



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

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SCHOOL OF COMPUTING, UTMJB
SEMESTER 1, SESSION 2023/2024

LAB 3: PART 2

SECD2523: DATABASE
SECTION 10

LECTURER'S NAME:

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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 6 Exercise 2: Retrieving Data Using SELECT

Write and Execute SELECT statements (S6L6 Objective 2)

In this exercise you will retrieve data that is stored in the database system by using a SELECT statement.

Part 1: Using Arithmetic Operators

1. Every customer has been told they can pay off their current balance over a 12 month period. Display the customer's first name, last name, current balance and monthly payment.

```
1 v SELECT first_name, last_name, current_balance, ROUND(current_balance / 12, 2) AS monthly_payment
2 FROM customers;
3
```

FIRST_NAME	LAST_NAME	CURRENT_BALANCE	MONTHLY_PAYMENT
Brian	Rogers	50	4.17
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.29
Andrew	Murcia	85	7.08
Maria	Galant	125.65	10.47

2. Obl is considering giving a gift card to all its customers of 5.00 that can be used to reduce their current balance. Write a query that will show the customers first name, last name, customer number, current balance and the value of their balance minus the gift value.

```
1 v SELECT first_name, last_name, ctr_number, current_balance, current_balance - 5.00 AS adjusted_balance
2 FROM customers;
3
```

FIRST_NAME	LAST_NAME	CTR_NUMBER	CURRENT_BALANCE	ADJUSTED_BALANCE
Brian	Rogers	c02001	50	45
Robert	Thornberry	c00001	150	145
Jennifer	Jones	c00012	0	-5
John	Doe	c00101	987.5	982.5
Andrew	Murcia	c00103	85	80
Maria	Galant	c01986	125.65	120.65

3. What would be the problem with implementing this scheme?
- The result of subtracting the gift card value from the balance is a negative number, which could potentially violate constraints.

Part 2 : Using Column Aliases

1. You previously wrote a query that display the customer's first name, last name, current balance and monthly payment. Rewrite the query to use First Name, Last Name, Balance and Monthly Repayments as the column aliases. The aliases are to be shown exactly as described (case sensitive).

```
1 v SELECT first_name AS "First_Name",  
2       last_name AS "Last_Name",  
3       current_balance AS "Balance",  
4       ROUND(current_balance/12,2) AS "Monthly_Repayments"  
5 FROM customers;
```

First_Name	Last_Name	Balance	Monthly_Repayments
Brian	Rogers	50	4.17
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.29
Andrew	Murcia	85	7.08
Maria	Galant	125.65	10.47

Part 3: Using Literal Character Strings

1. Write a query that will display the team information in the following format:

The Rockets team has 25 players and receives a discount of 10 percent.

Use **Team Information** as the column alias.

```
1 v SELECT 'The ' || name || ' team has ' || number_of_players || ' players and receives a discount of ' || discount || ' percent.'
2 AS "Team Information"
3 FROM teams;
```

Team Information
The Jets team has 10 players and receives a discount of 5 percent.
The Rockets team has 25 players and receives a discount of 10 percent.
The Celtics team has 42 players and receives a discount of 20 percent.
The Rovers team has 8 players and receives a discount of percent.

2. Why does the last team not show a discount?

- The last team which is Rovers does not show a discount because the discount column for that team is explicitly set to NULL.