
UTM
UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING
UTM Johor Bahru

**SESSION 2023/2024 SEMESTER 1**

**SECD2523**

**DATABASE**

**LAB EXERCISE : SQL DML2**

**NAME**

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**MATRIC NO**

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**LECTURER'S NAME**

**DR. ROZILAWATI BINTI DOLLAH**

**SECTION**

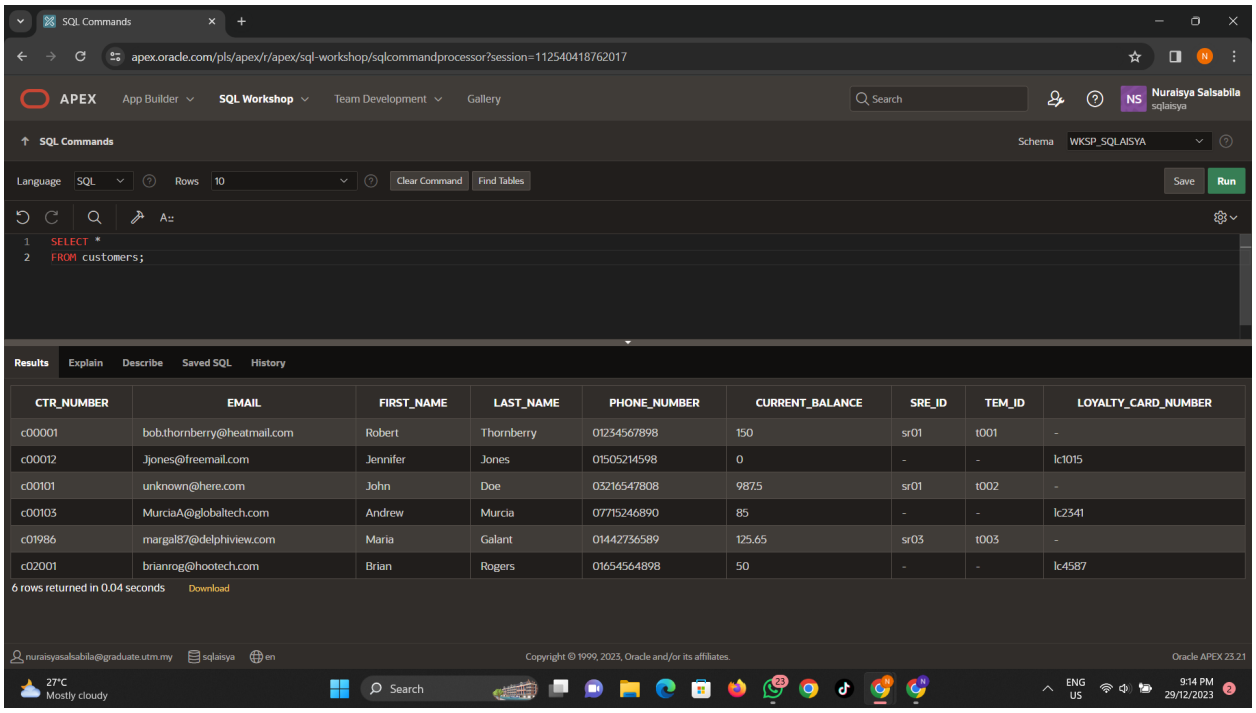
**10**

## Section 6 Lesson 6 Exercise 1: Retrieving Data Using SELECT

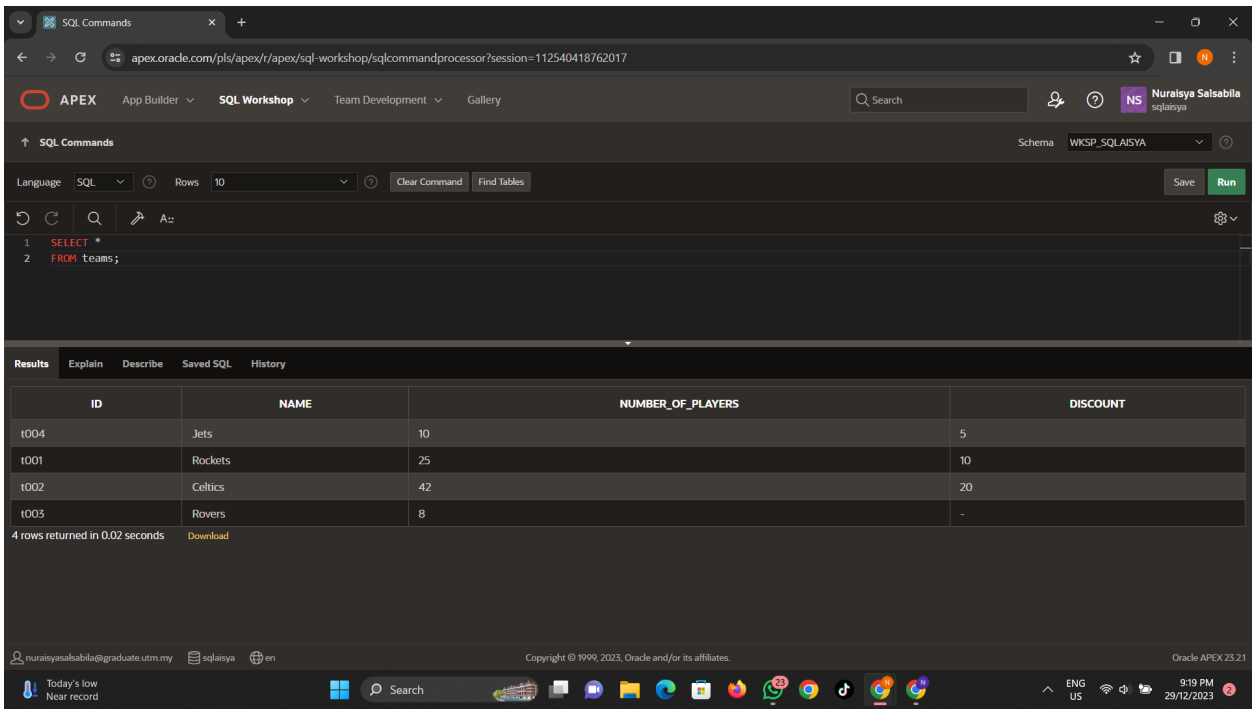
### Part 1: Retrieving all columns from a table.

Using the SELECT * statement show all data stored in the following tables:

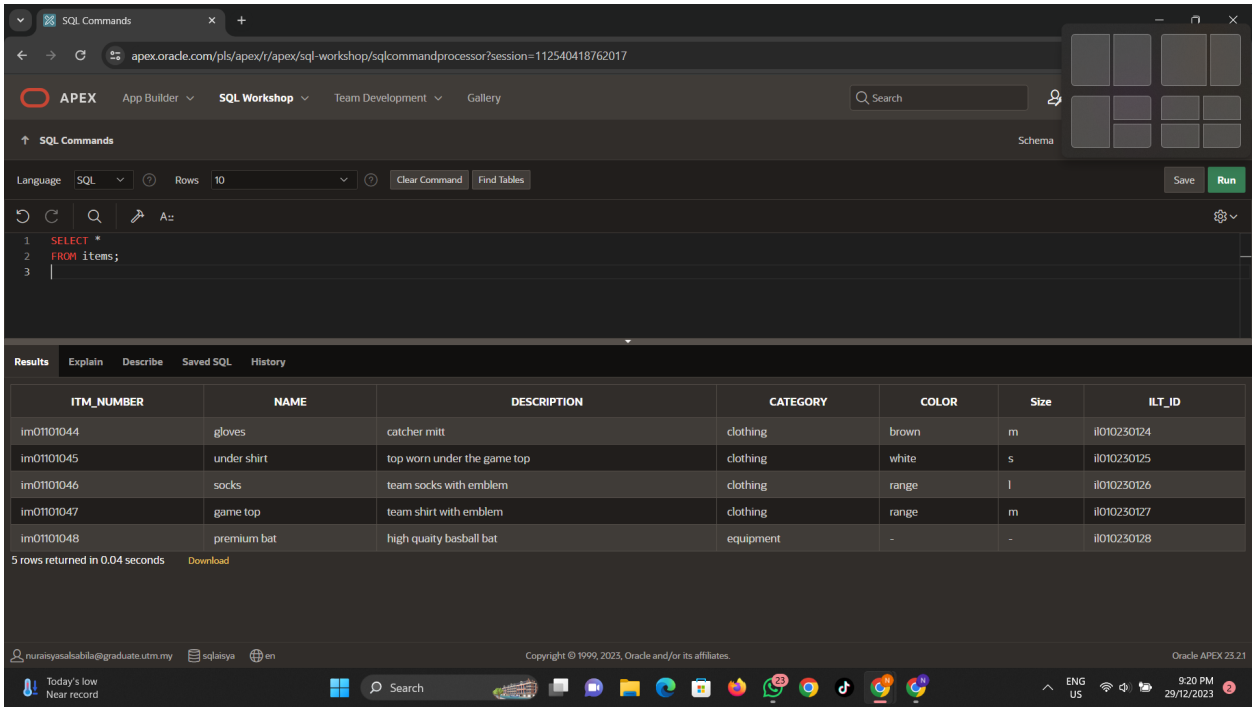
1. customers




2. teams

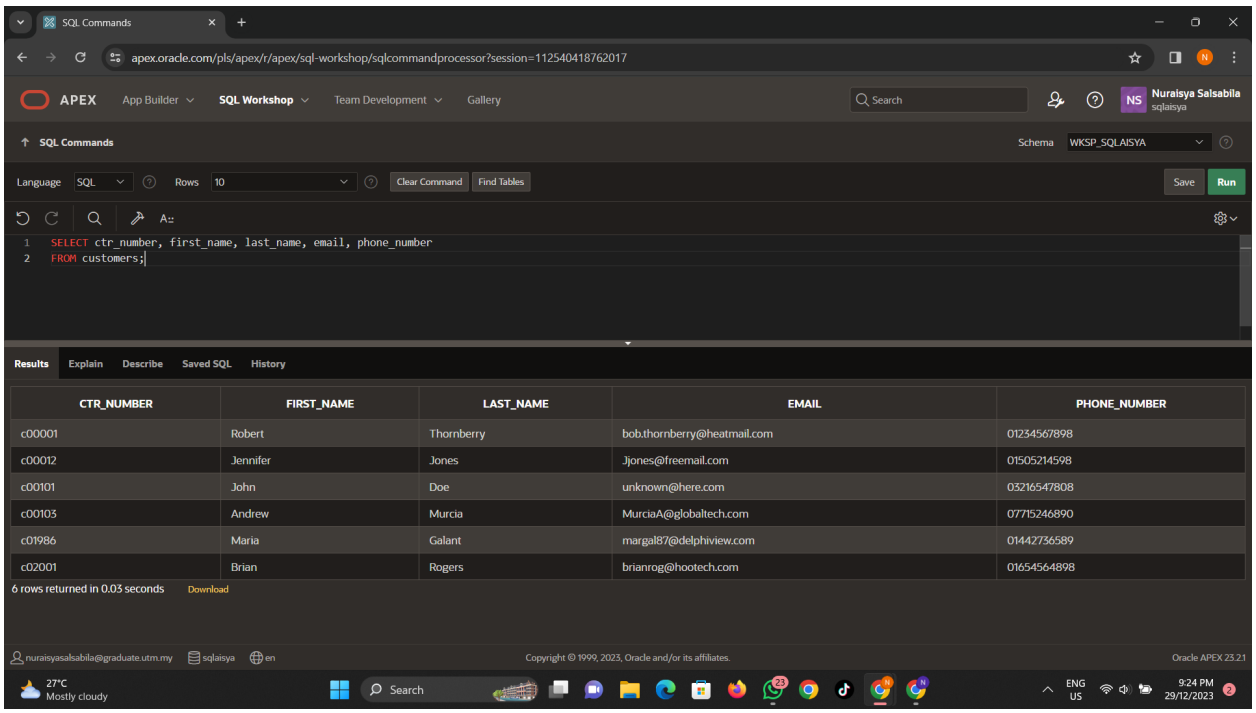


3. items

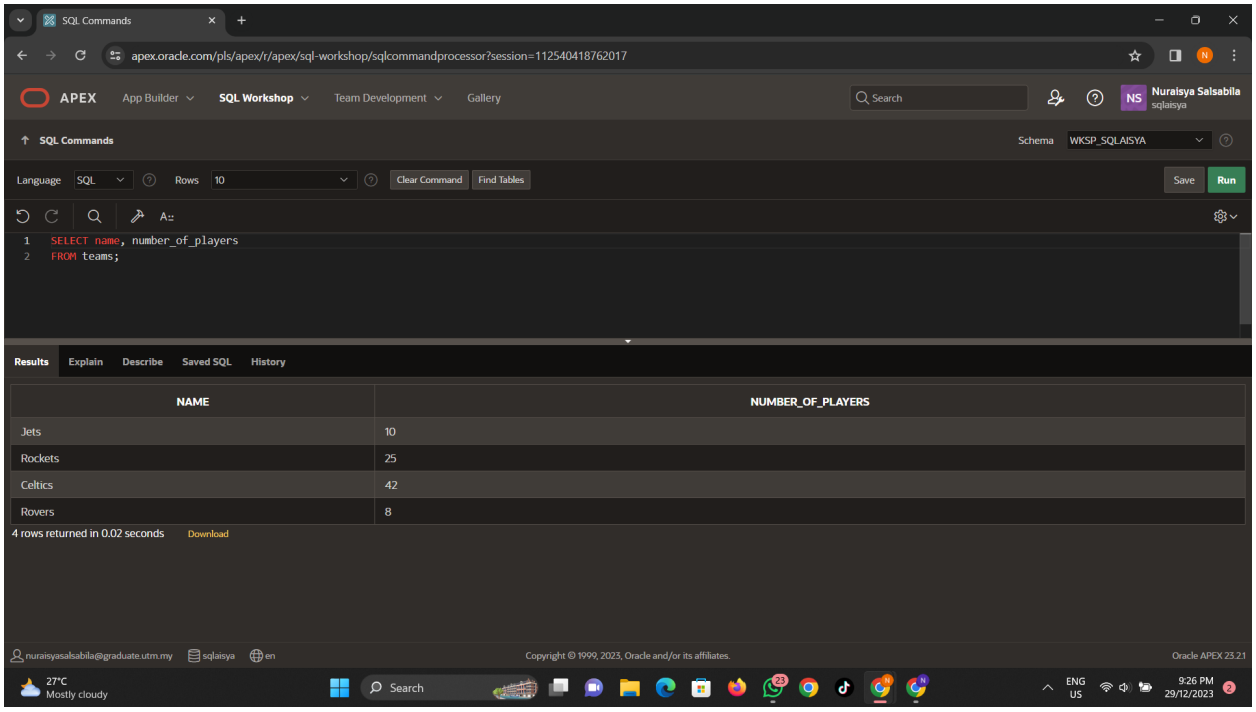



## Part 2: Selecting Specific Columns

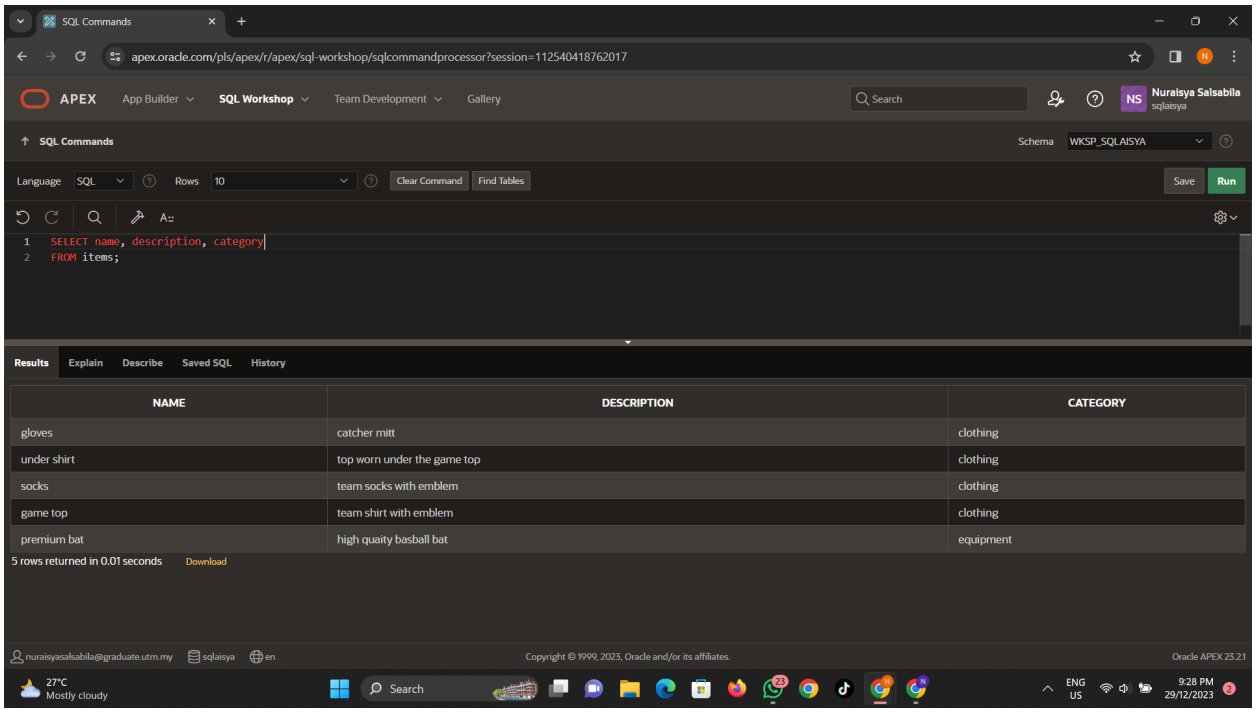
1. Display the customer number, first name, last name, email and phone number of the customers.



2. Display the name and number of players for each team.




3. Display the name, description and category for every item in the table.

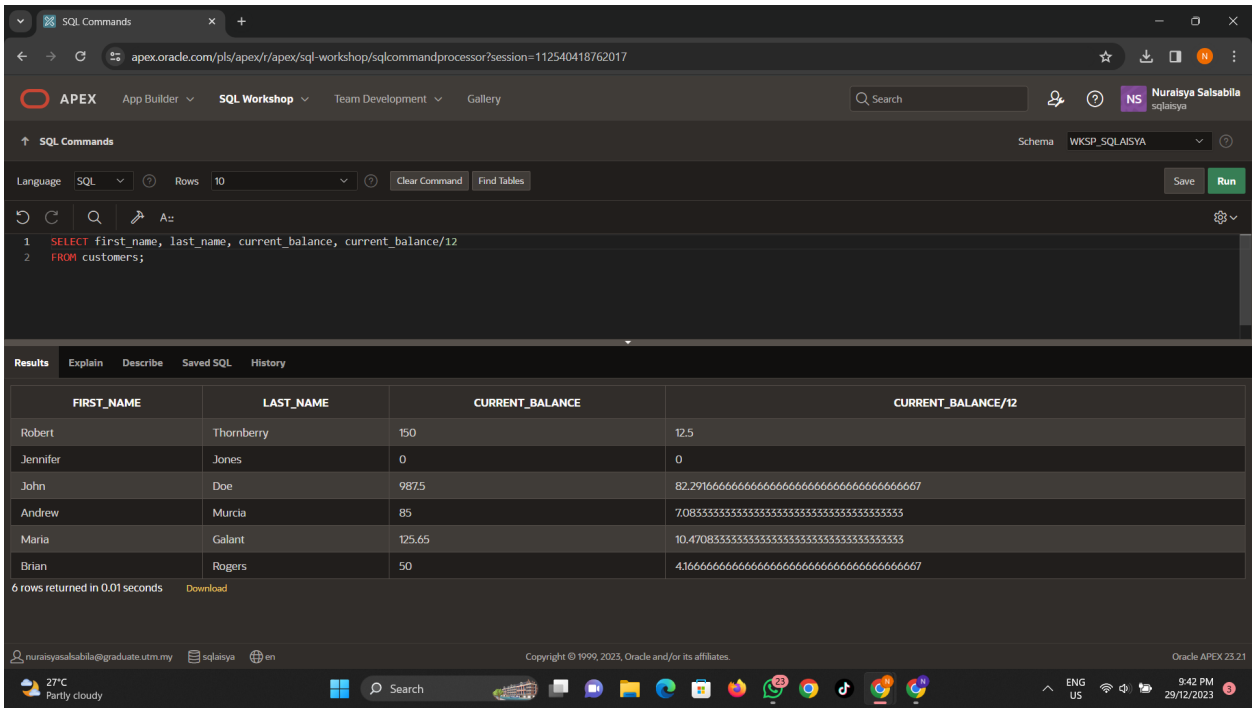


## Section 6 Lesson 6 Exercise 2: Retrieving Data Using SELECT

### 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

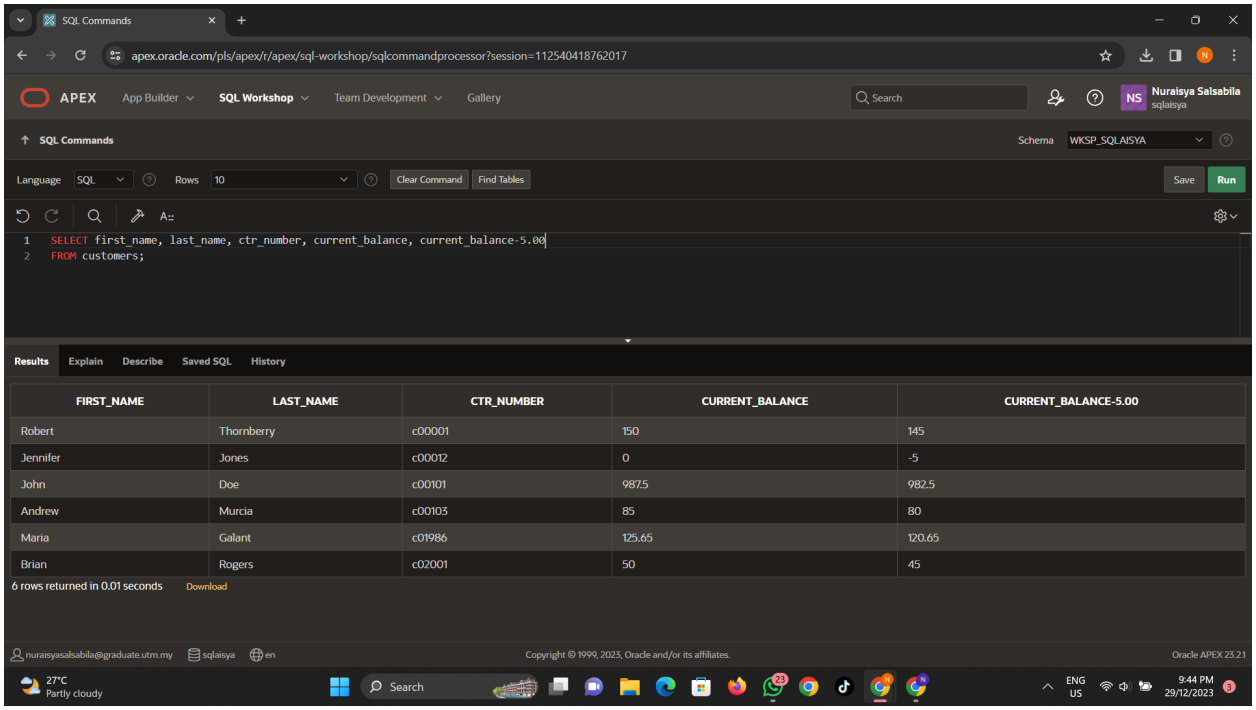
customer's first name, last name, current balance and monthly payment.




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.




3. What would be the problem with implementing this scheme?

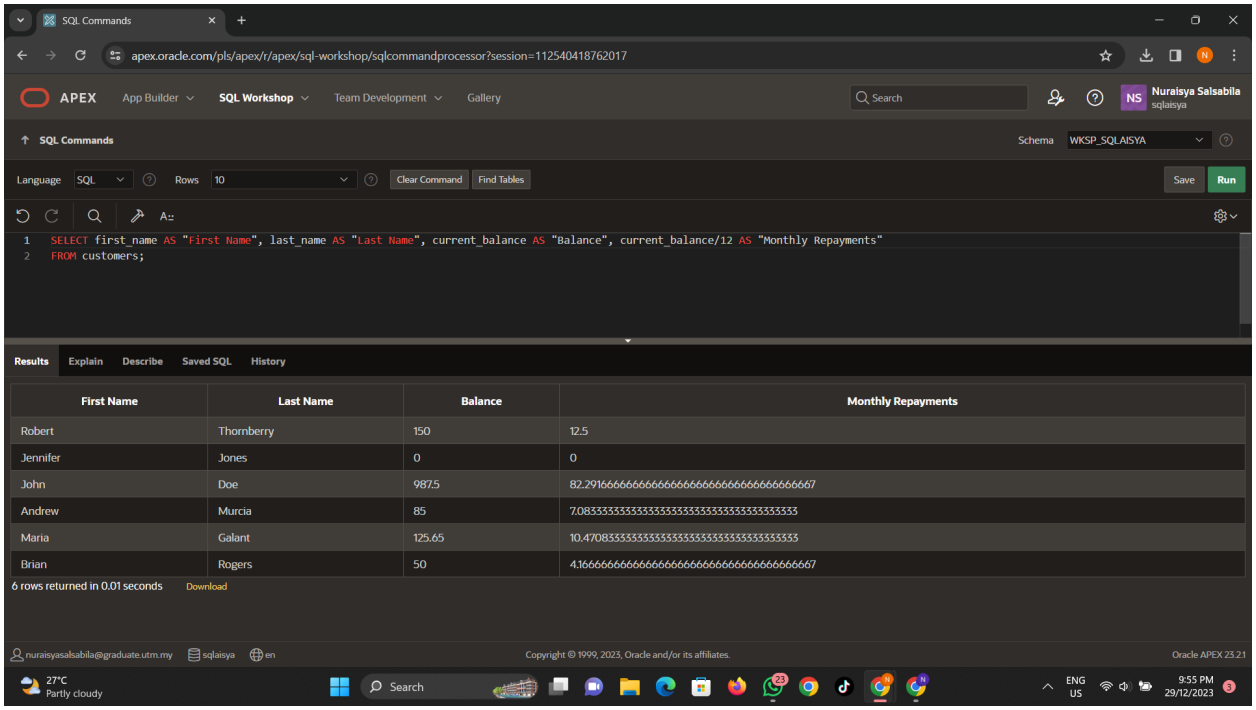
The current balance can have a negative value.

**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).

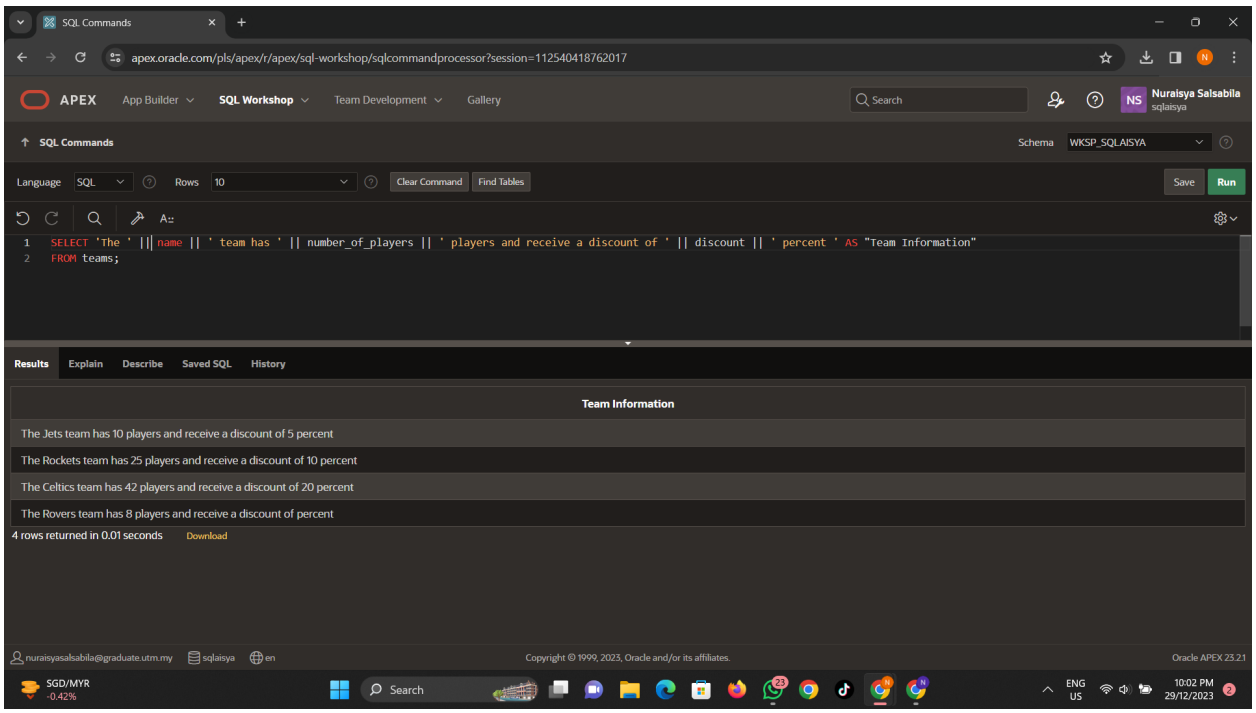



## Part 3: Using Literal Character Strings

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.



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

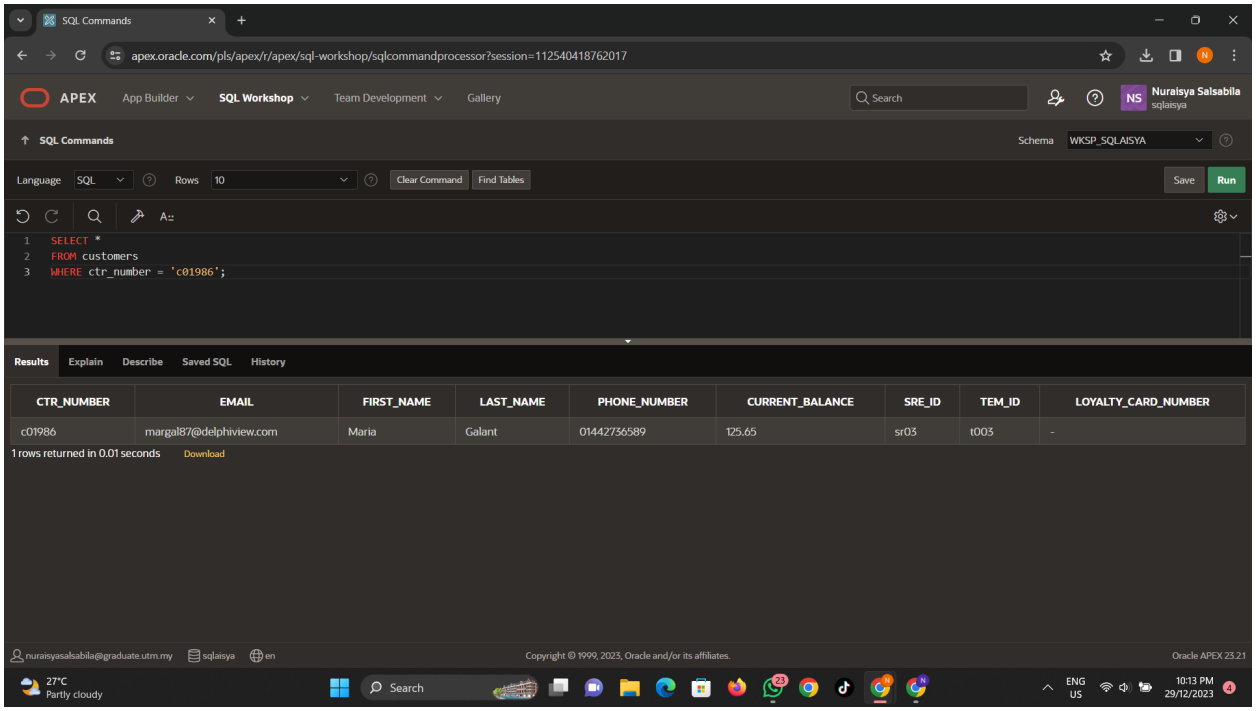
| NAME | NUMBER_OF_PLAYERS | DISCOUNT |
|---|---|---|
| Jets | 10 | 5 |
| Rockets | 25 | 10 |
| Celtics | 42 | 20 |
| Rovers | 8 | - |

Because the discount value of the last team is null.

## Section 6 Lesson 7 Exercise 1: Restricting Data Using WHERE

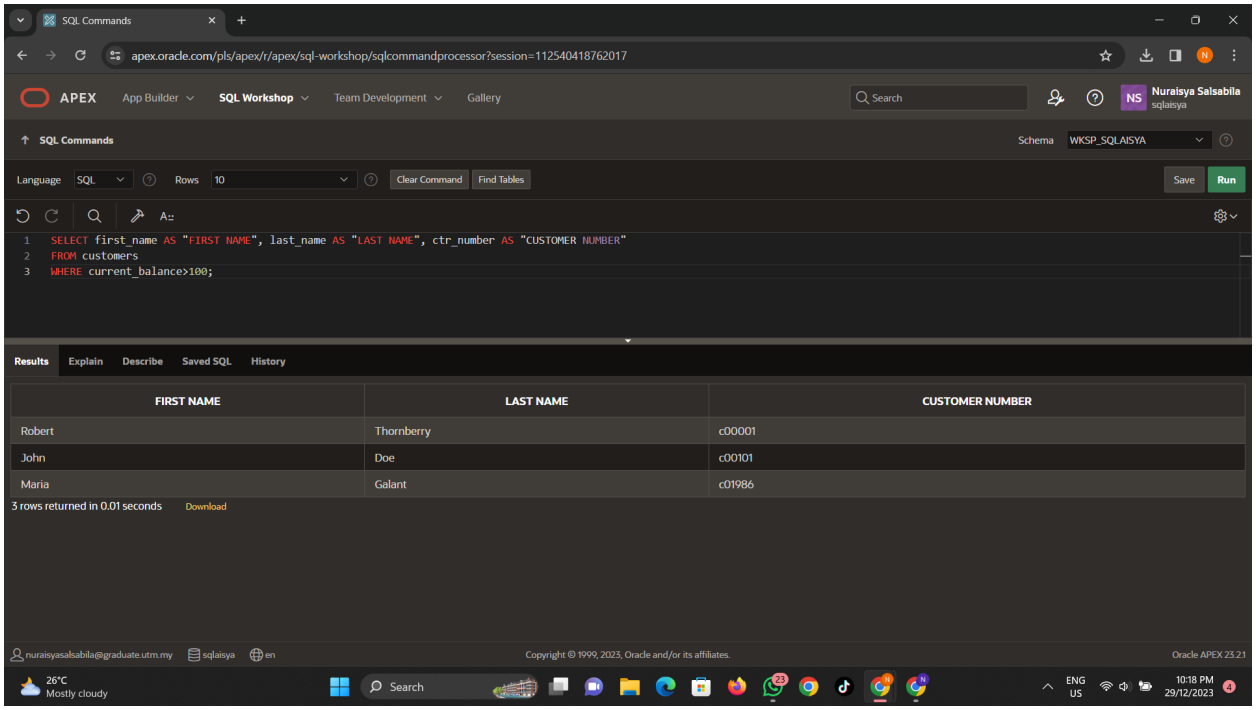
### Part 1: Using the WHERE Clause.

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



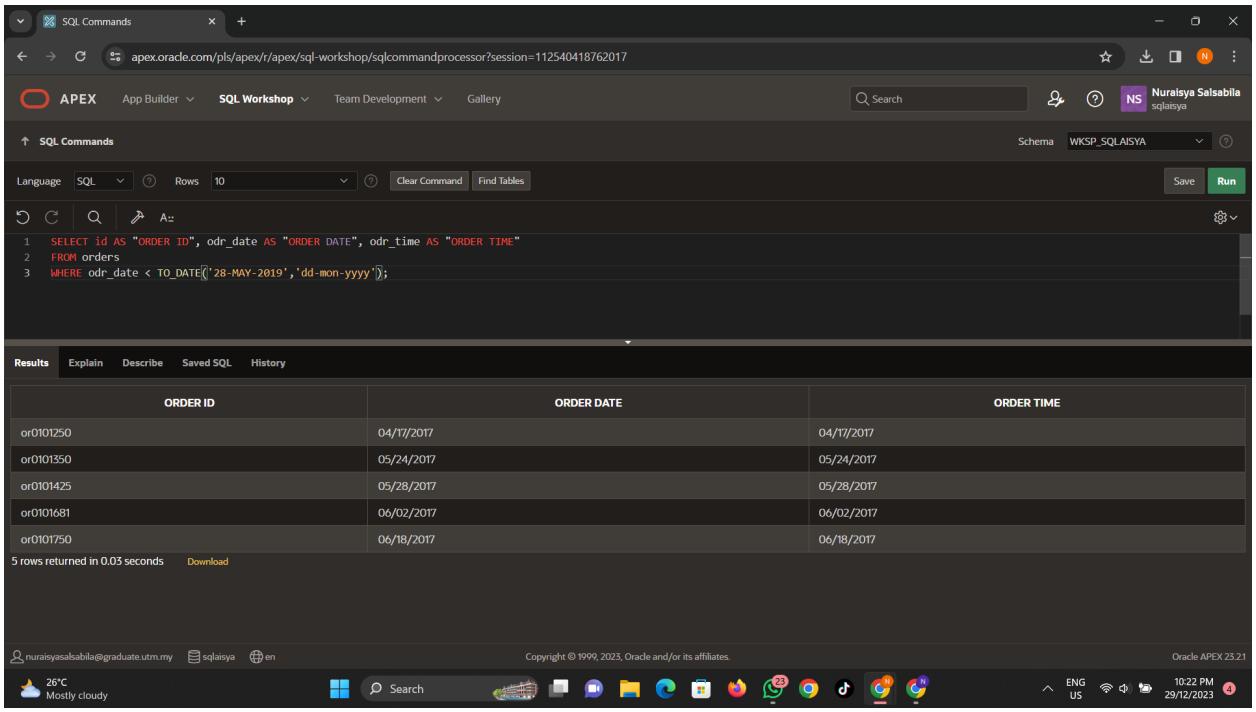

2. Display the first name, last name and customer number for all customers who have a current balance of greater

than 100. Use an appropriate alias for your column headings.



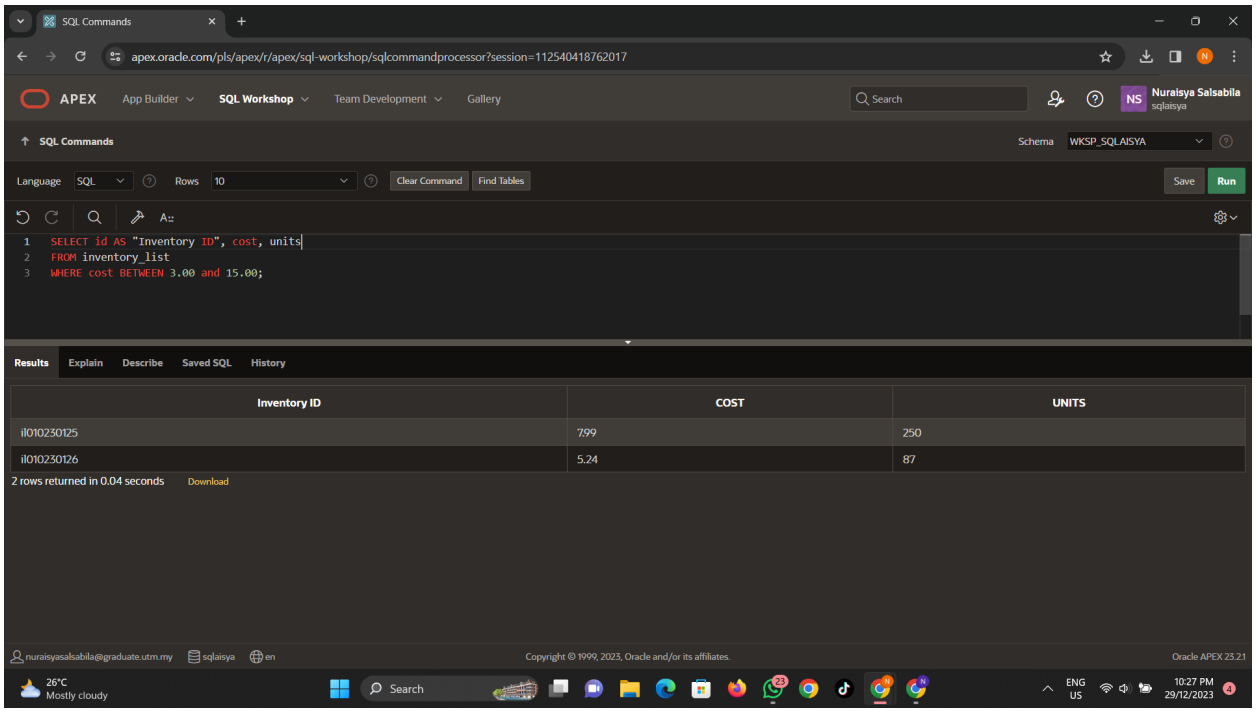

3. Display the order id, date and time of all orders that were placed before the 28th of May 2019. Use an

appropriate alias for your column headings.



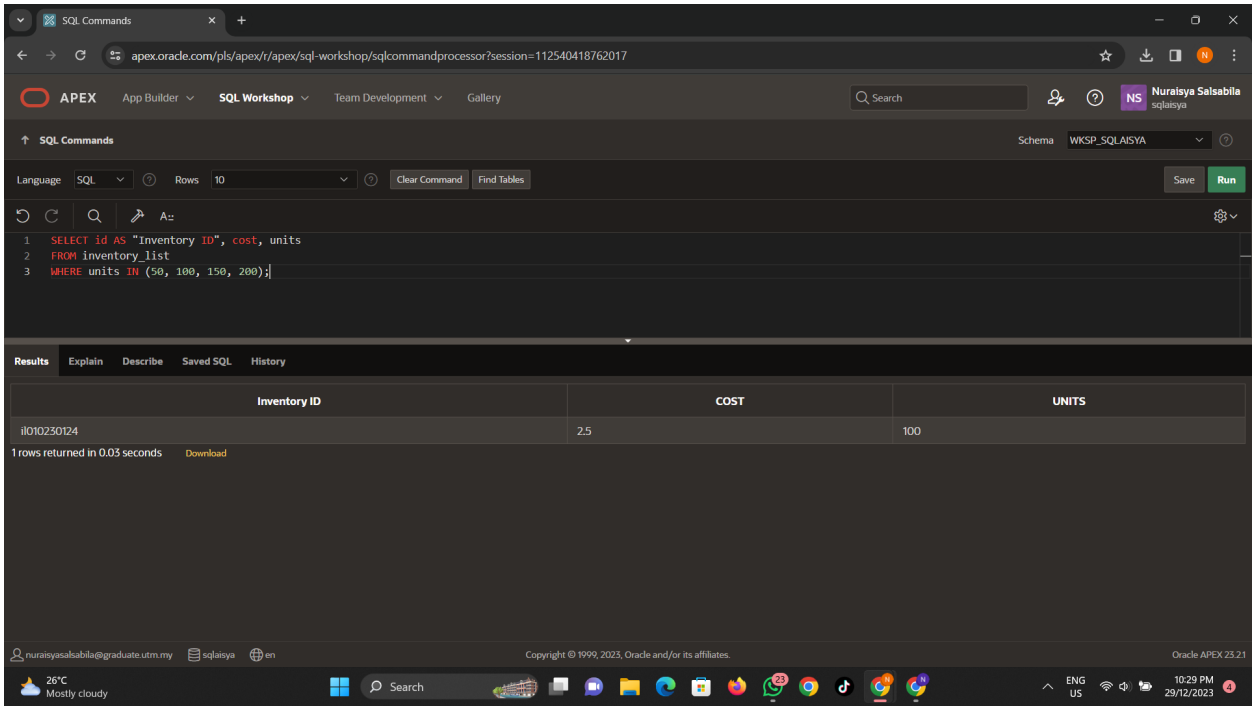

## Part 2: Range Conditions: BETWEEN Operator

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.




**Part 3: Membership Conditions: IN Operator**

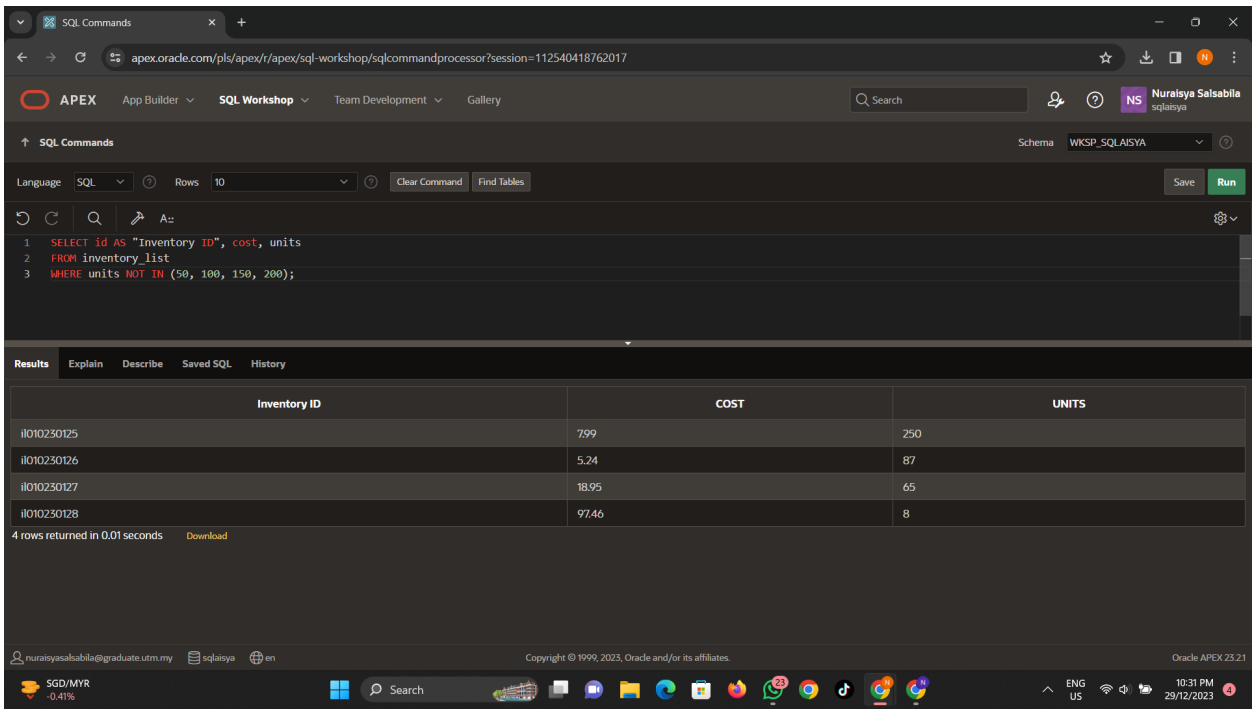
1. Display the inventory id, cost and number of units using appropriate aliases for all items that have 50, 100, 150
or 200 units in stock.




## Part 4: Membership Conditions: NOT IN Operator

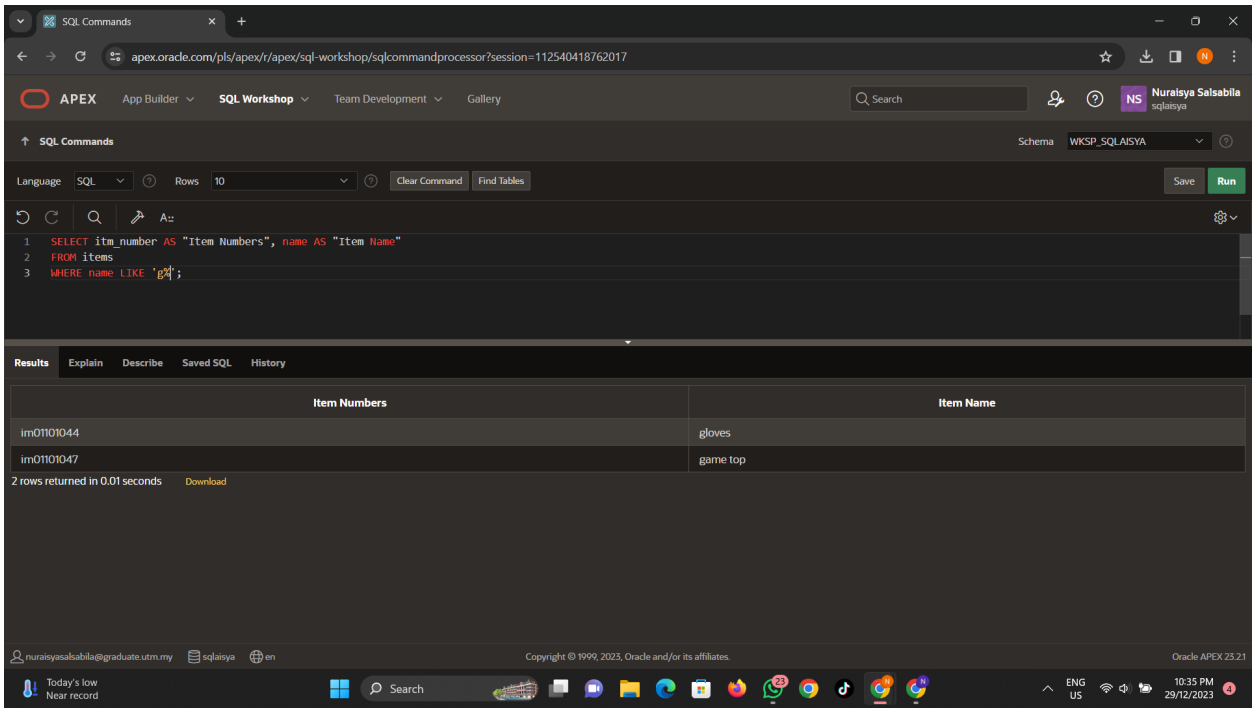
1. Display the inventory id, cost and number of units using appropriate aliases for all items that do not have 50,

100, 150 or 200 units in stock.



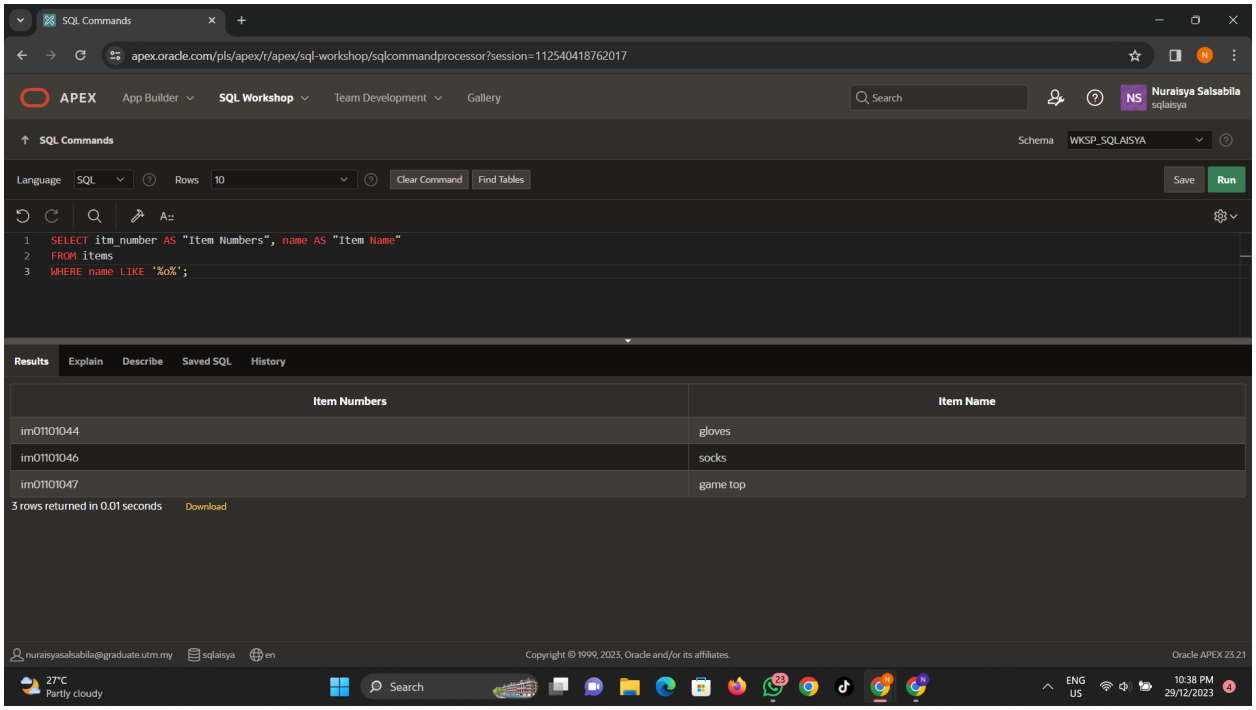
**Part 5: Pattern Matching: LIKE Operator**

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.




**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.



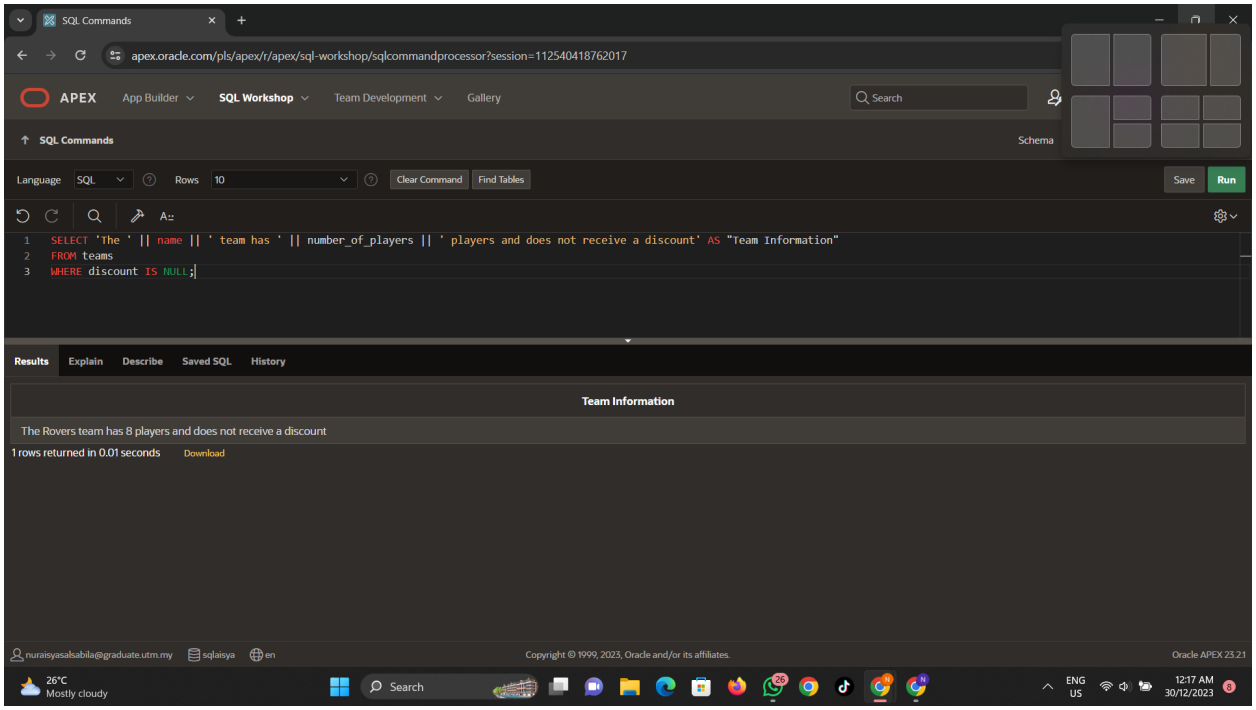

## Section 6 Lesson 7 Exercise 2: Restricting Data Using WHERE

### Part 1: Using the NULL Conditions

1. Write a query that will display information for teams that don't receive a discount in the following format:

The Rovers team has 25 players and does not receive a discount.

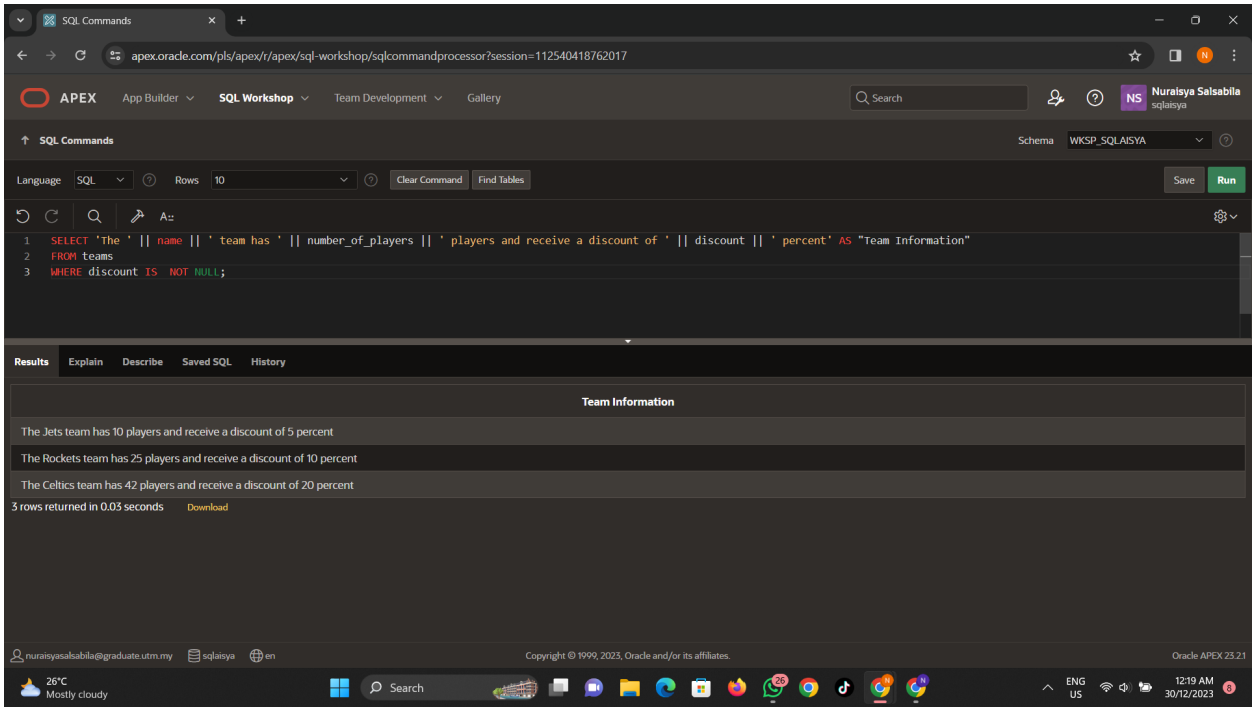
Use Team Information as the column alias.




2. Write a query that will display information for only teams that receive a discount in the following format:

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

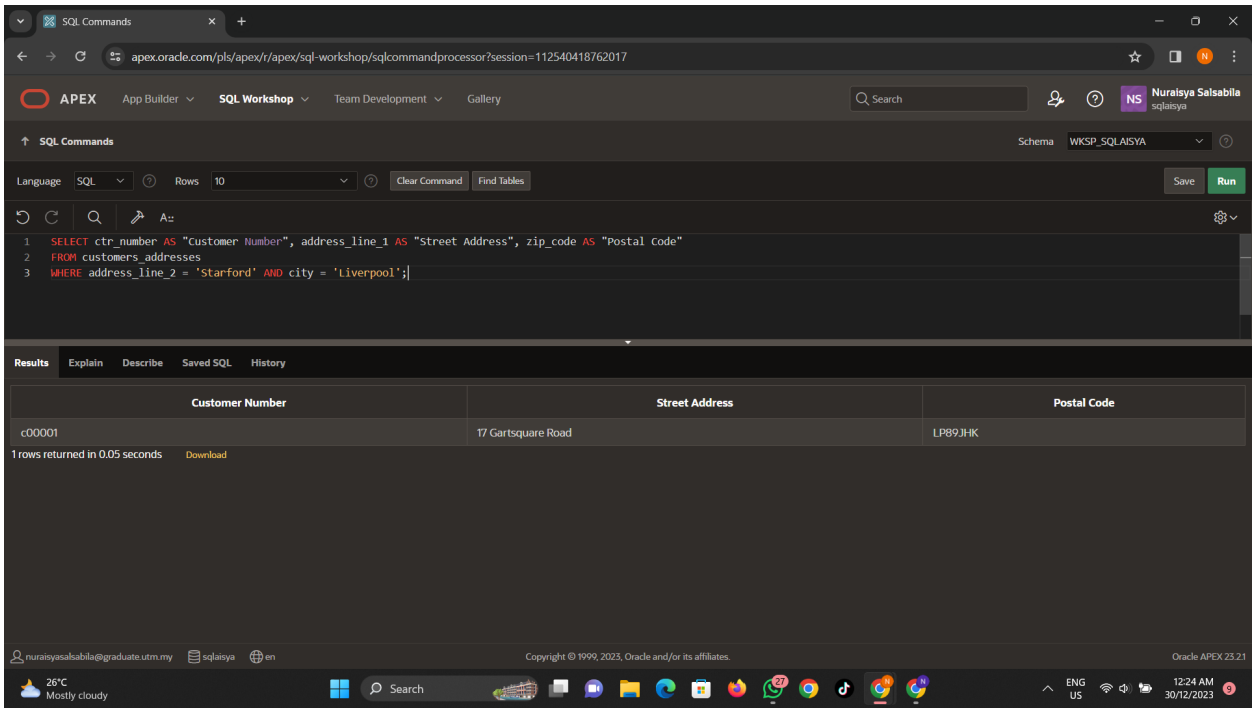
Use Team Information as the column alias.



**Part 2: Logical Operators: AND**

1. Write a query that will display the customer number, address line 1 and postal code for customers that live in the

starford area of Liverpool. Use Customer Number, Street Address and Postal Code as the column aliases.

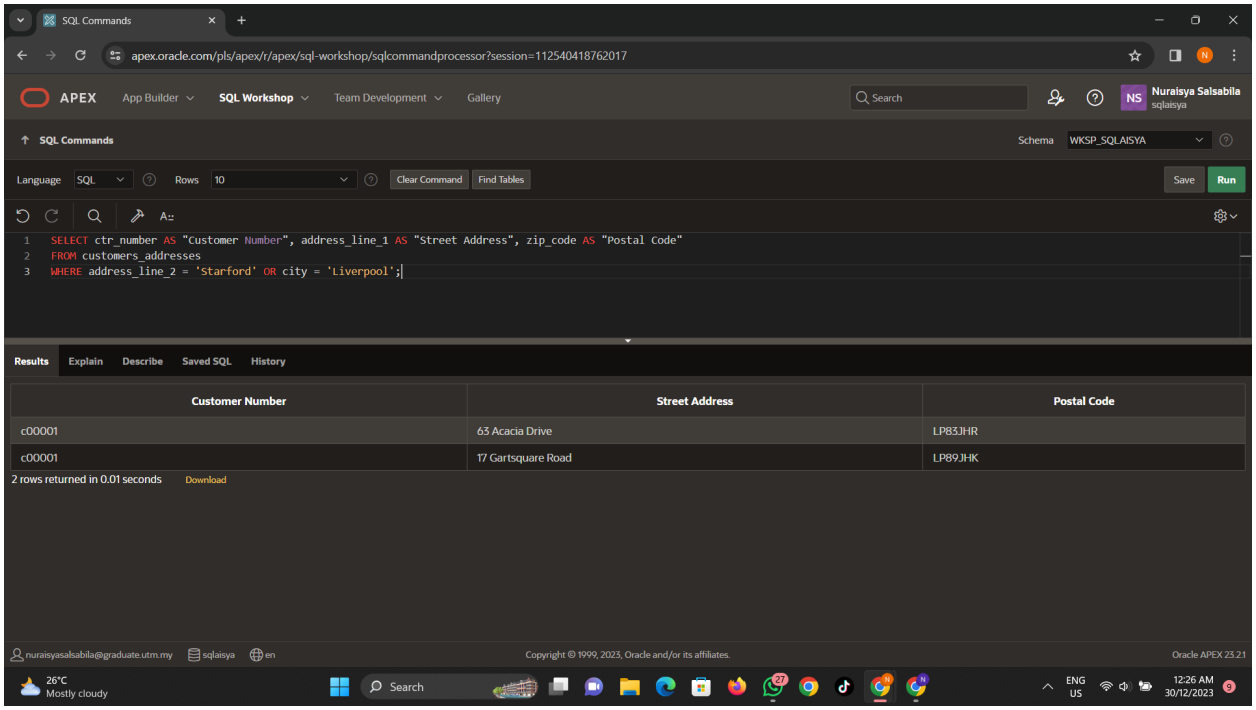



**Part 3: Logical Operators: OR**

1. Write a query that will display the customer number, address line 1 and postal code for customers that live in

either starford or Liverpool in general. Use Customer Number, Street Address and Postal Code as the column

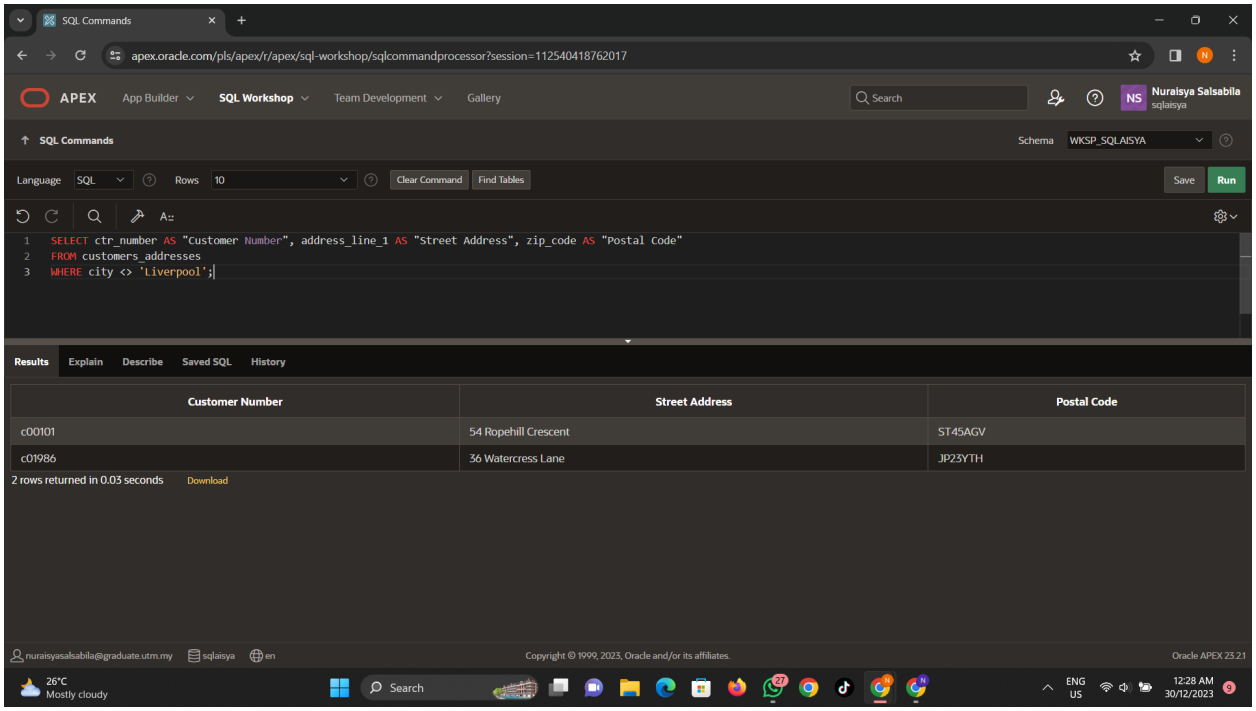
Aliases.




## Part 4: Logical Operators: NOT Equal To

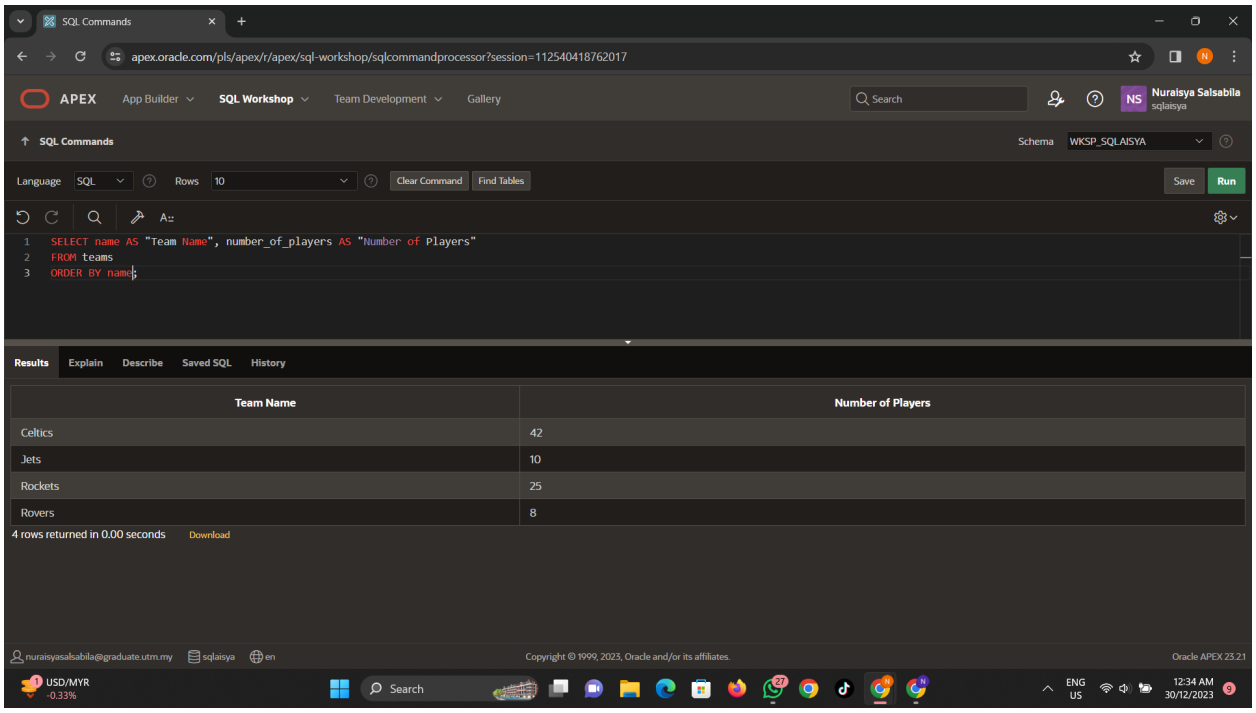
1. Write a query that will display the customer number, address line 1 and postal code for customers that do not

live in Liverpool. Use Customer Number, Street Address and Postal Code as the column aliases.

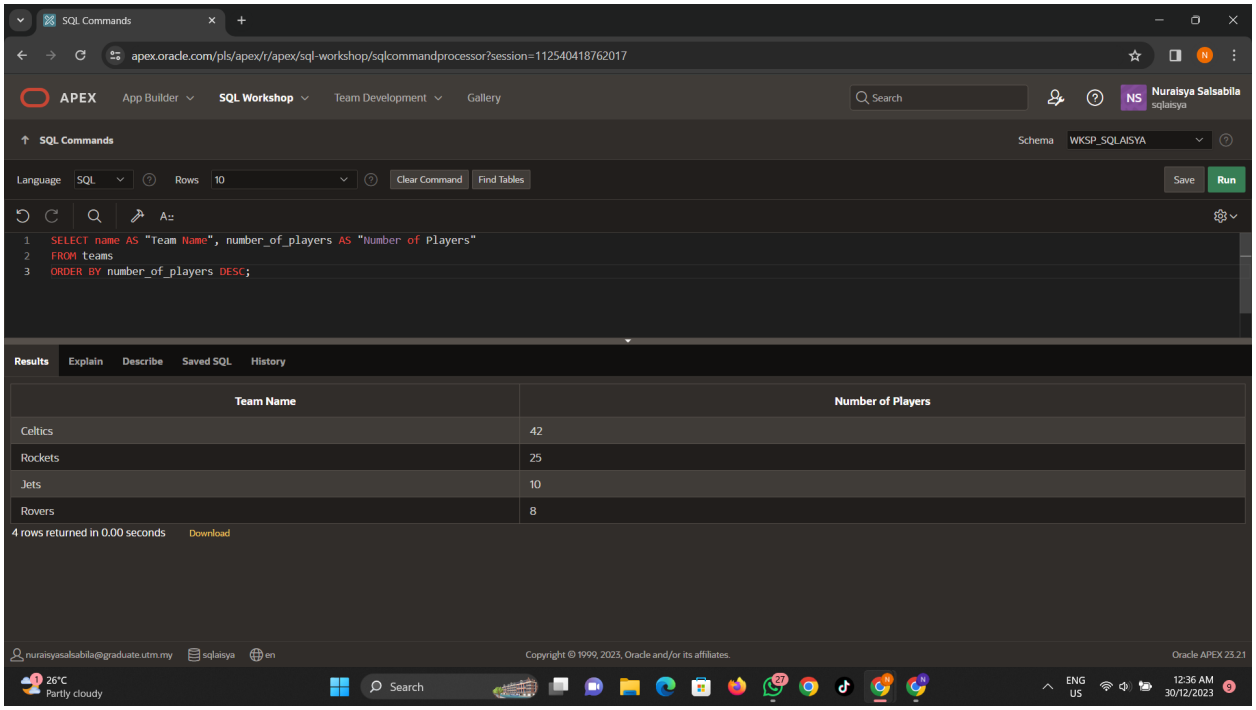


## Section 6 Lesson 8 Exercise 1: Sorting Data Using ORDER BY

1. Display the team name and number of players alphabetically in order of team name. Use an appropriate alias for
your column headings.



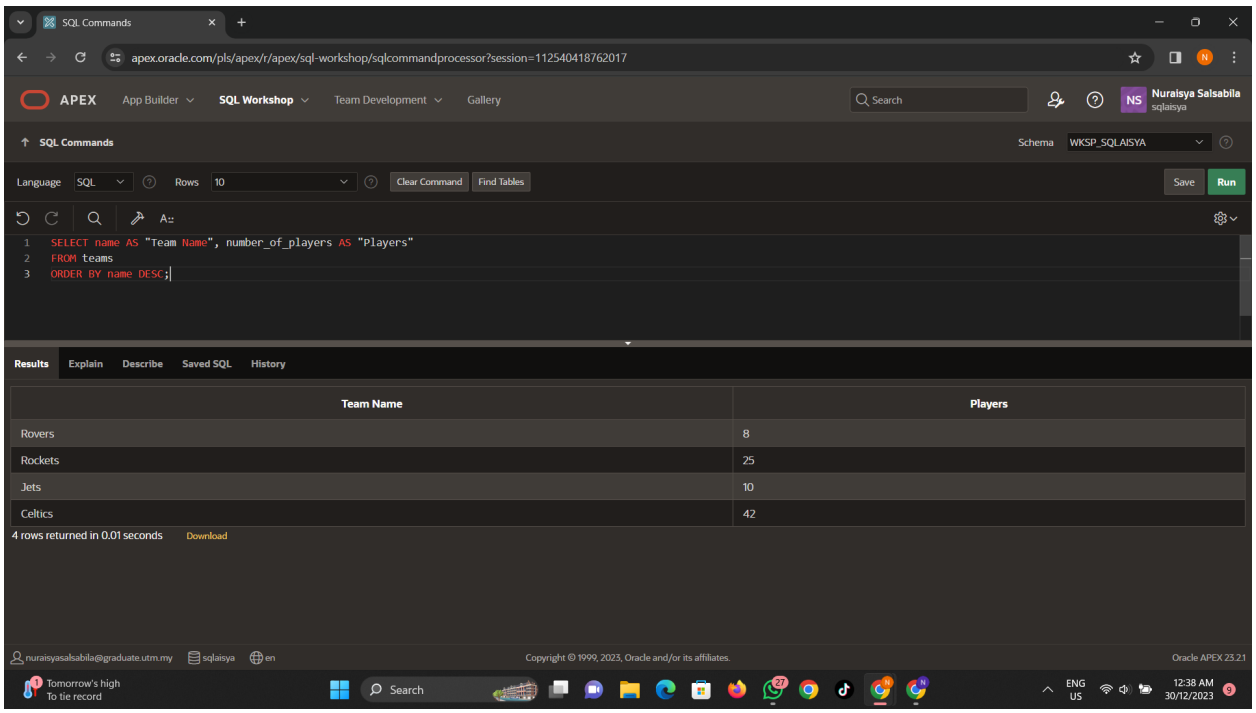

2. Display the team name and number of players in descending order of number of players. Use an appropriate
alias for your column headings.




3. Display the team name and number of players alphabetically in order of team name. Use Team Name for the

name alias and Players for the number of players. Sort the output in descending order of name using the alias in

the ORDER BY clause.



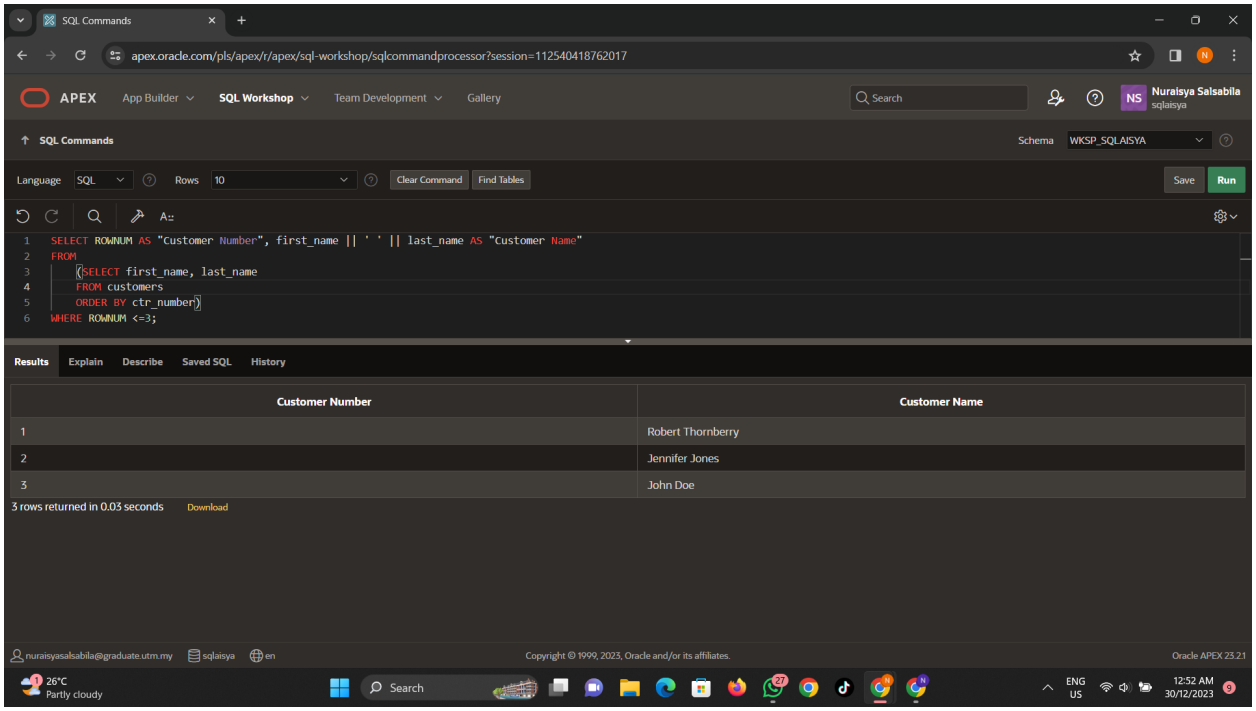
## Section 6 Lesson 8 Exercise 2: Sorting Data Using ORDER BY

### Part 1 : TOP-N-ANALYSIS (S6L8 Objective 3)

1. The customers are numbered sequentially with each new customer being assigned a higher customer number.

Use TOP-N-ANALYSIS to only show the First and last name of the first three customers. Show the customers first

and last name in the same column using Customer Name as the column alias.

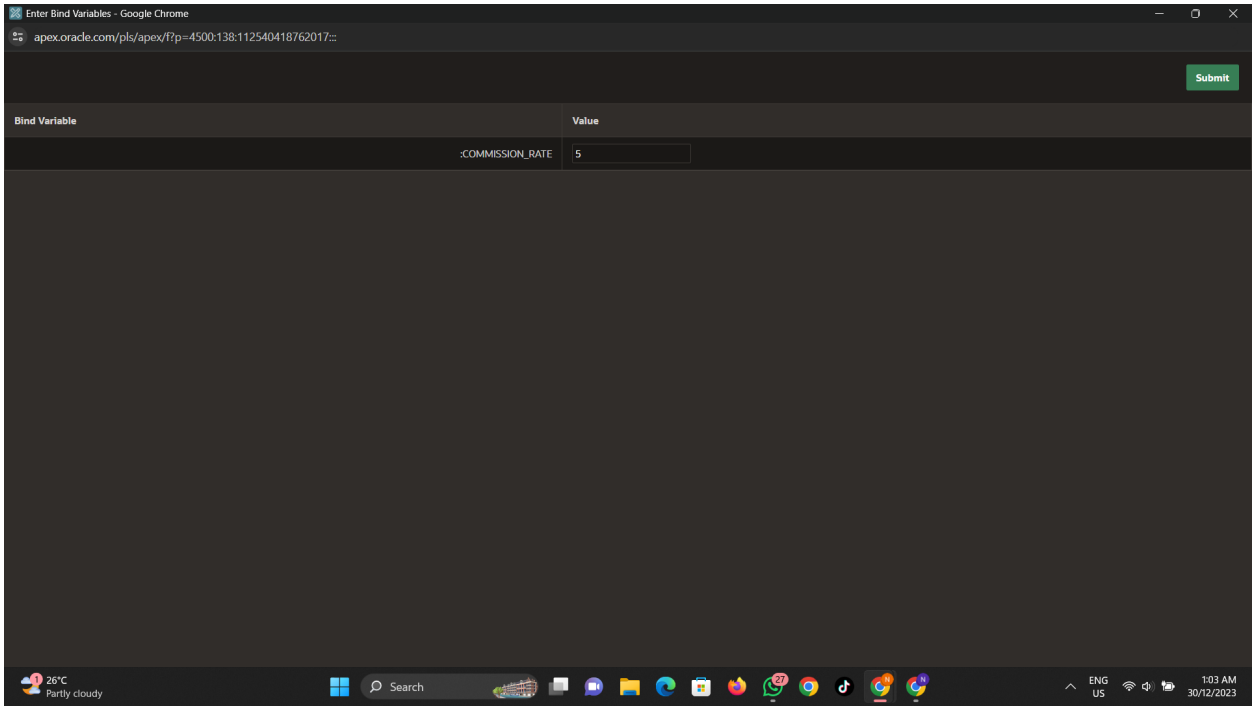


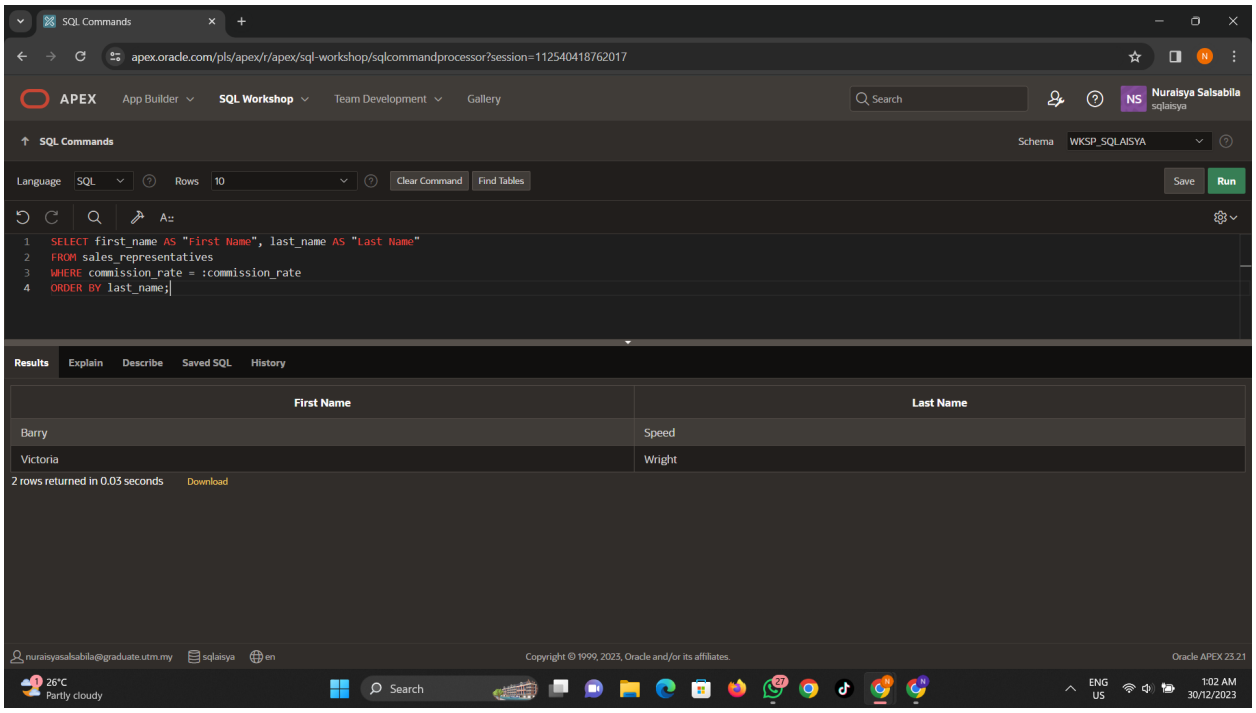

### Part 2 : Using a Substitution Variable (S6L8 Objective 4)

1. Use a substitution variable that will allow you to enter the commission rate for the sales representatives. The

first and last names should be displayed to screen for any sales representatives that earn that commission rate

and the output should be ordered by their last name. Use an appropriate alias for your column headings.


Enter Bind Variables - Google Chrome
apex.oracle.com/pls/apex/f?p=4500:138:112540418762017:::
Submit
Bind Variable
Value
:COMMISSION_RATE
5
26°C
Partly cloudy
Search
ENG
US
1:03 AM
30/12/2023


SQL Commands
apex.oracle.com/pls/apex/r/apex/sql-workshop/sqlcommandprocessor?session=112540418762017
APEX
App Builder
SQL Workshop
Team Development
Gallery
Search
Nuraisya Salsabila
sqlaisya
SQL Commands
Schema
WKSP_SQLAISYA
Language
SQL
Rows
10
Clear Command
Find Tables
Save
Run
SELECT first_name AS "First Name", last_name AS "Last Name"
FROM sales_representatives
WHERE commission_rate = :commission_rate
ORDER BY last_name;
Results
Explain
Describe
Saved SQL
History
First Name
Last Name
Barry
Speed
Victoria
Wright
2 rows returned in 0.03 seconds
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30/12/2023