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Database Design Project

Oracle Baseball League Store Database

Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

Section 6 Lesson 7 Exercise 1: Restricting Data Using WHERE

Limit rows using WHERE (S6L7 Objective 1)

In this exercise you will refine the data that is returned in your query by adding a WHERE clause to your SELECT statement.

Part 1: Using the WHERE Clause.

1. Using the unique customer number in the where clause display all columns for Maria Galant.

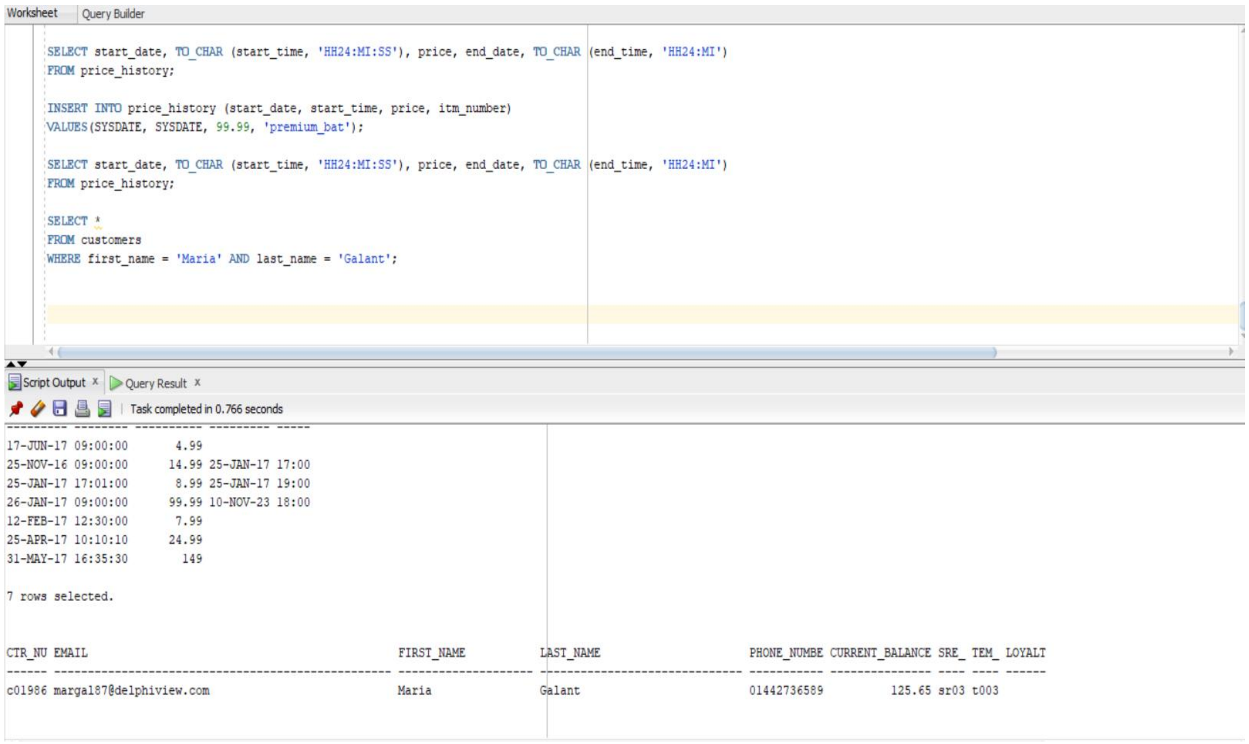
Code:

SELECT *

FROM customers

WHERE first_name = 'Maria' AND last_name = 'Galant';

Output:



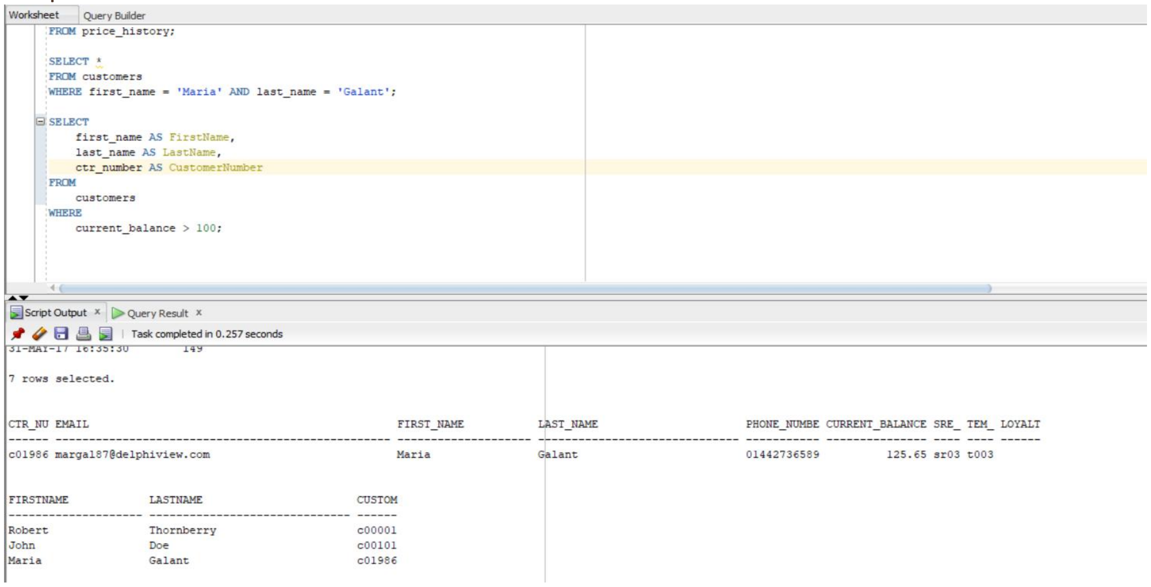
```
SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR (end_time, 'HH24:MI')
FROM price_history;

INSERT INTO price_history (start_date, start_time, price, itm_number)
VALUES(SYSDATE, SYSDATE, 99.99, 'premium_bat');

SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR (end_time, 'HH24:MI')
FROM price_history;

SELECT *
FROM customers
WHERE first_name = 'Maria' AND last_name = 'Galant';
```

```
--------- -------- ---------- --------- -----
17-JUN-17 09:00:00       4.99
25-NOV-16 09:00:00      14.99 25-JAN-17 17:00
25-JAN-17 17:01:00       8.99 25-JAN-17 19:00
26-JAN-17 09:00:00      99.99 10-NOV-23 18:00
12-FEB-17 12:30:00       7.99
25-APR-17 10:10:10      24.99
31-MAY-17 16:35:30        149

7 rows selected.


CTR_NU EMAIL                                              FIRST_NAME           LAST_NAME                      PHONE_NUMBE CURRENT_BALANCE SRE_ TEM_ LOYALT
------ -------------------------------------------------- -------------------- ------------------------------ ----------- --------------- ---- ---- ------
c01986 margal87@delphiview.com                            Maria                Galant                         01442736589          125.65 sr03 t003
```

2. Display the first name, last name and customer number for all customers who have a current balance of greater than 100. Use an appropriate alias for your column headings.

Code:
SELECT
first_name AS FirstName,
last_name AS LastName,
ctr_number AS CustomerNumber
FROM
customers
WHERE
current_balance > 100;

Output:



Worksheet Query Builder

```
FROM price_history;

SELECT *
FROM customers
WHERE first_name = 'Maria' AND last_name = 'Galant';

SELECT
    first_name AS FirstName,
    last_name AS LastName,
    ctr_number AS CustomerNumber
FROM
    customers
WHERE
    current_balance > 100;
```

Script Output × Query Result ×

Task completed in 0.257 seconds

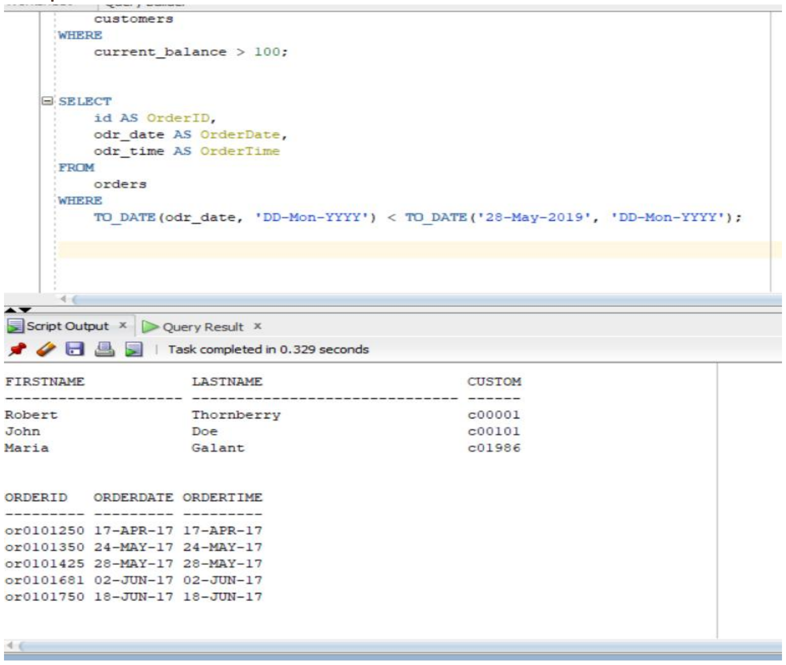
```
31-MAY-17 16:35:30        149

7 rows selected.


CTR_NU EMAIL                                              FIRST_NAME          LAST_NAME                      PHONE_NUMBE CURRENT_BALANCE SRE_ TEM_ LOYALT
------ -------------------------------------------------- ------------------- ------------------------------ ----------- --------------- ---- ---- ------
c01986 margal87@delphiview.com                            Maria               Galant                         01442736589          125.65 sr03 t003


FIRSTNAME           LASTNAME                       CUSTOM
------------------- ------------------------------ ------
Robert              Thornberry                     c00001
John                Doe                            c00101
Maria               Galant                         c01986
```

3. Display the order id, date and time of all orders that were placed before the 28th of May 2019. Use an appropriate alias for your column headings.

Code:

SELECT
id AS OrderID,
odr_date AS OrderDate,
odr_time AS OrderTime
FROM
orders
WHERE
TO_DATE(odr_date, 'DD-Mon-YYYY') < TO_DATE('28-May-2019', 'DD-Mon-YYYY');

Output:



```
    customers
WHERE
    current_balance > 100;

SELECT
    id AS OrderID,
    odr_date AS OrderDate,
    odr_time AS OrderTime
FROM
    orders
WHERE
    TO_DATE(odr_date, 'DD-Mon-YYYY') < TO_DATE('28-May-2019', 'DD-Mon-YYYY');
```

Script Output × Query Result ×

Task completed in 0.329 seconds

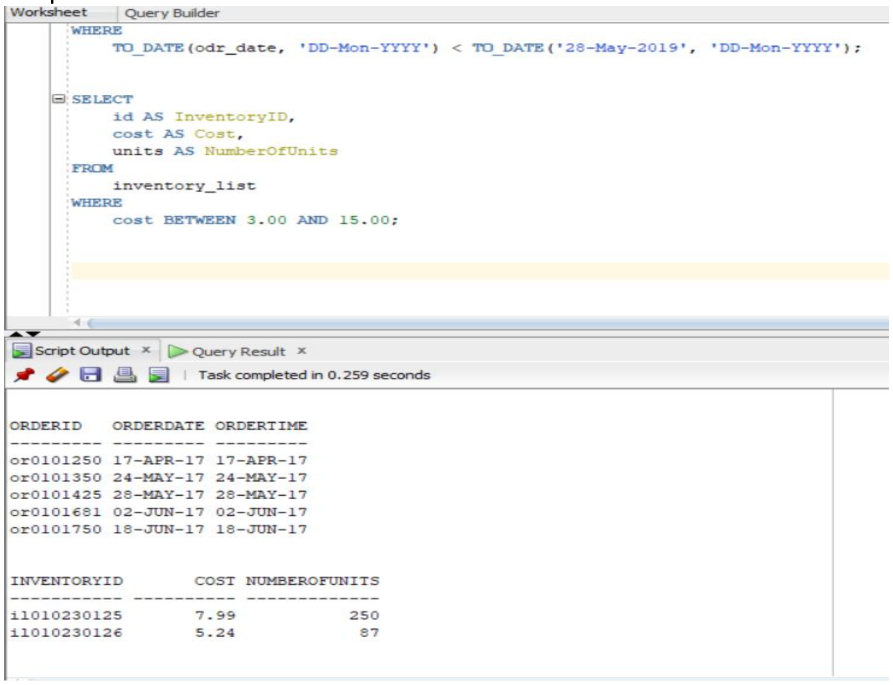
```
FIRSTNAME            LASTNAME                       CUSTOM
-------------------- ------------------------------ ------
Robert               Thornberry                     c00001
John                 Doe                            c00101
Maria                Galant                         c01986


ORDERID   ORDERDATE ORDERTIME
--------- --------- ---------
or0101250 17-APR-17 17-APR-17
or0101350 24-MAY-17 24-MAY-17
or0101425 28-MAY-17 28-MAY-17
or0101681 02-JUN-17 02-JUN-17
or0101750 18-JUN-17 18-JUN-17
```

Part 2: Range Conditions: BETWEEN Operator

1. Display the inventory id, cost and number of units using appropriate aliases for all items that have a trade cost of between 3.00 and 15.00.

   Code:
   SELECT
   id AS InventoryID,
   cost AS Cost,
   units AS NumberOfUnits
   FROM
   inventory_list
   WHERE
   cost BETWEEN 3.00 AND 15.00;

   Output:



```
WHERE
    TO_DATE(odr_date, 'DD-Mon-YYYY') < TO_DATE('28-May-2019', 'DD-Mon-YYYY');

SELECT
    id AS InventoryID,
    cost AS Cost,
    units AS NumberOfUnits
FROM
    inventory_list
WHERE
    cost BETWEEN 3.00 AND 15.00;
```

```
ORDERID   ORDERDATE ORDERTIME
--------- --------- ---------
or0101250 17-APR-17 17-APR-17
or0101350 24-MAY-17 24-MAY-17
or0101425 28-MAY-17 28-MAY-17
or0101681 02-JUN-17 02-JUN-17
or0101750 18-JUN-17 18-JUN-17


INVENTORYID       COST NUMBEROFUNITS
----------- ---------- -------------
i1010230125       7.99           250
i1010230126       5.24            87
```

Part 3: Membership Conditions: IN Operator

1. Display the inventory id, cost and number of units using appropriate aliases for all items that have 50, 100, 150 or 200 units in stock.

Code:

SELECT

id AS InventoryID,

cost AS Cost,

units AS NumberOfUnits

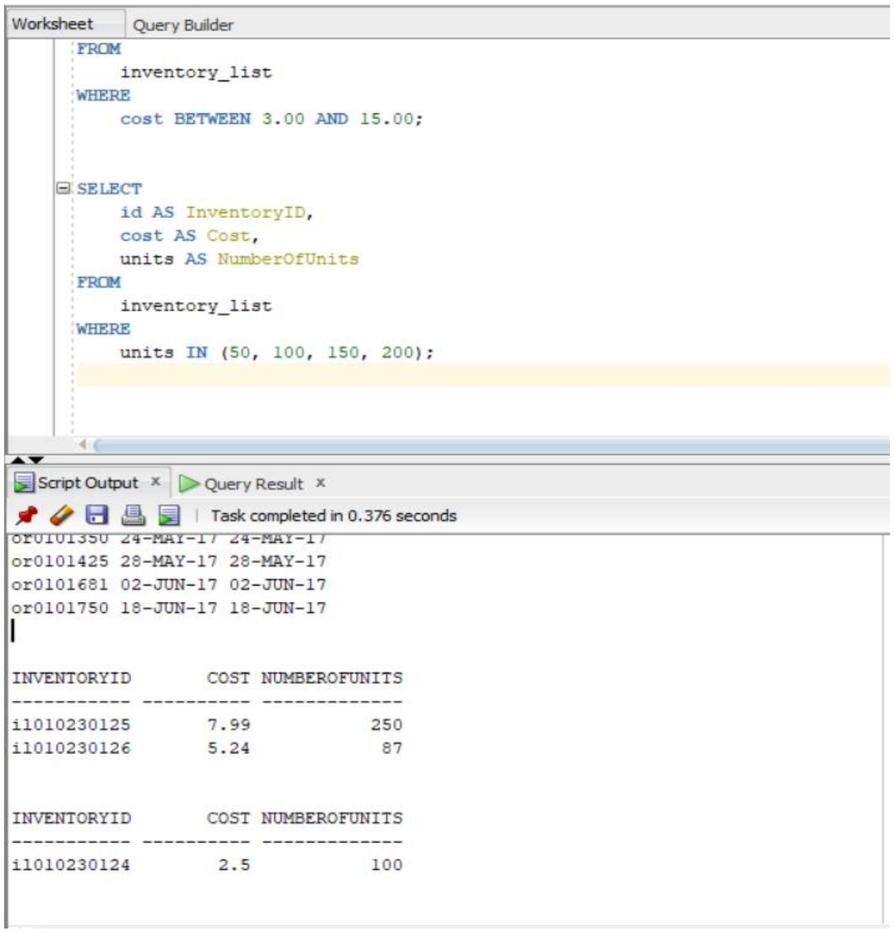
FROM

inventory_list

WHERE

units IN (50, 100, 150, 200);

Output:



Worksheet Query Builder

```
FROM
    inventory_list
WHERE
    cost BETWEEN 3.00 AND 15.00;


SELECT
    id AS InventoryID,
    cost AS Cost,
    units AS NumberOfUnits
FROM
    inventory_list
WHERE
    units IN (50, 100, 150, 200);
```

Script Output × Query Result ×

Task completed in 0.376 seconds

```
or0101350 24-MAY-17 24-MAY-17
or0101425 28-MAY-17 28-MAY-17
or0101681 02-JUN-17 02-JUN-17
or0101750 18-JUN-17 18-JUN-17


INVENTORYID       COST NUMBEROFUNITS
----------- ---------- -------------
i1010230125       7.99           250
i1010230126       5.24            87


INVENTORYID       COST NUMBEROFUNITS
----------- ---------- -------------
i1010230124        2.5           100
```

Part 4: Membership Conditions: NOT IN Operator

1. Display the inventory id, cost and number of units using appropriate aliases for all items that do not have 50, 100, 150 or 200 units in stock.

Code:

SELECT

id AS InventoryID,

cost AS Cost,

units AS NumberOfUnits

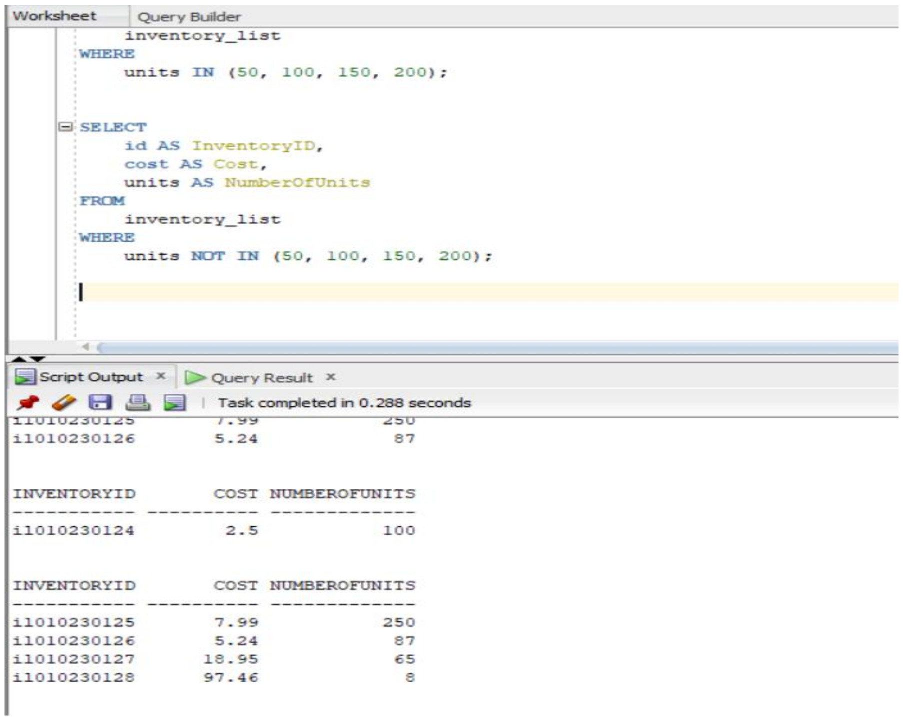
FROM

inventory_list

WHERE

units NOT IN (50, 100, 150, 200);

Output:



Worksheet Query Builder

```
    inventory_list
WHERE
    units IN (50, 100, 150, 200);

SELECT
    id AS InventoryID,
    cost AS Cost,
    units AS NumberOfUnits
FROM
    inventory_list
WHERE
    units NOT IN (50, 100, 150, 200);
```

Script Output × Query Result ×

Task completed in 0.288 seconds

```
i1010230126        5.24            87


INVENTORYID        COST NUMBEROFUNITS
----------- ---------- -------------
i1010230124         2.5           100


INVENTORYID        COST NUMBEROFUNITS
----------- ---------- -------------
i1010230125        7.99           250
i1010230126        5.24            87
i1010230127       18.95            65
i1010230128       97.46             8
```

Part 5: Pattern Matching: LIKE Operator

1. Display item number and name of all items that have a name that begins with g. Use an appropriate alias for your column headings.

Code:

SELECT

itm_number AS ItemNumber,

name AS ItemName

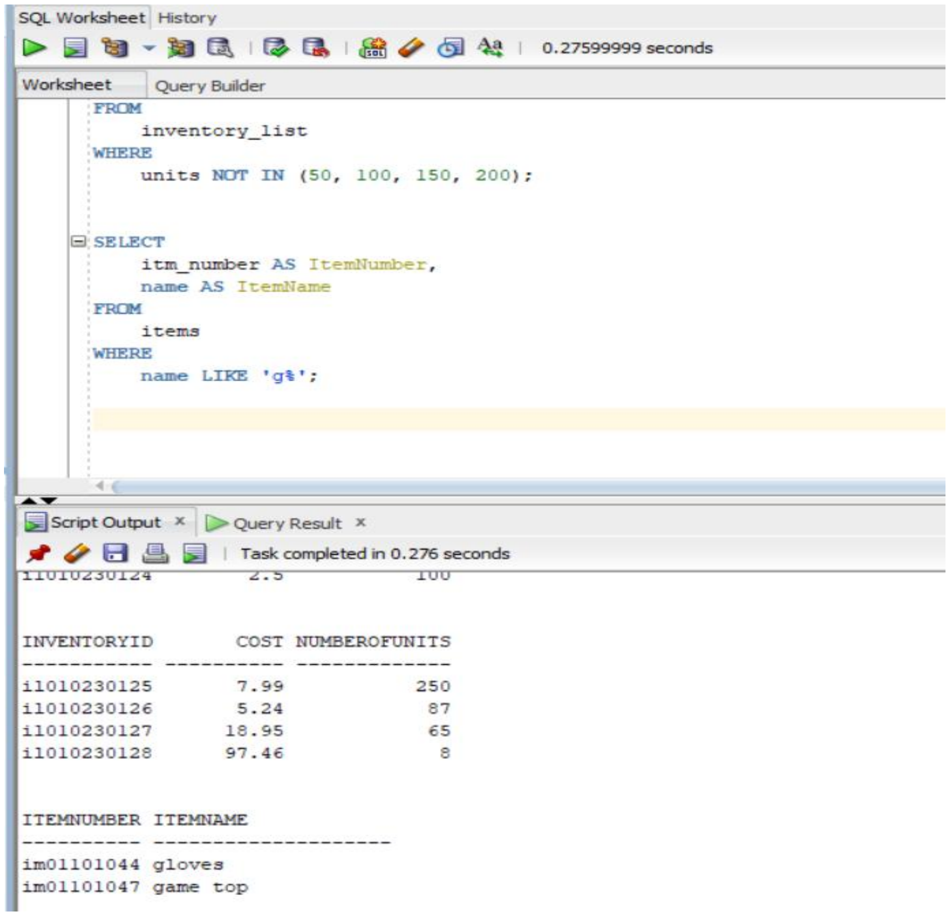
FROM

items

WHERE

name LIKE 'g%';

Output:



```
FROM
    inventory_list
WHERE
    units NOT IN (50, 100, 150, 200);


SELECT
    itm_number AS ItemNumber,
    name AS ItemName
FROM
    items
WHERE
    name LIKE 'g%';
```

```
INVENTORYID       COST NUMBEROFUNITS
----------- ---------- -------------
i1010230125       7.99           250
i1010230126       5.24            87
i1010230127      18.95            65
i1010230128      97.46             8


ITEMNUMBER ITEMNAME
---------- --------------------
im01101044 gloves
im01101047 game top
```

Part 6 : Pattern Matching: Combining Wildcard Characters with the LIKE Operator

1. Display item number and name of all items that have a name that contain a lowercase o. Use an appropriate alias for your column headings.

Code:

SELECT

itm_number AS ItemNumber,

name AS ItemName

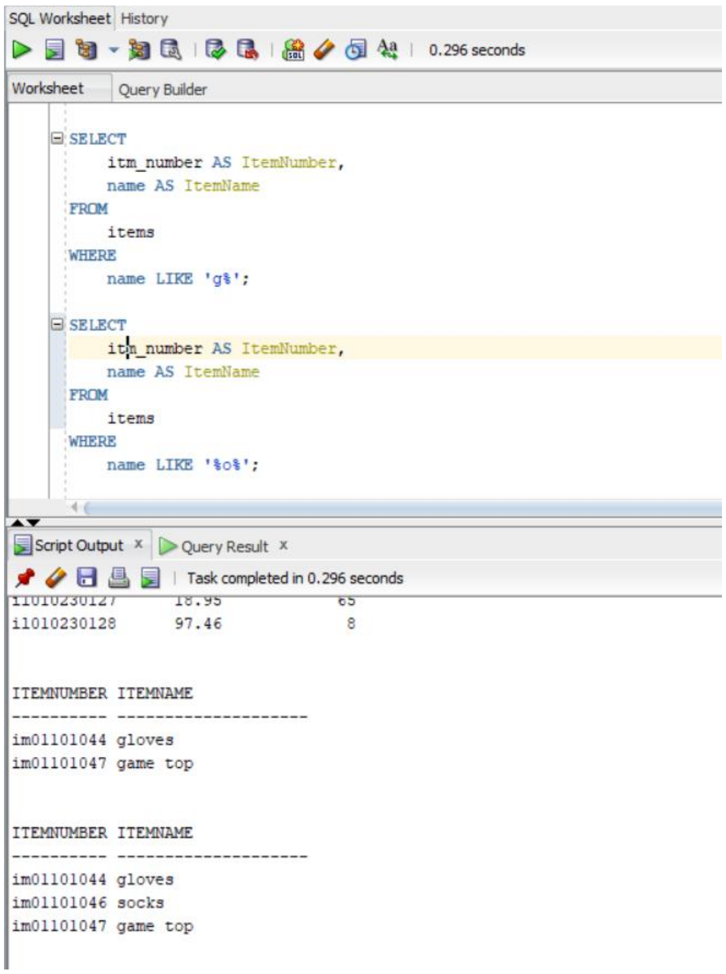
FROM

items

WHERE

name LIKE '%o%';

Output:



```
SELECT
    itm_number AS ItemNumber,
    name AS ItemName
FROM
    items
WHERE
    name LIKE 'g%';

SELECT
    itm_number AS ItemNumber,
    name AS ItemName
FROM
    items
WHERE
    name LIKE '%o%';
```

Task completed in 0.296 seconds

```
i1010230127      18.95           65
i1010230128      97.46            8


ITEMNUMBER ITEMNAME
---------- --------------------
im01101044 gloves
im01101047 game top


ITEMNUMBER ITEMNAME
---------- --------------------
im01101044 gloves
im01101046 socks
im01101047 game top
```