Assignment 7 - Subqueries (100 points) Due Date: Monday, February 22nd, 11:59 PM

Objectives

The goal of the assignment is to have you thinking about subqueries. This assignment focuses on how to write a subquery, use the IN operator when writing a subquery, use comparison operators when writing a subquery, write a correlated subquery including the use of the EXISTS operator, and use the ORDER BY clause when writing a subquery.

This assignment reinforces the following objectives:

- Learn the formal subquery definition and write a subquery.
- Learn the subquery restrictions.
- Use the IN operator when writing a subquery.
- Nest subqueries at multiple levels.
- Use comparison operators when writing a subquery.
- Use the ALL and ANY keywords when writing a subquery.
- Write a correlated subquery including the use of the EXISTS operator.
- Use the ORDER BY clause when writing a subquery.

This assignment uses the tables associated with the retailStore database.

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- 1. Write a SQL statement that displays the item number, item description, and price of the least expensive item in the database. (Use a subquery.)
- 2. Write a SQL statement that uses the IN operator to find the customer number, first name, and last name of each customer for which as order was created on 09/17/2018. (Use a subquery.)

Sample run:

3. Write a SQL statement that displays the order ID and order date for each order created for the customer Andrew Murcia. (Use a subquery.)

Sample run:

```
+-----+
| order_id | order_date |
+-----+
| or0101425 | 2017-05-27 |
```

4. Write a SQL statement that displays the item number, item description, item price, and category for each item that has a unit price greater than the unit price of every item in category "Accessories".

Use either the ALL or ANY operator in your query. (Hint: Make sure you select the correct operator.)

Sample run:

5. Write a SQL statement that returns all those employees who have a salary greater than that of Lorentz and are in the same department as Abel. Display first name, last name, salary, and manager ID columns.

Sample run:

+ -		+-		+-		- +		+
	first_name					 -+	manager_id	 +
İ	Eleni	İ	Zlotkey	i	10500.00	İ	100	İ
1	Ellen	l	Abel		11000.00	1	149	
1	Jonathon		Taylor		8600.00		149	
	Nick		Hooper		9600.00		149	
+-		+ -		+-		-+		+

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6. Write a SQL statement returns a list of department IDs and average salaries where the department's average salary is less than Ernst's salary. (Use a subquery.)

Sample run:

+-			-+-		+
1	department	id	1	avgerage	
+-			+-		+
1		10		4300.000000	1
1		50		3371.428571	
+-			+-		+

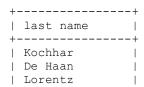
7. Write a SQL statement that returns the department ID and minimum salary of all employees, grouped by department ID. This minimum salary must be greater than the minimum salary of those employees whose department ID is **not** equal to 50. (Use a subquery.)

Sample run:

+		minimum salary	+
NULL 10 60		7000.00 4100.00 4200.00.	

8. Write a SQL statement that finds the last names of all employees whose salaries are the same as the minimum salary for any department. (Use a subquery.)

Sample run:



9. Write a pair-wise subquery listing the last name, first name, department ID, and manager ID for all employees that have the same department ID and manager ID as employee 141. Exclude employee 141 from the result set. (Use a subquery.)

Sample run:

last name	+ first name	department	id	+ manager id
+	Curtis Randall Peter George Tiffany		50 50 50 50 50	124 124 124 124 124 124

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10. Write a non-pair-wise subquery listing the last name, first name, department ID, and manager ID for all employees that have the same department_ID and manager ID as employee 141. (Use a subquery.)

Sample run:

last name	first name	department	id	+ manager id
Rajs Davies Matos Vargas Bell Heiden	Trenna Curtis Randall Peter George Tiffany	 	50 50 50 50 50 50	124 124 124 124 124

11. Write a SQL statement that lists the highest earners for each department. Include the last name, department ID, and the salary for each employee. (Use a subquery.)

Sample run:

+	+	-+-		-+
last name	department id		salary	
+	+	-+-		-+
King	90		24000.00	
Hunold	60		9000.00	
Mourgos	50		5800.00	
Abel	80		11000.00	
Whalen	10		4400.00	-
Hartstein	20		13000.00	
Higgins	110		12000.00	
Barbosa Souza	85		9500.00	
Saikawa	10		4400.00	
+	+	- + -		- +

Submission Instructions:

- For each of the queries above, submit the query and the result from running the query. Please use the provided SQL file to write your submissions.
- You will need to label your assignment with your first initial, last name, and the name of the assignment.
 Example: hibrahim_assignment7.sql and hibrahim_assignment7.txt
- Zip the two files together to create one compressed file. Example: hibrahim_assignment7.zip
- Submit the zipped file containing the script and output .txt via Canvas.
- Remember to include the guery number as a comment at each step.
- Read your output .txt file before you submitting.