Assignment – SQL

Objectives

The purpose of this assignment is to assess the students' knowledge about storing and querying data from a database considering the relationships between tables in that database. Students will query data from a database (single/multiple tables) and use the relationships to reconnect some tables when extracting data and obtaining information. Student will:

- Produce query results containing data from multiple tables using joins and demonstrate their knowledge of inner, outer and full joins.
- Troubleshoot queries to handle potentially ambiguous fields across multiple tables through the use of aliases.

Submission

Your submission will be a single SQL file with the solutions provided. (with a .sql file extension and PDF include all the codes/outputs)

DBS211_Assignment01.sql

Your submission needs to include a comment header block and be commented top clearly indicate the answers to each question. Make sure every SQL statement terminates with a semicolon.

Example Submission

```
-- **********************
-- Student Names:
-- Student (ID)
-- Date: The current date
-- Purpose: Assignment 01 DBS211
-- **********************

-- Q1 SOLUTION --
SELECT * FROM TABLE;

-- Q2 Solution –
SELECT * FROM TABLE;
```

Locate, select, and submit the file to the assignment link.

Setup

Create a new worksheet in SQL developer and add an appropriate comment header that includes your name, student id, the date and the purpose of the file (i.e. DBS211 – Assignment 01).

Style Guide

Your SQL should be written using the standard coding style:

- all keywords are to be upper case,
- all user-defined names are to be lower case, (example: table and field names)
- there should be a carriage return before each major part of the SQL statements (i.e. before SELECT, FROM, WHERE and ORDER BY)

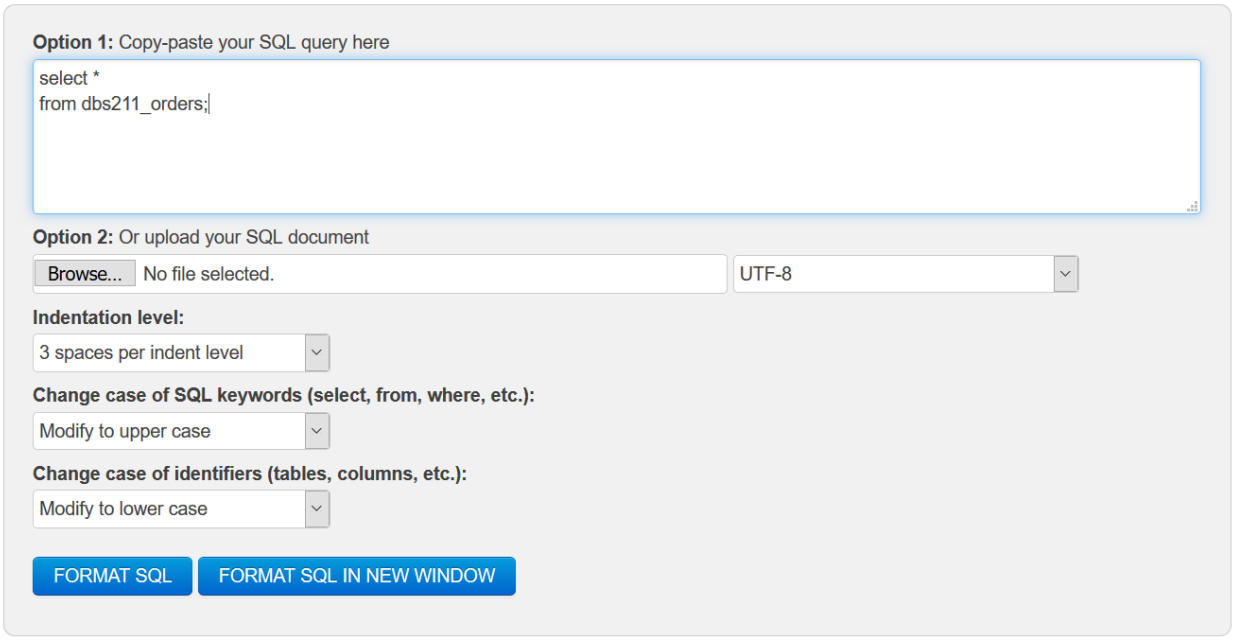
See the following sample:

```
SELECT columns
FROM tables
WHERE conditions
ORDER BY column1, column2;
```

To save time, you can write the SQL statements in your SQL developer. To make sure that your SQL statements style follows the standard SQL style guideline, copy and paste your SQL statements onto the following website and click on "FORMAT SQL" or "FORMAT SQL IN NEW WINDOW".

https://www.freeformatter.com/sql-formatter.html#ad-output

You can also upload your SQL file. See the setting in the following image. Have SQL keywords (SELECT, INSERT, UPDATE, etc.) uppercase and user defined objects and identifiers (tables, columns, etc.) lowercase.



Marking Scheme

Question	Points	Question	Points
1	2	**6**	1.5
2	1.5		
3	2		
4	1.5		
5	1.5		

Total: 10

Grade Policy

- Questions with errors do not get any marks. (They get zero.)
  - Execute your *.sql* file by selecting all the statements and using the "Run statement" button to make sure there is no errors in your file and check the output result returned by each query.
- Make sure your result in a question matches the sample output result.
- You do not receive marks for the missing or incomplete solutions.

Tasks:

Important: For each question, the title of columns and the output result must match the provided output result in that question to receive a full mark. Remember to comment the question number for each solution.

IF you do not have a solution for any question, write the following statement for that question.

See the example:

```
SELECT 'No Solution'
FROM dual;
```

1. Display employee number, employee full name, phone, extension, and city for employees who work in NYC, London, and Paris. *Sort the result based on the city and the employee number*. **(2 Marks)**

	EMPLOYEENUMBER	Employee Name	PHONE	EXTENSION	CITY
1	1501	Bott Larry	+44 20 7877 2041	x2311	London
2	1504	Jones Barry	+44 20 7877 2041	x102	London
3	1286	Tseng Foon Yue	+1 212 555 3000	x228	NYC
4	1323	Vanauf George	+1 212 555 3000	x4102	NYC
5	1102	Bondur Gerard	+33 14 723 4404	x5408	Paris
6	1337	Bondur Loui	+33 14 723 4404	x6493	Paris
7	1370	Hernandez Gerard	+33 14 723 4404	x2028	Paris
8	1401	Castillo Pamela	+33 14 723 4404	x2759	Paris
9	1702	Gerard Martin	+33 14 723 4404	x2312	Paris

2. Display employee number, employee full name, phone, extension, city and manager ID for employees who do not report to a manager. (See the following output) *Sort the result based on the city and the employee number*. **(1.5 Marks)**

	Employee Number	Employee Name	PHONE	EXTENSION	CITY	Manager Id
1	1002	Murphy, Diane	+1 650 219 4782	x5800	San Francisco	(null)

3. Modify the query in Question 2 to display the manager ID and the manager name for the employees returned by the previous query. *Sort the result based on the city and the employee number.* **(2 Marks)**

	EMPLOYEENUMBER	Employee Name	Extension	City	Manager Name	Manager ID
1	1501	Bott Larry	x2311	London	Bondur Gerard	1102
2	1504	Jones Barry	x102	London	Bondur Gerard	1102
3	1286	Tseng Foon Yue	x228	NYC	Bow Anthony	1143
4	1323	Vanauf George	x4102	NYC	Bow Anthony	1143
5	1102	Bondur Gerard	x5408	Paris	Patterson Mary	1056
6	1337	Bondur Loui	x6493	Paris	Bondur Gerard	1102
7	1370	Hernandez Gerard	x2028	Paris	Bondur Gerard	1102
8	1401	Castillo Pamela	x2759	Paris	Bondur Gerard	1102
9	1702	Gerard Martin	x2312	Paris	Bondur Gerard	1102

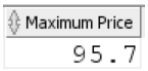
4. Select employee name, email, country, and postal code for the employees whose job title is Sales Rep. *Sort the result based on the postal code.* **(1.5 Marks)**

	First Name	Last Name	Country	Postal Code
1	Steve	Patterson	USA	02107
2	Julie	Firrelli	USA	02107
3	Foon Yue	Tseng	USA	10022
4	George	Vanauf	USA	10022
5	Mami	Nishi	Japan	102-8578
6	Yoshimi	Kato	Japan	102-8578
7	Martin	Gerard	France	75017
8	Loui	Bondur	France	75017
9	Gerard	Hernandez	France	75017
10	Pamela	Castillo	France	75017
11	Gerard	Bondur	France	75017
12	Leslie	Thompson	USA	94080
13	Leslie	Jennings	USA	94080
14	Anthony	Bow	USA	94080
15	Jeff	Firrelli	USA	94080
16	Diane	Murphy	USA	94080
17	Mary	Patterson	USA	94080
18	Larry	Bott	UK	EC2N 1HN
19	Barry	Jones	UK	EC2N 1HN
20	Andy	Fixter	Australia	NSW 2010
21	Peter	Marsh	Australia	NSW 2010
22	Tom	King	Australia	NSW 2010
23	William	Patterson	Australia	NSW 2010

5. Select customer name, customer number, phone, city, state, and postal code for all the customers who have not made the payment. *Sort the result based on the customer number.* The output should be as follows: **(1.5 Marks)**

	CUSTOMERNUMBER	CUSTOMERNAME	PHONE	POSTALCODE
1	125	Havel "&" Zbyszek Co	(26) 642-7555	01-012
2	168	American Souvenirs Inc	2035557845	97823
3	169	Porto Imports Co.	(1) 356-5555	1756
4	206	Asian Shopping Network, Co	+612 9411 1555	038988
5	223	NatÃ¼rlich Autos	0372-555188	01307
6	237	ANG Resellers	(91) 745 6555	28001
7	247	Messner Shopping Network	069-0555984	60528
8	273	Franken Gifts, Co	089-0877555	80805
9	293	BG"&"E Collectables	+41 26 425 50 01	1700
10	303	Schuyler Imports	+31 20 491 9555	1043 GR
11	307	Der Hund Imports	030-0074555	12209
12	335	Cramer SpezialitÃ¤ten, Ltd	0555-09555	14776
13	348	Asian Treasures, Inc.	2967 555	(null)
14	356	SAR Distributors, Co	+27 21 550 3555	0028
15	361	Kommission Auto	0251-555259	44087
16	369	Lisboa Souveniers, Inc	(1) 354-2555	1675
17	376	Precious Collectables	0452-076555	3012
18	409	Stuttgart Collectable Exchange	0711-555361	70563
19	443	Feuer Online Stores, Inc	0342-555176	04179
20	459	Warburg Exchange	0241-039123	52066
21	465	Anton Designs, Ltd.	+34 913 728555	28023
22	477	Mit VergnÃ¼gen "&" Co.	0621-08555	68306
23	480	Kremlin Collectables, Co.	+7 812 293 0521	196143
24	481	Raanan Stores, Inc	+ 972 9 959 8555	47625

6. Find the maximum value of priceeach for the product with productcode = 'S10_1678'. **(1.5 Marks)**. Your query returns the following output:



Good Luck