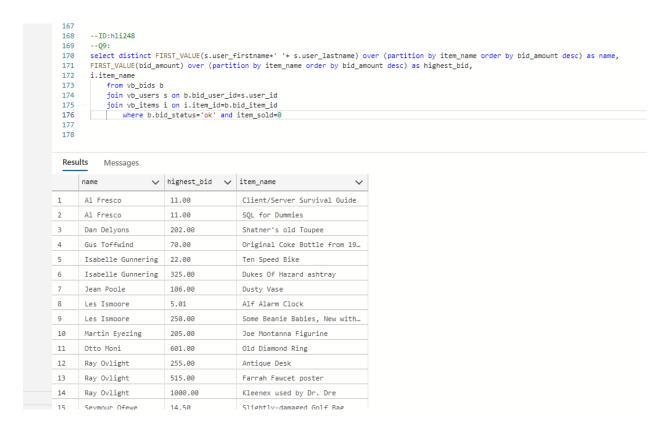
```
155
        --ID:hli248
 156
        --Q8:
        select s.user_firstname+' '+s.user_lastname as name,s.user_email ,
 157
            count(*) as total_bid, count(distinct bid_item_id) as total_item,
 158
 159
            cast(count(*) as decimal(10,3))/cast(count(distinct bid_item_id) as decimal (10,3)) as KPI
 160
            from vb_items i
 161
                join vb_bids b on i.item_id=b.bid_item_id
 162
                join vb_users s on b.bid_user_id=s.user_id
                where b.bid_status='ok'
 163
            group by user_email,user_firstname,user_lastname
 164
 165
 Results
           Messages
      name

√ user_email

√ total_bid

                                                                 total_item
                                                                                   3.0000000000000000
1
                          abuss@mail.org
      Abby Kuss
2
       Anne Dewey
                          adwewy@mail.org
                                                  5
                                                                  3
                                                                                   1.6666666666666
                                                                  2
3
      Barb Barion
                          bbarion@mail.org
                                                                                   1.5000000000000000
4
      Barry DeHatchett
                          bdehatchett@mail.org
                                                  5
                                                                  1
                                                                                   5,000000000000000
5
                                                                  2
      Bo Enarreau
                          benarreau@mail.org
                                                  2
                                                                                   1.0000000000000000
6
      Gus Toffwind
                          gtoffwind@mail.org
                                                  2
                                                                  2
                                                                                   1.0000000000000000
7
                                                                  2
      Isabelle Gunner…
                          igunner@mail.org
                                                                                   3,5000000000000000
8
                          lismoore@mail.org
                                                  3
                                                                  3
       Les Ismoore
                                                                                   1.0000000000000000
9
                          meveyzing@mail.org
                                                                  1
      Martin Eyezing
                                                  1
                                                                                   1.0000000000000000
      Rose Abov-Dures...
                                                                                   1.0000000000000000
10
                          rabovdu@mail.org
                                                  2
                                                                  2
       Ray Ovlight
                                                                  3
                          rovlight@mail.org
                                                  6
                                                                                   2.0000000000000000
11
                                                  2
                                                                  2
      Victor Rhee
                          vrhee@mail.org
                                                                                   1,0000000000000000
12
                                                  2
                                                                  1
                                                                                   2.0000000000000000
13
       Seymour Ofewe
                          sofewe@mail.org
14
      Pete Moss
                          pmoss@mail.org
                                                  2
                                                                  2
                                                                                   1.0000000000000000
```

9. Among items not sold, show highest bidder name and the highest bid for each item. Make sure to include only valid bids.



10. Write a query with output similar to question 3, but also includes the overall average seller rating, and the difference between each user's average rating and the overall average. For reference, the overall average seller rating should be 3.2.

```
--ID:hli248
180
       --Q10:
181
183
       select distinct s.user_firstname +' '+ s.user_lastname as name,count(rating_for_user_id) over(partition by rating_for_user_id) as number_of_rating,
       avg(cast(rating_value as decimal(10,3))) over(partition by rating_for_user_id)as global_avg_rating, avg(cast(rating_value as decimal(10,3))) over(partition by rating_astype)as avg_rating
184
185
            from vb_user_ratings r
187
            join vb_users s on r.rating_for_user_id=s.user_id
188
            where r.rating_astype='Seller
189
       select name, number_of_rating, global_avg_rating, avg_rating, (avg_rating -global_avg_rating) as diff from test
```

name 🗸	number_of_rating 🗸	global_avg_rating 🗸	avg_rating 🗸	diff 🗸
Abby Kuss	3	4.333333	3.200000	-1.133333
Anita Job	1	3.000000	3.200000	0.200000
Barb Barion	2	3.500000	3.200000	-0.300000
Carrie Dababbi	4	4.750000	3.200000	-1.550000
Les Ismoore	2	2.500000	3.200000	0.700000
Martin Eyezing	2	2.500000	3.200000	0.700000
Rose Abov-Duresst	3	1.000000	3.200000	2.200000
Ty Anott	2	2.500000	3.200000	0.700000
Victor Rhee	1	4.000000	3,200000	-0.800000

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?
- 2. What were the challenges or roadblocks (if any) you encountered on the way to completing it?
- 3. Were you prepared for this assignment? What can you do to be better prepared?
- 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)
 - 4 ==> I understand this material and can explain it to others.
 - 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.