



UTM

UNIVERSITI TEKNOLOGI MALAYSIA

SECD2523 - DATABASE

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SQL3 – DML2

2023/2024

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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.

The screenshot shows the APEX SQL Workshop interface. The SQL command area contains the following query:

```
1 SELECT *
2 FROM customers
3 WHERE ctr_number = 'c01986';
```

The Results tab is active, displaying a table with the following data:

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-

1 rows returned in 0.01 seconds

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.

The screenshot shows the APEX SQL Workshop interface. The SQL command area contains the following query:

```
1 SELECT first_name AS "First Name", last_name AS "Last Name", current_balance AS "Balance"
2 FROM customers
3 WHERE current_balance > 100;
```

The Results tab is active, displaying a table with the following data:

First Name	Last Name	Balance
Robert	Thornberry	150
John	Doe	987.5
Maria	Galant	125.65

3 rows returned in 0.01 seconds

- 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.

The screenshot shows the Oracle APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Jane Ng' are on the right. The 'SQL Commands' section shows a query: `SELECT ID AS "ORDER ID", ODR_DATE AS "ORDER DATE", TO_CHAR(ODR_TIME, 'HH24:MI:SS') AS "ORDER TIME" FROM ORDERS WHERE ODR_DATE < TO_DATE('28-MAY-2019', 'DD-MON-YYYY');`. The 'Results' tab displays a table with 5 rows. The footer shows the user 'janeng251@gmail.com', database 'bioinfo_database', and 'Oracle APEX 23.21'.

ORDER ID	ORDER DATE	ORDER TIME
or0101250	04/17/2017	08:32:30
or0101350	05/24/2017	10:30:35
or0101425	05/28/2017	12:30:00
or0101681	06/02/2017	14:55:30
or0101750	06/18/2017	09:05:00

Part 2: Range Conditions: BETWEEN Operator

- 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.

The screenshot shows the Oracle APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile 'Jane Ng' are on the right. The 'SQL Commands' section shows a query: `SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units in Stock" FROM inventory_list WHERE cost BETWEEN 3 AND 15;`. The 'Results' tab displays a table with 2 rows. The footer shows the user 'janeng251@gmail.com', database 'bioinfo_database', and 'Oracle APEX 23.21'.

Inventory ID	Cost	Number of Units in Stock
il010230125	7.99	250
il010230126	5.24	87

Part 3: Membership Conditions: IN Operator

- 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.

APEX

App Builder

SQL Workshop

Team Development

Gallery

Q Search

JN

Jane Ng

bioinfo_database

SQL Commands

SchemaWKSP_BIOINFODATABASE

LanguageSQL

Rows10

Clear Command

Find Tables

Save

Run

Q

Az

1SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units in Stock"

2FROM inventory_list

3WHERE units IN (50, 100, 150, 200, 250);

Results

Explain

Describe

Saved SQL

History

Inventory ID	Cost	Number of Units in Stock
il010230124	2.5	100
il010230125	799	250

2 rows returned in 0.02 secondsDownload

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bioinfo_database

en

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Oracle APEX 23.21

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.

The screenshot shows the APEX SQL Workshop interface. The SQL command area contains the following query:

```
1 SELECT id AS "Inventory ID", cost AS "Cost", units AS "Number of Units in Stock"
2 FROM inventory_list
3 WHERE units NOT IN (50, 100, 150, 200, 250);
```

The Results tab shows the following data:

Inventory ID	Cost	Number of Units in Stock
il010230126	5.24	87
il010230127	18.95	65
il010230128	97.46	8

3 rows returned in 0.00 seconds

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.

The screenshot shows the APEX SQL Workshop interface. The SQL command area contains the following query:

```
1 SELECT item_number AS "Item ID", name AS "Item Name"
2 FROM items
3 WHERE name LIKE 'g%';
```

The Results tab shows the following data:

Item ID	Item Name
im01101044	gloves
im01101047	game top

2 rows returned in 0.01 seconds

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.

APEX

App Builder

SQL Workshop

Team Development

Gallery

Search

JN

Jane Ng

bioinfo_database

SQL Commands

SchemaWKSP_BIOINFODATABASE

LanguageSQLRows10Clear CommandFind TablesSaveRun

1SELECT itm_number AS "Item ID", name AS "Item Name"

2FROM items

3WHERE name LIKE '%o%';

Results

Explain

Describe

Saved SQL

History

Item ID	Item Name
im01101044	gloves
im01101046	socks
im01101047	game top

3 rows returned in 0.03 secondsDownload

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Oracle APEX 23.2.1