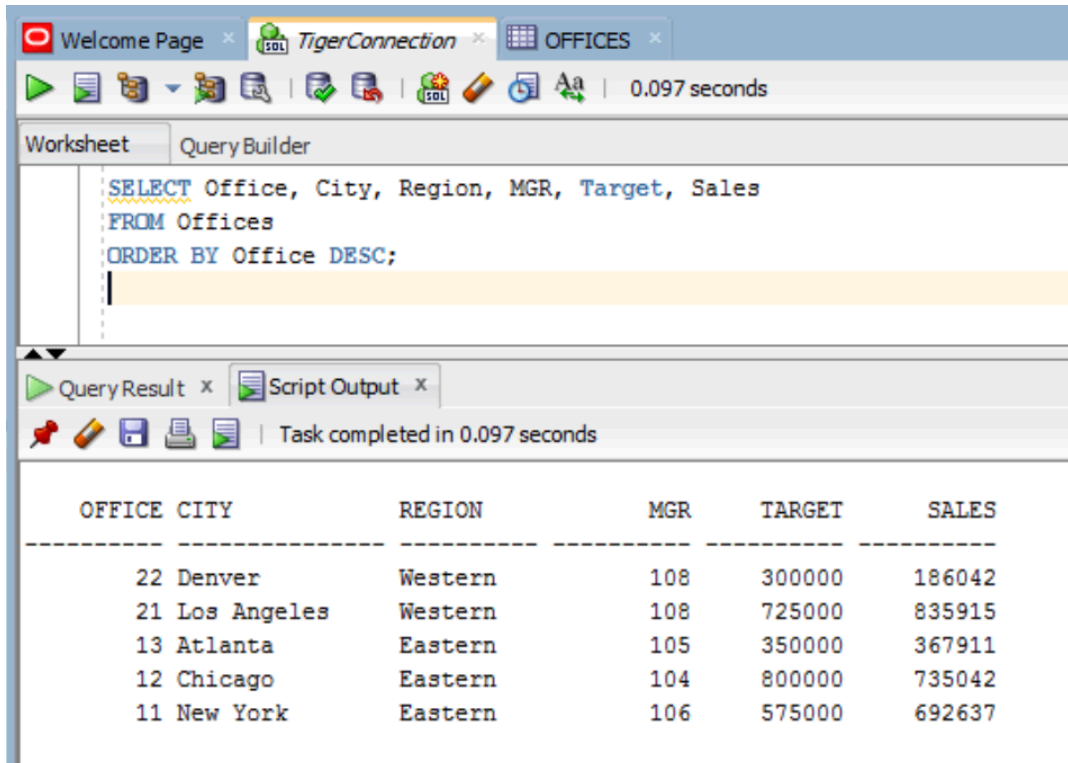# CS443 - Assignment 2

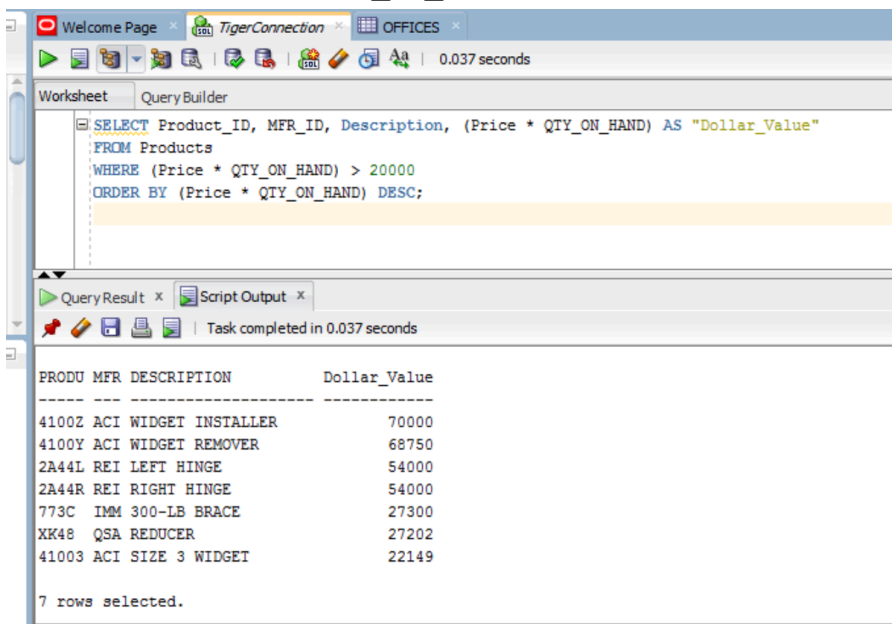**1) Write a select statement to list all the columns from the Offices table. 'Select *' is not allowed. Return the list in DESC Office order.**
```
SELECT Office, City, Region, MGR, Target, Sales
FROM Offices
ORDER BY Office DESC;
```

Welcome Page   TigerConnection   OFFICES

0.097 seconds

Worksheet   Query Builder

```
SELECT Office, City, Region, MGR, Target, Sales
FROM Offices
ORDER BY Office DESC;
```

Query Result   Script Output

Task completed in 0.097 seconds

OFFICE	CITY	REGION	MGR	TARGET	SALES
22	Denver	Western	108	300000	186042
21	Los Angeles	Western	108	725000	835915
13	Atlanta	Eastern	105	350000	367911
12	Chicago	Eastern	104	800000	735042
11	New York	Eastern	106	575000	692637

2) List the product ID, mfr ID, Name (its description), and dollar value of quantity on hand (price * quantity) of the products whose dollar value is greater than 20000. Return the list in descending order by their dollar value.
```
SELECT Product_ID, MFR_ID, Description, (Price * QTY_ON_HAND) AS "Dollar_Value"
FROM Products
WHERE (Price * QTY_ON_HAND) > 20000
ORDER BY (Price * QTY_ON_HAND) DESC;
```

Welcome Page   TigerConnection   OFFICES

0.037 seconds

Worksheet   Query Builder

```
SELECT Product_ID, MFR_ID, Description, (Price * QTY_ON_HAND) AS "Dollar_Value"
FROM Products
WHERE (Price * QTY_ON_HAND) > 20000
ORDER BY (Price * QTY_ON_HAND) DESC;
```

Query Result   Script Output

Task completed in 0.037 seconds

PRODU	MFR	DESCRIPTION	Dollar_Value
4100Z	ACI	WIDGET INSTALLER	70000
4100Y	ACI	WIDGET REMOVER	68750
2A44L	REI	LEFT HINGE	54000
2A44R	REI	RIGHT HINGE	54000
773C	IMM	300-LB BRACE	27300
XK48	QSA	REDUCER	27202
41003	ACI	SIZE 3 WIDGET	22149

7 rows selected.

3) List the Order Number, Order Date, Customer Number, and Sales Rep Number for orders for part '779C' or '773C'. (Use a compound search condition - OR.)

```
SELECT Order_Num, Order_Date, Cust, Rep
FROM Orders
WHERE Product = '779C' OR Product = '773C';
```

Welcome Page × TigerConnection × OFFICES ×

0.065 seconds

Worksheet   Query Builder

```
SELECT Order_Num, Order_Date, Cust, Rep
FROM Orders
WHERE Product = '779C' OR Product = '773C';
```

Query Result × Script Output ×

Task completed in 0.065 seconds

```
ORDER_NUM ORDER_DAT         CUST         REP
--------- ---------    ----------   ----------
   113007 08-JAN-18         2112          108
   113048 10-FEB-21         2120          102
   113003 25-JAN-17         2108          109
```

4) List the Name and Age of all Sales Reps in the following offices: 11; 13. (Use the set membership test - IN.)

```
SELECT Name, Age
FROM SalesReps
WHERE Rep_Office IN ('11', '13');
```

Welcome Page × TigerConnection × OFFICES ×

0.024 seconds

Worksheet   Query Builder

```
SELECT Name, Age
FROM SalesReps
WHERE Rep_Office IN ('11', '13');
```

Query Result × Script Output ×

Task completed in 0.024 seconds

```
NAME                     AGE
---------------     ----------
Bill Adams                37
Mary Jones                31
Sam Clark                 52
```

5) List the names of all Sales Reps who have the letter 'a' (this is lower case a) as the second character of their name.

```sql
SELECT Name
FROM SalesReps
WHERE Name LIKE '_a%';
```
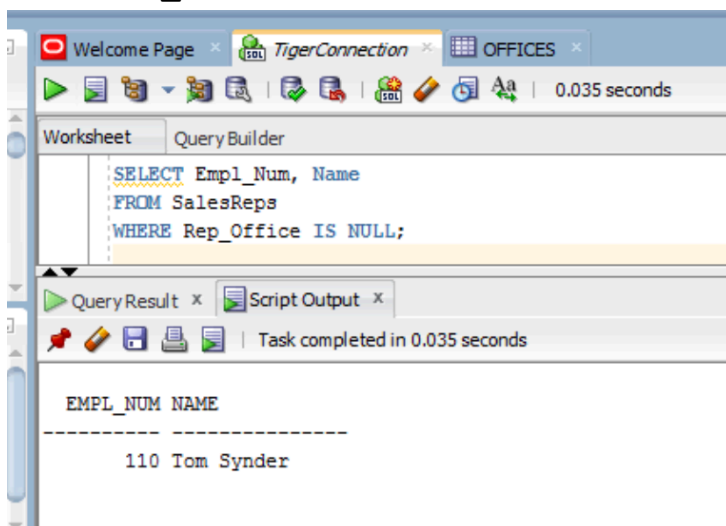
```
Welcome Page  ×    TigerConnection  ×    OFFICES  ×

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Worksheet    Query Builder

    SELECT Name
    FROM SalesReps
    WHERE Name LIKE '_a%';
    |


▷ Query Result  ×   📄 Script Output  ×

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NAME
---------------
Mary Jones
Sam Clark
Dan Roberts
Larry Fitch
Paul Cruz
Nacy Angelli

6 rows selected.
```

6) Return the Sales Rep ID and Name of any Sales Rep not assigned to an office yet.

```sql
SELECT Empl_Num, Name
FROM SalesReps
WHERE Rep_Office IS NULL;
```

```
Welcome Page  ×    TigerConnection  ×    OFFICES  ×

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Worksheet    Query Builder

    SELECT Empl_Num, Name
    FROM SalesReps
    WHERE Rep_Office IS NULL;


▷ Query Result  ×   📄 Script Output  ×

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  EMPL_NUM NAME
---------- ---------------
       110 Tom Synder
```

7) Show all the sales rep names with last name "Smith" or "Jones".
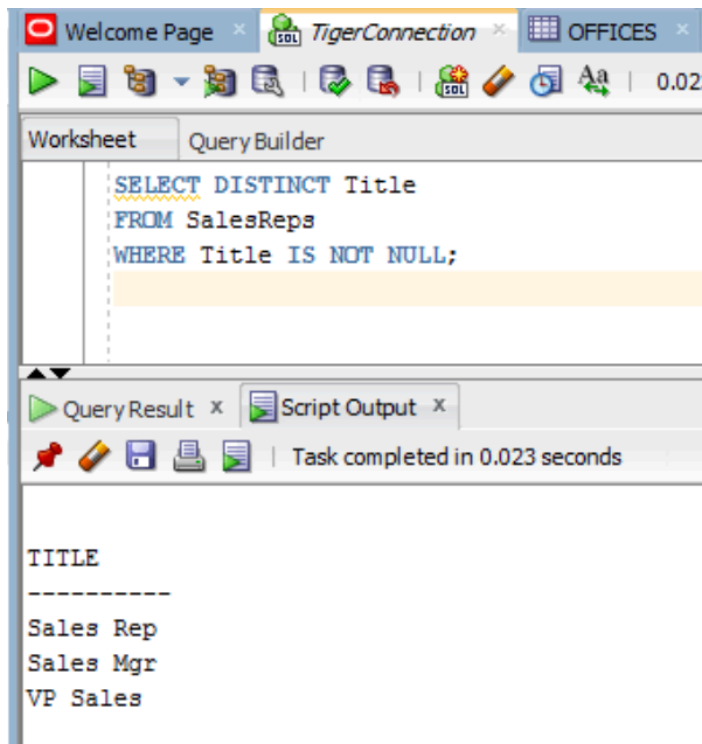```
SELECT Name
FROM SalesReps
WHERE Name LIKE '% Smith' OR Name LIKE '% Jones';
```
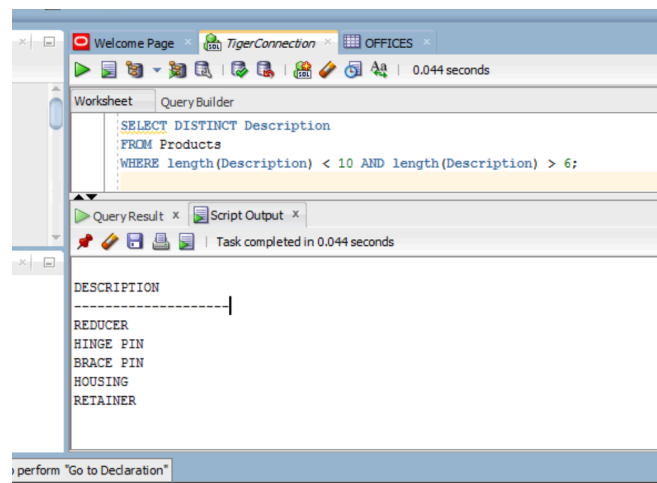
```
Welcome Page ×   TigerConnection ×   OFFICES ×
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Worksheet   Query Builder
    SELECT Name
    FROM SalesReps
    WHERE Name LIKE '% Smith' OR Name LIKE '% Jones';

Query Result ×   Script Output ×
                  Task completed in 0.026 seconds

NAME

Mary Jones
Sue Smith
Bob Smith
```
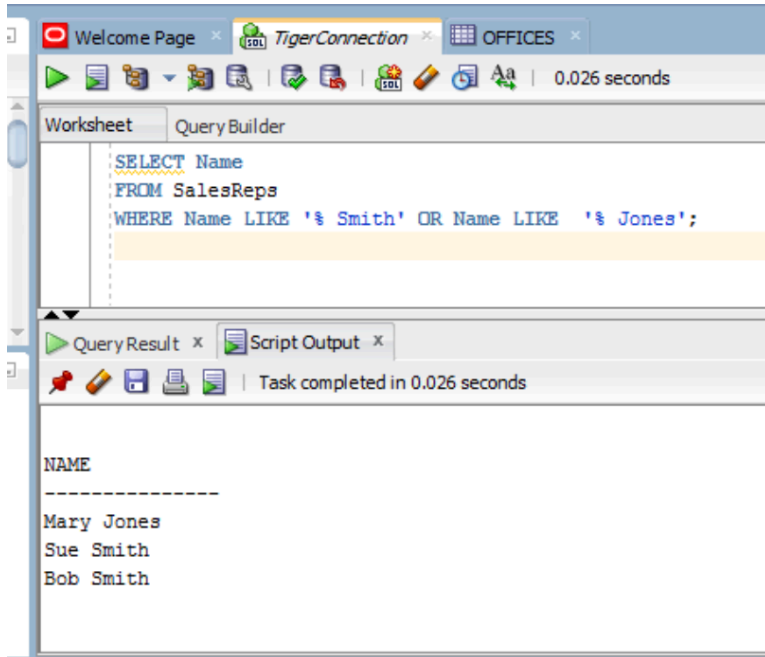
**8) List different titles in the sales reps table. Only list each title once and unknown titles should be ignored. Duplicate rows are not allowed.**
```
SELECT DISTINCT Title
FROM SalesReps
WHERE Title IS NOT NULL;
```

```
Welcome Page ×   TigerConnection ×   OFFICES ×
                                         0.02
Worksheet   Query Builder
    SELECT DISTINCT Title
    FROM SalesReps
    WHERE Title IS NOT NULL;

Query Result ×   Script Output ×
                  Task completed in 0.023 seconds

TITLE

Sales Rep
Sales Mgr
VP Sales
```
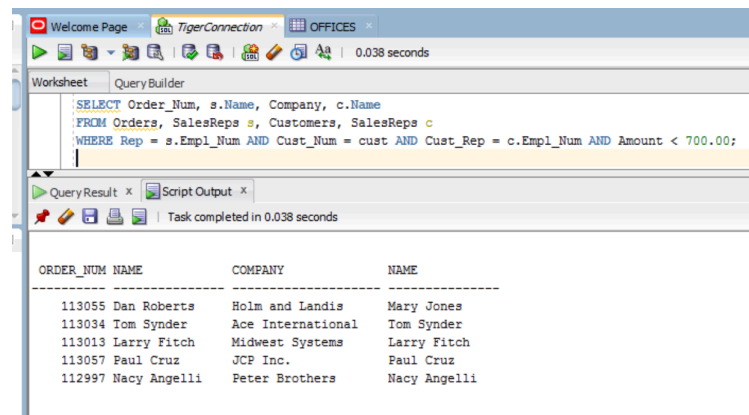
**9)** List the description of the products which are more than 6 character and less than 10 character long. No duplicate row is allowed. You can use the build in function  length() to do this. For example, length(name) return the number of characters for attribute called "name".

```
SELECT DISTINCT Description
FROM Products
WHERE length(Description) < 10 AND length(Description) > 6;
```
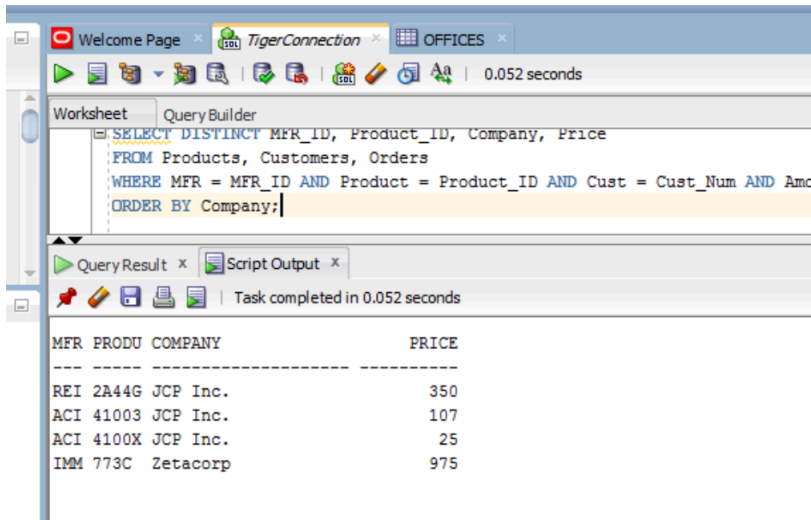
```
Welcome Page   TigerConnection   OFFICES
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Worksheet   Query Builder
    SELECT DISTINCT Description
    FROM Products
    WHERE length(Description) < 10 AND length(Description) > 6;

▲▼
▷ Query Result ×   Script Output ×
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DESCRIPTION
-------------------|
REDUCER
HINGE PIN
BRACE PIN
HOUSING
RETAINER

perform "Go to Declaration"
```

**10)** For all order **Amount less than $700,** list the order num with the name of the rep who placed the order and the name of the customer who made the order and the name of the rep for that customer

```
SELECT Order_Num, s.Name, Company, c.Name
FROM Orders, SalesReps s, Customers, SalesReps c
WHERE Rep = s.Empl_Num AND Cust_Num = cust AND Cust_Rep = c.Empl_Num AND Amount <
700.00;
```

```
Welcome Page    TigerConnection    OFFICES
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Worksheet    Query Builder
    SELECT Order_Num, s.Name, Company, c.Name
    FROM Orders, SalesReps s, Customers, SalesReps c
    WHERE Rep = s.Empl_Num AND Cust_Num = cust AND Cust_Rep = c.Empl_Num AND Amount < 700.00;

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▷ Query Result  ×    Script Output  ×
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ORDER_NUM NAME              COMPANY              NAME
--------- ---------------   ------------------   ---------------
   113055 Dan Roberts       Holm and Landis      Mary Jones
   113034 Tom Synder        Ace International     Tom Synder
   113013 Larry Fitch       Midwest Systems      Larry Fitch
   113057 Paul Cruz         JCP Inc.             Paul Cruz
   112997 Nacy Angelli      Peter Brothers       Nacy Angelli
```

11) List the Mfr Id, the Product Id, Company and PRICE of all products bought by customers where customer number is one of (2111,2112,2105,2119) and where the ==amount of the order < $10,000.== Order the results by ascending Company. Duplicate row are not allowed.

```
SELECT DISTINCT MFR_ID, Product_ID, Company, Price
FROM Products, Customers, Orders
WHERE MFR = MFR_ID AND Product = Product_ID AND Cust = Cust_Num AND Amount < 10000.00
AND Cust_Num IN ('2111', '2112', '2105', '2119')
ORDER BY Company;
```
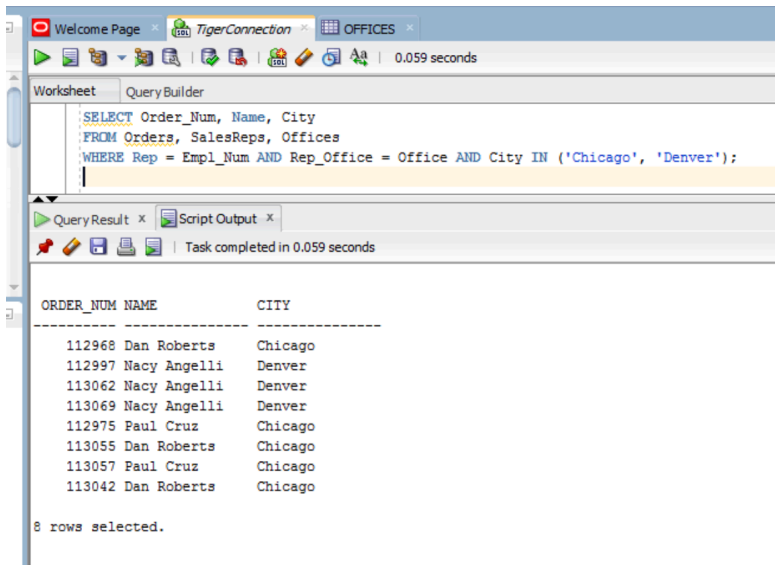

12) List all orders number, the name of the rep who took the order , the city where the rep has his/her office. Print the employee whose office is in either Chicago or Denver;

```
SELECT Order_Num, Name, City
FROM Orders, SalesReps, Offices
WHERE Rep = Empl_Num AND Rep_Office = Office AND City IN ('Chicago', 'Denver');
```
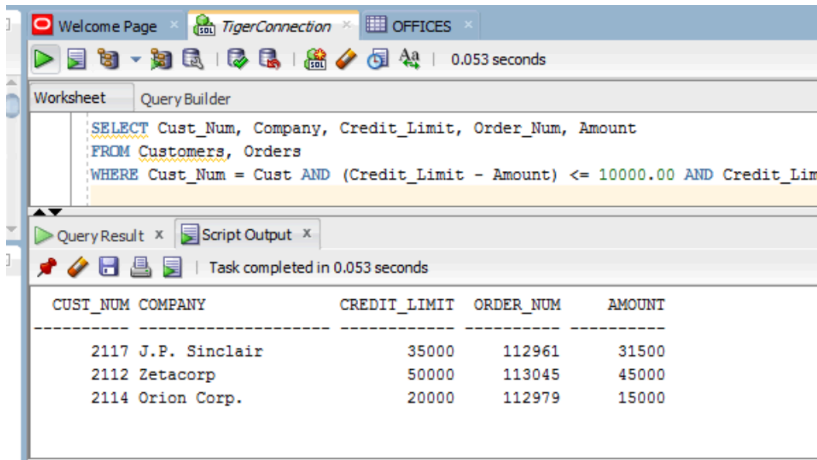
13) List all customers (Customer number, Company, and Credit Limit) and orders (Order Number, Amount) where the Amount is within ==$10,000== of the Credit Limit. Therefore:

- Credit_limit should be greater than zero and
- Amount should be greater than zero and
- Amount should be less than credit_limit and
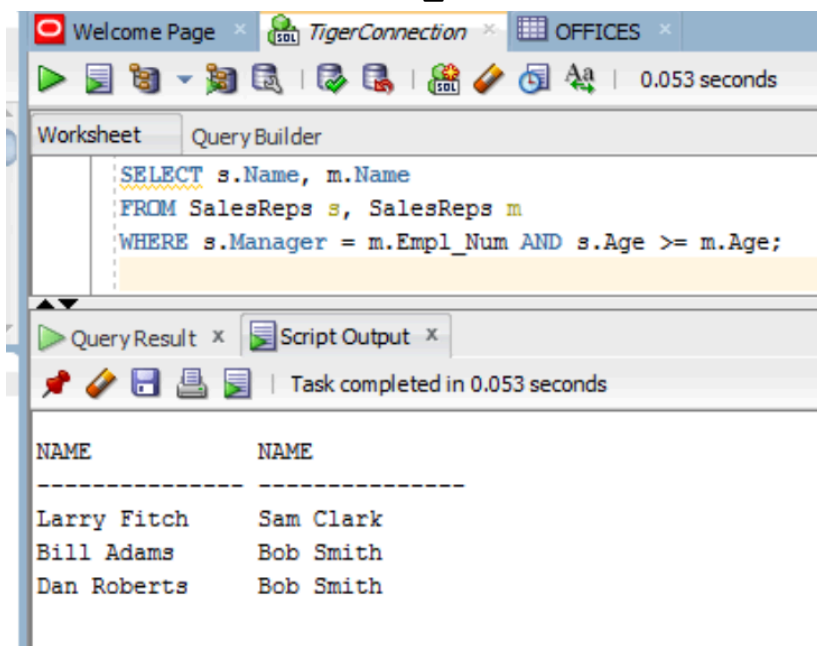- ==Credit_limit – Amount <=$10000==

```
SELECT Cust_Num, Company, Credit_Limit, Order_Num, Amount
FROM Customers, Orders
WHERE Cust_Num = Cust AND (Credit_Limit - Amount) <= 10000.00 AND Credit_Limit > 0.00
AND Amount > 0.00 AND Amount < Credit_Limit;
```


14) List all salesreps names and their managers' names where the salesrep is at least as old as the manager. Duplicate rows are not allowed.

```
SELECT s.Name, m.Name
FROM SalesReps s, SalesReps m
WHERE s.Manager = m.Empl_Num AND s.Age >= m.Age;
```

15) List all salesreps (Name) and the City they work in where either the sales of the salesrep < Quota or the sales for the office is < Target.

```
SELECT Name, City
FROM SalesReps s, Offices o
WHERE Rep_Office = Office AND (s.Sales < Quota OR o.Sales < Target);
```
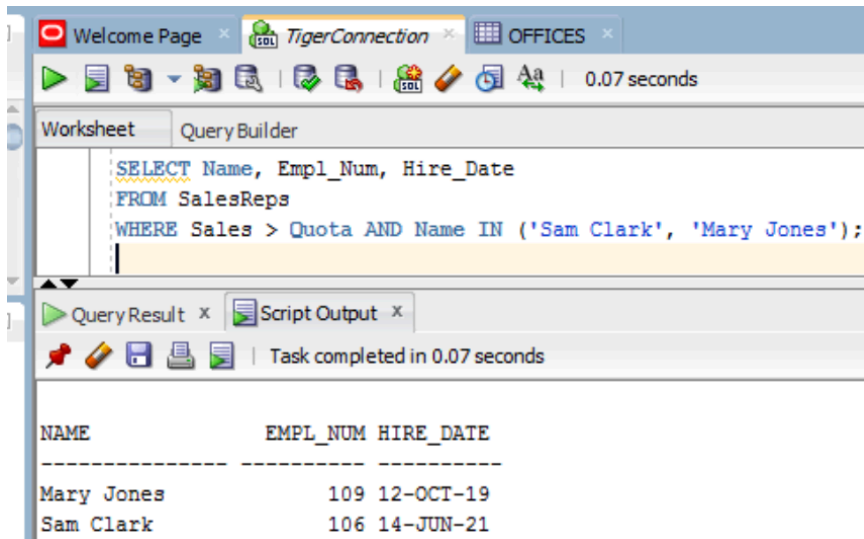

16) List the name, ID, and hire date of the salesreps where the following two conditions hold:

a) The salesreps sales should be greater than the quota and
b) The rep should be either "Sam Clark", or "Mary Jones."

```
SELECT Name, Empl_Num, Hire_Date
FROM SalesReps
WHERE Sales > Quota AND Name IN ('Sam Clark', 'Mary Jones');
```

17) List all orders (Order Number) over $7,000 showing the company placing the order, the Customer Rep assign to the company, the Office id and the city , and the rep who took the order where such that the Customer Rep's is not the rep who took the order.
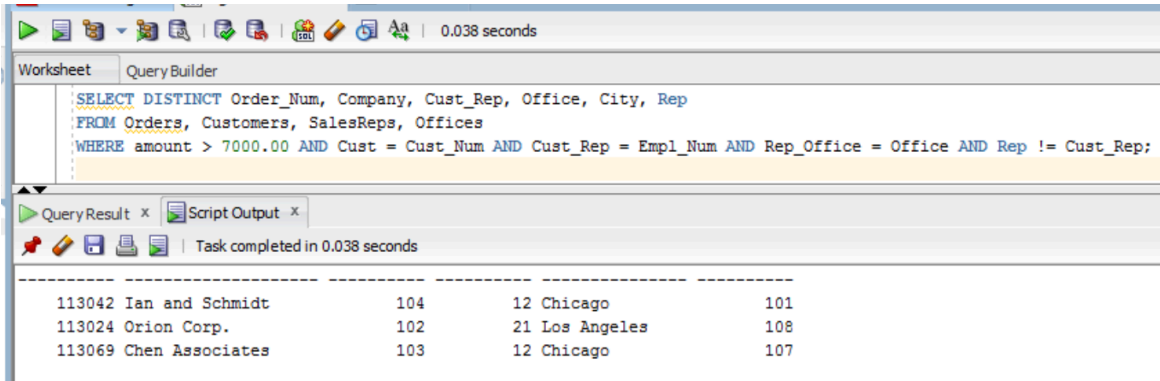
```
SELECT DISTINCT Order_Num, Company, Cust_Rep, Office, City, Rep
FROM Orders, Customers, SalesReps, Offices
WHERE amount > 7000.00 AND Cust = Cust_Num AND Cust_Rep = Empl_Num AND Rep_Office =
Office AND Rep != Cust_Rep;
```

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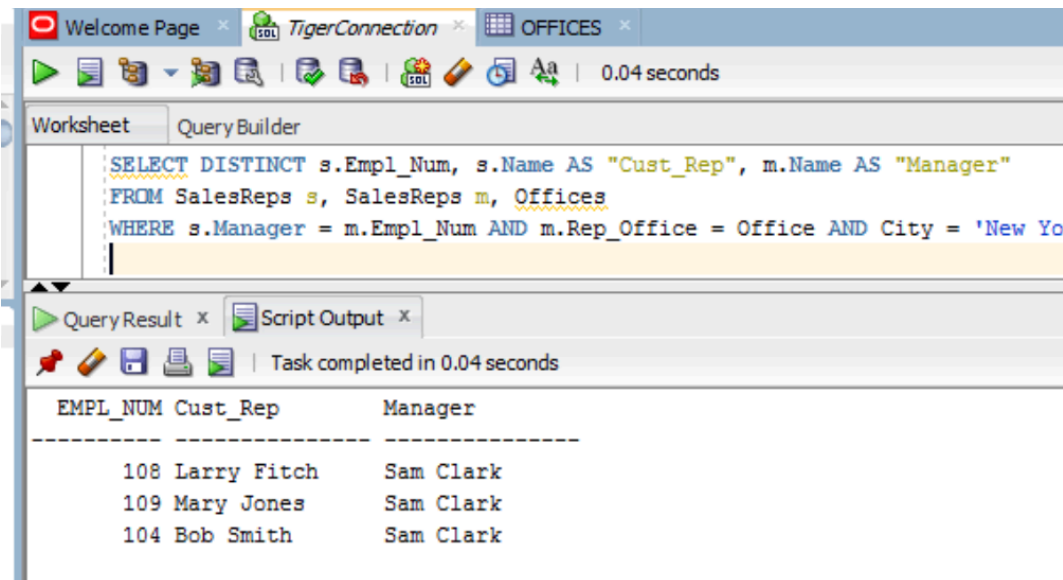
| Worksheet | Query Builder |

```
SELECT DISTINCT Order_Num, Company, Cust_Rep, Office, City, Rep
FROM Orders, Customers, SalesReps, Offices
WHERE amount > 7000.00 AND Cust = Cust_Num AND Cust_Rep = Empl_Num AND Rep_Office = Office AND Rep != Cust_Rep;
```

▲▼
▷ Query Result ✕ 🖻 Script Output ✕
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```
---------- -------------------- ---------- ---------- ----------------- ----------
113042 Ian and Schmidt            104       12 Chicago               101
113024 Orion Corp.                102       21 Los Angeles           108
113069 Chen Associates            103       12 Chicago               107
```

18) List all customer reps (their name and their id) and their managers name in which the manager is based in New York. Use appropriate column header.

```
SELECT DISTINCT s.Empl_Num, s.Name AS "Cust_Rep", m.Name AS "Manager"
FROM SalesReps s, SalesReps m, Offices
WHERE s.Manager = m.Empl_Num AND m.Rep_Office = Office AND City = 'New York';
```

🔴 Welcome Page ✕   🗔 TigerConnection ✕   ▦ OFFICES ✕

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| Worksheet | Query Builder |

```
SELECT DISTINCT s.Empl_Num, s.Name AS "Cust_Rep", m.Name AS "Manager"
FROM SalesReps s, SalesReps m, Offices
WHERE s.Manager = m.Empl_Num AND m.Rep_Office = Office AND City = 'New Yo
```

▲▼
▷ Query Result ✕ 🖻 Script Output ✕
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```
EMPL_NUM Cust_Rep            Manager
---------- ----------------- -----------------
    108 Larry Fitch          Sam Clark
    109 Mary Jones           Sam Clark
    104 Bob Smith            Sam Clark
```

19) List all products (ProductId, MFR_Id, and Description), customers (CustNum, Company) who have bought that product, and orders (Order Number, and Order Date) <mark>where the order < $700.</mark> Sort the rows by the OrderDate. Duplicate rows is not allowed.

```
SELECT DISTINCT Product_ID, Mfr_ID, Description, Cust_Num, Company, Order_Num,
Order_Date
FROM Products, Customers, Orders
WHERE Amount < 700.00 AND Product_ID = Product AND Cust = Cust_Num AND MFR_ID = MFR
ORDER BY Order_Date;
```

Welcome Page ×	TigerConnection ×	OFFICES ×

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Worksheet	Query Builder

```
SELECT DISTINCT Product_ID, Mfr_ID, Description, Cust_Num, Company, Order_Num, Order_Date
FROM Products, Customers, Orders
WHERE Amount < 700.00 AND Product_ID = Product AND Cust = Cust_Num AND MFR_ID = MFR
ORDER BY Order_Date;
```

▷ Query Result × | Script Output ×

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```
PRODU MFR DESCRIPTION              CUST_NUM COMPANY              ORDER_NUM ORDER_DAT
----- --- --------------------     -------- -------------------- --------- ---------
41003 BIC HANDLE                       2118 Midwest Systems         113013 14-JAN-18
41003 BIC HANDLE                       2124 Peter Brothers          112997 08-JAN-21
4100X ACI WIDGET ADJUSTER              2111 JCP Inc.                113057 18-FEB-21
2A45C REI RATCHET LINK                 2107 Ace International       113034 14-NOV-21
4100X ACI WIDGET ADJUSTER              2108 Holm and Landis         113055 15-FEB-22
```

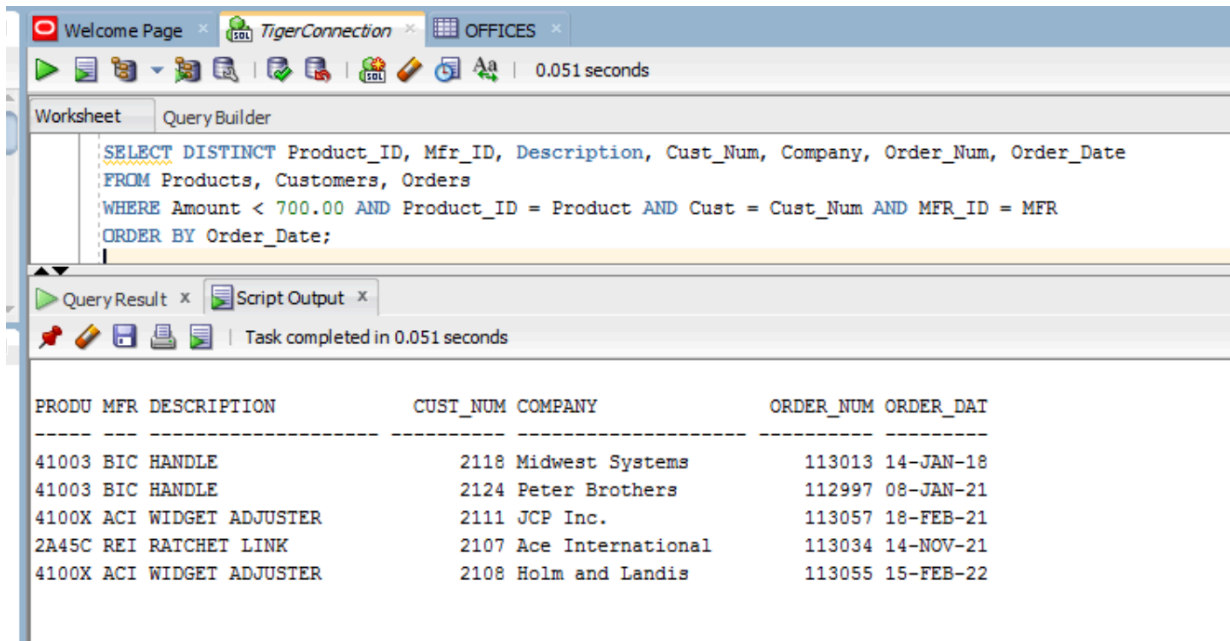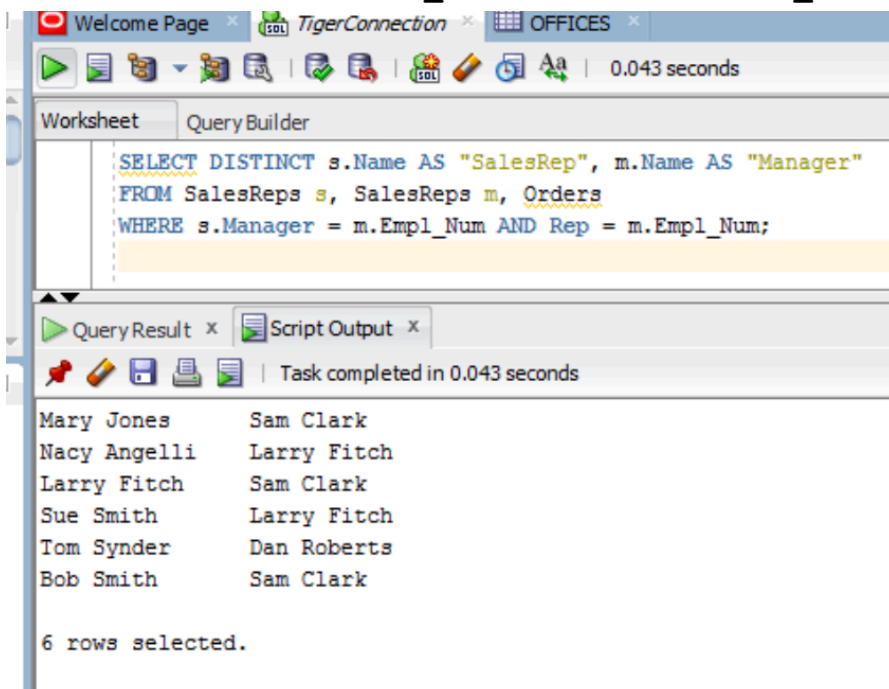**20)** List the name of the salesreps and the name of their managers only if the manager has taken care of some orders.

```
SELECT DISTINCT s.Name AS "SalesRep", m.Name AS "Manager"
FROM SalesReps s, SalesReps m, Orders
WHERE s.Manager = m.Empl_Num AND Rep = m.Empl_Num;
```

Welcome Page ×	TigerConnection ×	OFFICES ×

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Worksheet	Query Builder

```
SELECT DISTINCT s.Name AS "SalesRep", m.Name AS "Manager"
FROM SalesReps s, SalesReps m, Orders
WHERE s.Manager = m.Empl_Num AND Rep = m.Empl_Num;
```

▷ Query Result × | Script Output ×

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```
Mary Jones      Sam Clark
Nacy Angelli    Larry Fitch
Larry Fitch     Sam Clark
Sue Smith       Larry Fitch
Tom Synder      Dan Roberts
Bob Smith       Sam Clark

6 rows selected.
```