UTM
UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING
UTM Johor Bahru

Database-SECD 2523

Lab 3:DML 2 -Part 1

NAME :YASEEN MOHAMED
MATRIC :A22EC4016
LECTURER: DR NOOR HIDAYAH ZAKARIA

Section 6 Lesson 6 Exercise 1: Retrieving Data Using SELECT

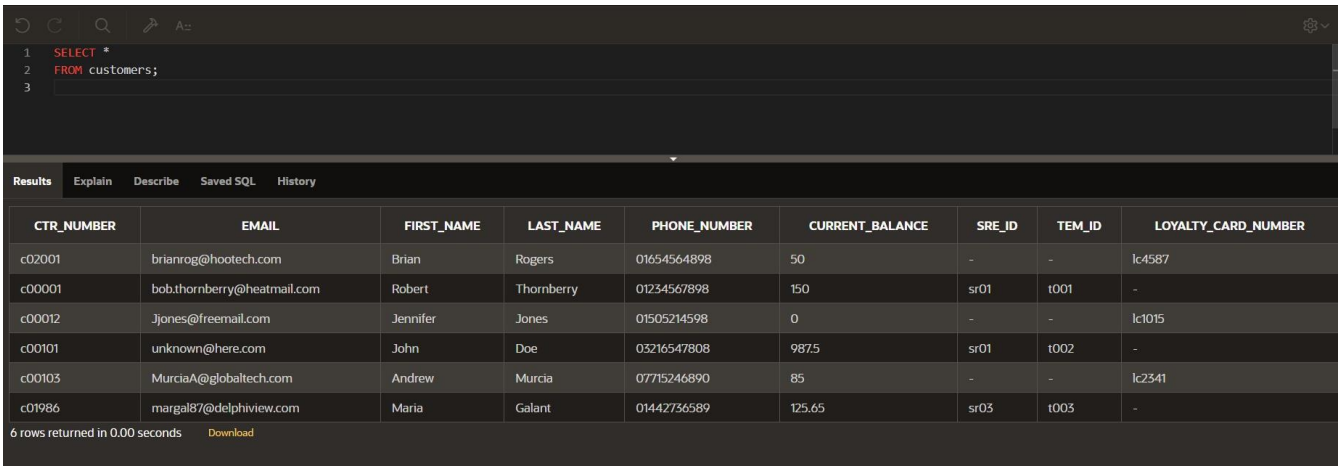
Write and Execute SELECT statements (S6L6 Objective 2)

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

Part 1: Retrieving all columns from a table.

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

1. customers.



```
SELECT *
FROM customers;
```

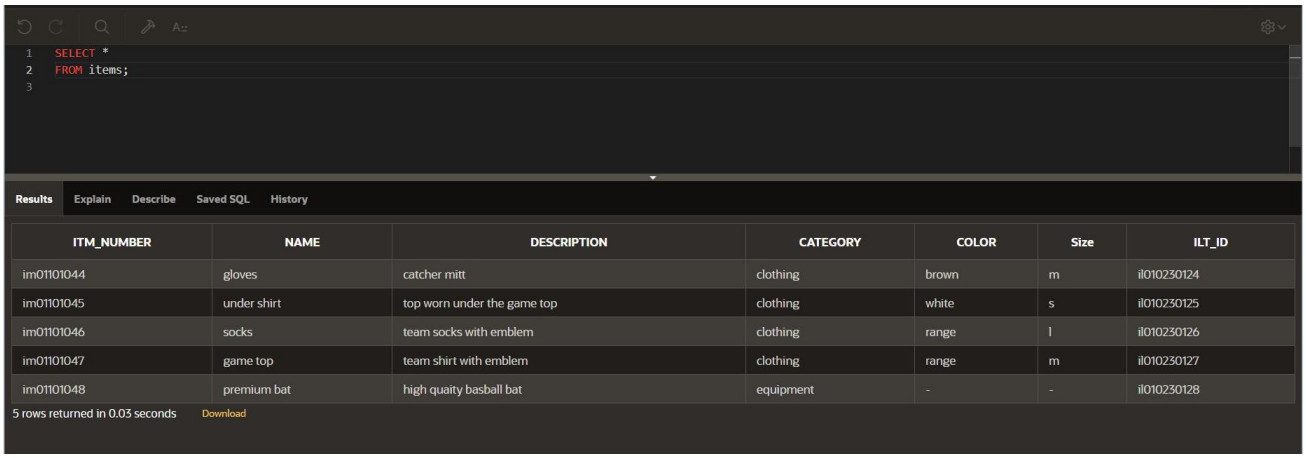
Results | Explain | Describe | Saved SQL | History

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c02001	brianrog@hootech.com	Brian	Rogers	01654564898	50	-	-	lc4587
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	lc1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	-	-	lc2341
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-

6 rows returned in 0.00 seconds Download

2. teams.

3. items



```
SELECT *
FROM items;
```

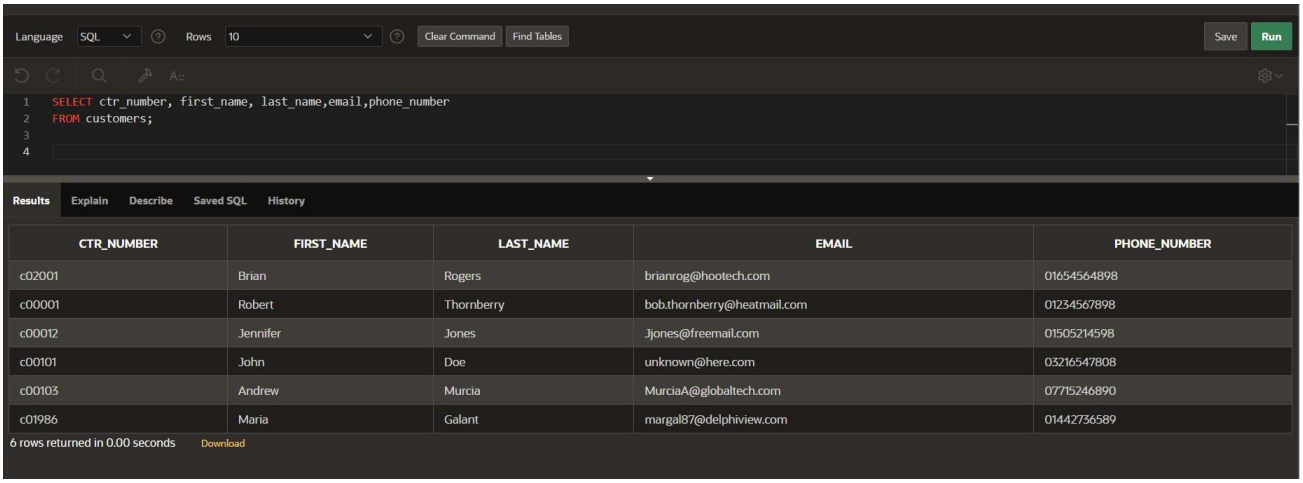
Results | Explain | Describe | Saved SQL | History

ITM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	Size	ILT_ID
im01101044	gloves	catcher mitt	clothing	brown	m	il010230124
im01101045	under shirt	top worn under the game top	clothing	white	s	il010230125
im01101046	socks	team socks with emblem	clothing	range	l	il010230126
im01101047	game top	team shirt with emblem	clothing	range	m	il010230127
im01101048	premium bat	high quaity basball bat	equipment	-	-	il010230128

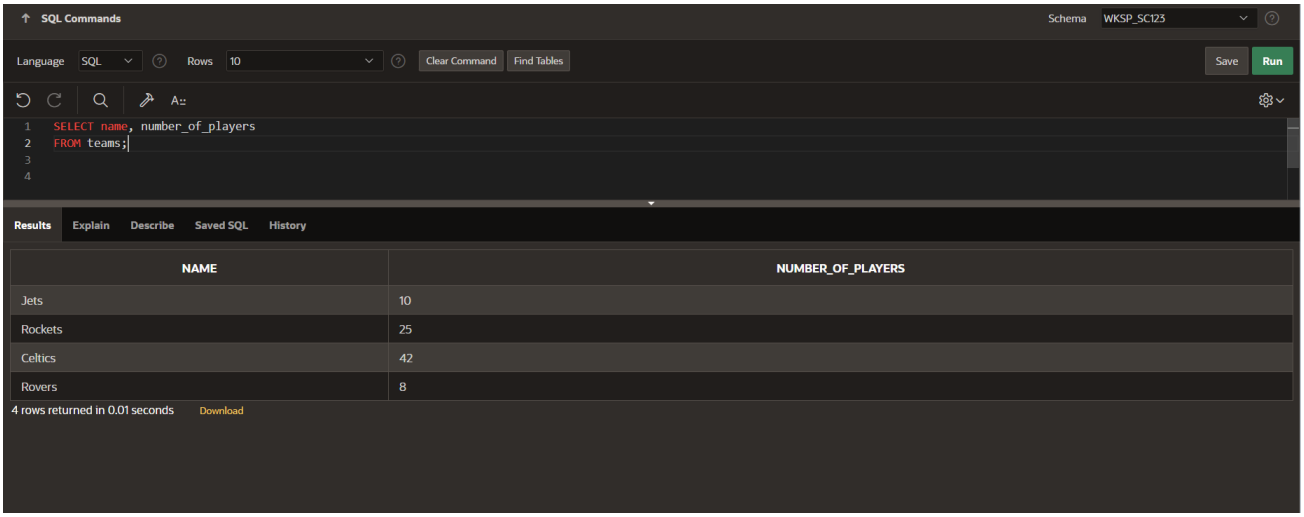
5 rows returned in 0.03 seconds Download

Part 2: Selecting Specific Columns

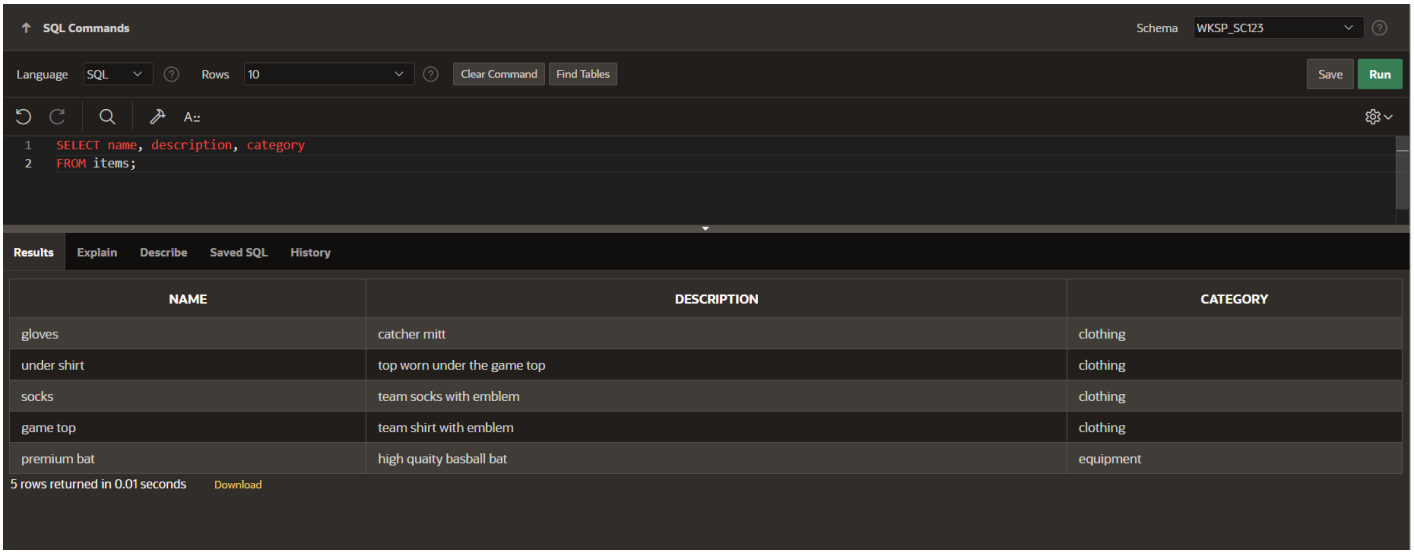
1. Display the customer number, first name, last name, email and phone number of the customers.



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



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



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Lab 3:DML 2 -Part 2

NAME :YASEEN MOHAMED
MATRIC :A22EC4016
LECTURER: DR NOOR HIDAYAH ZAKARIA

Section 6 Lesson 6 Exercise 2: Retrieving Data Using SELECT

Write and Execute SELECT statements (S6L6 Objective 2)

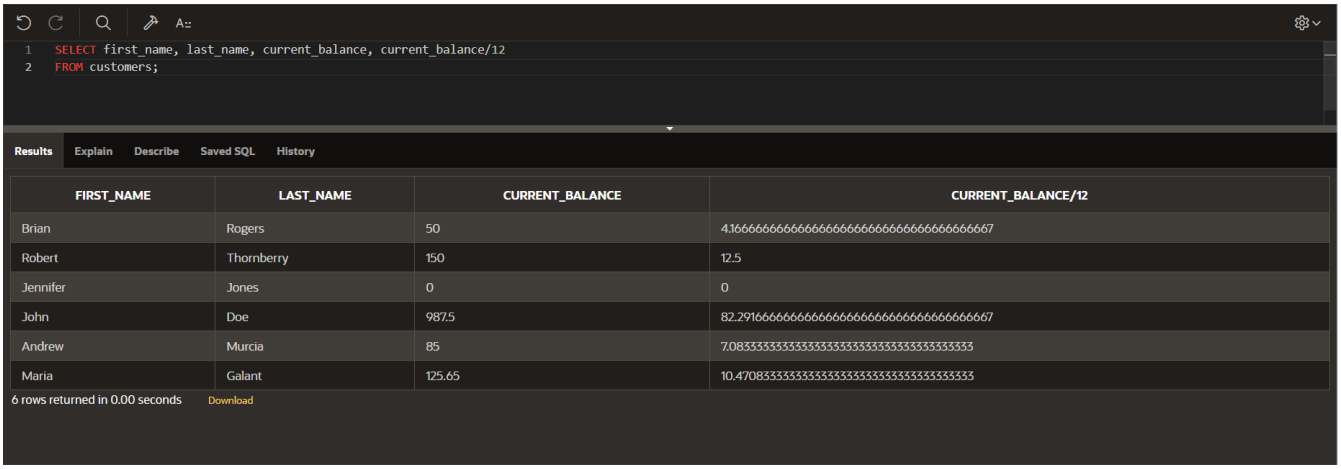
In this exercise you will retrieve data that is stored in the database system by using a SELECT statement.

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.

2. Obl is considering giving a gift card to all its customers of 5.00 that can be used to



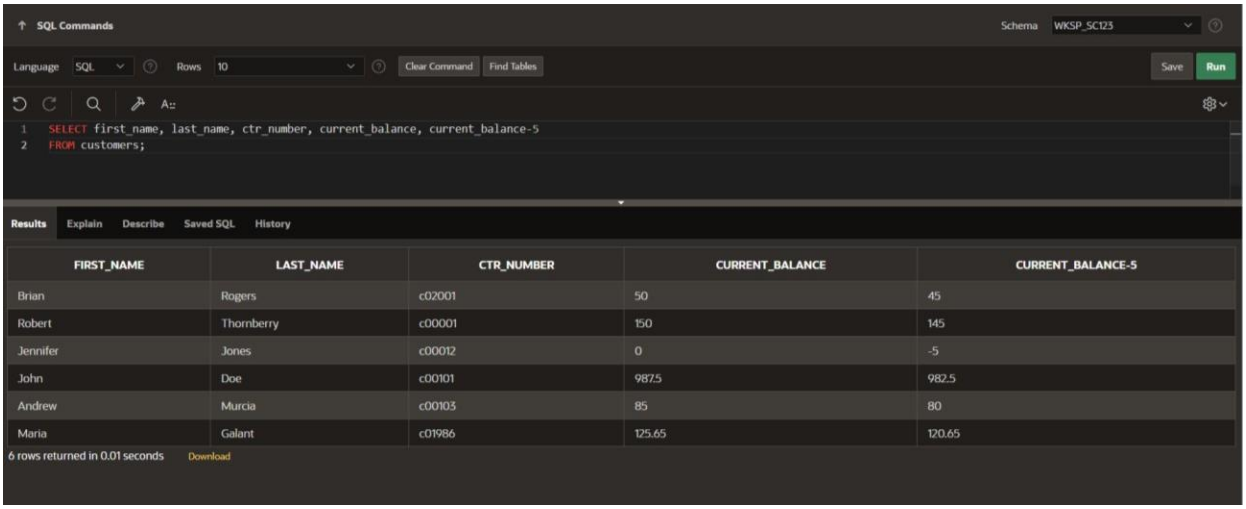
```
SELECT first_name, last_name, current_balance, current_balance/12
FROM customers;
```

Results | Explain | Describe | Saved SQL | History

FIRST_NAME	LAST_NAME	CURRENT_BALANCE	CURRENT_BALANCE/12
Brian	Rogers	50	4.16666666666666666666666666666666666667
Robert	Thornberry	150	12.5
Jennifer	Jones	0	0
John	Doe	987.5	82.291666666666666666666666666666666667
Andrew	Murcia	85	7.0833333333333333333333333333333333333
Maria	Galant	125.65	10.470833333333333333333333333333333333

6 rows returned in 0.00 seconds Download

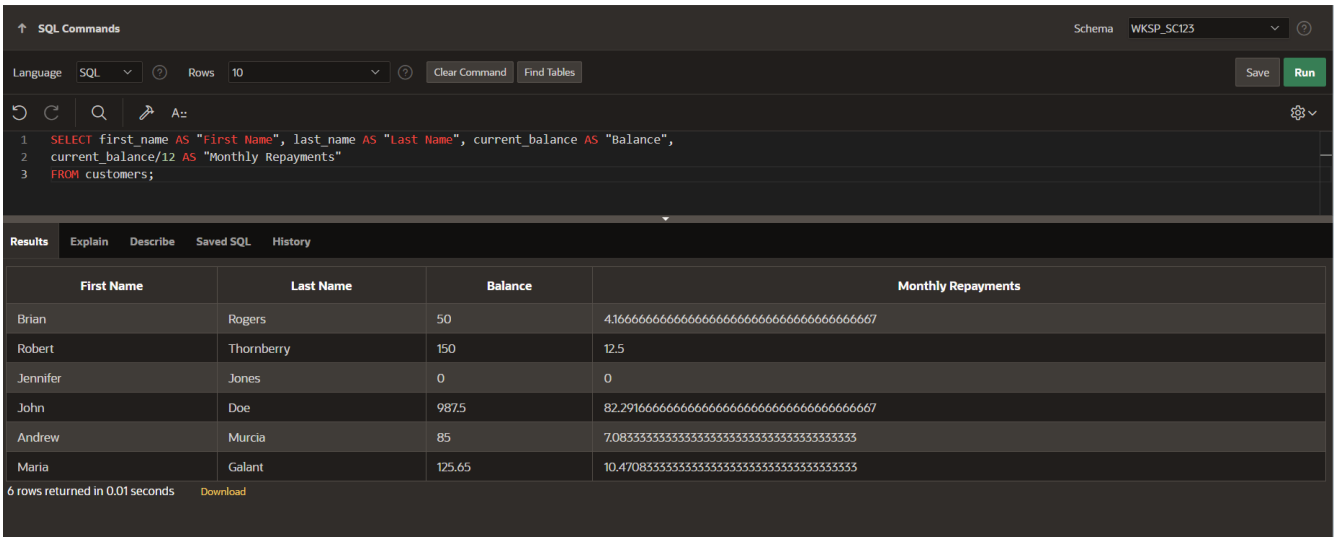
   reduce their current balance. Write a query that will show the customers first name, last name, customer number, current balance and the value of their balance minus the gift value.



3. What would be the problem with implementing this scheme?
   The current balance cannot be zero 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).

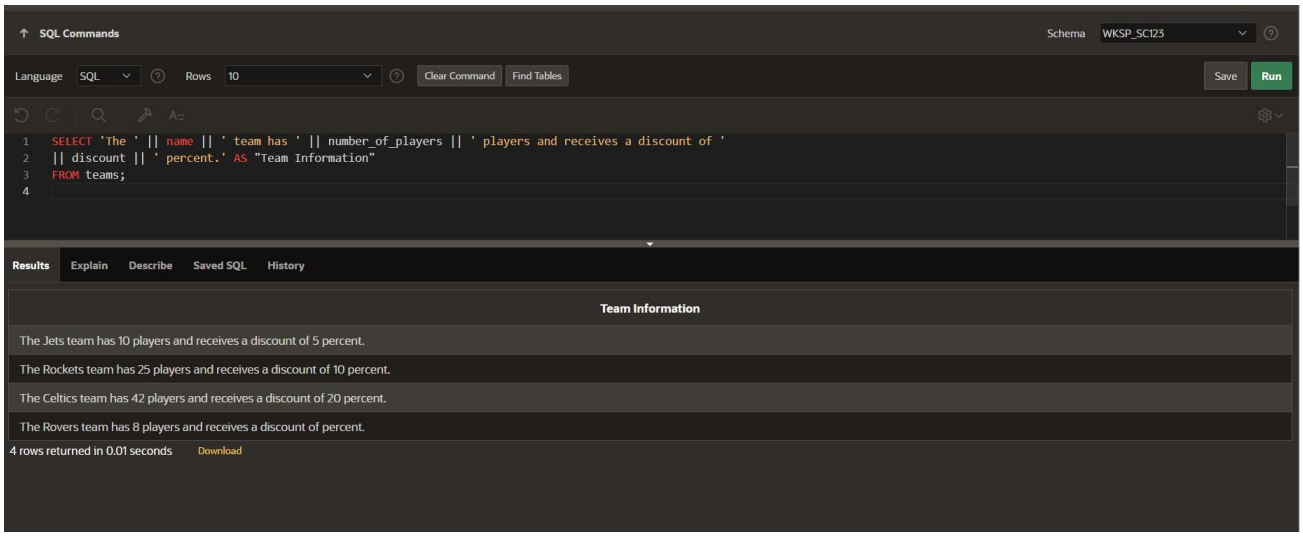


Part 3: Using Literal Character Strings

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?
   Because it contains zero value, so it does not get any discount

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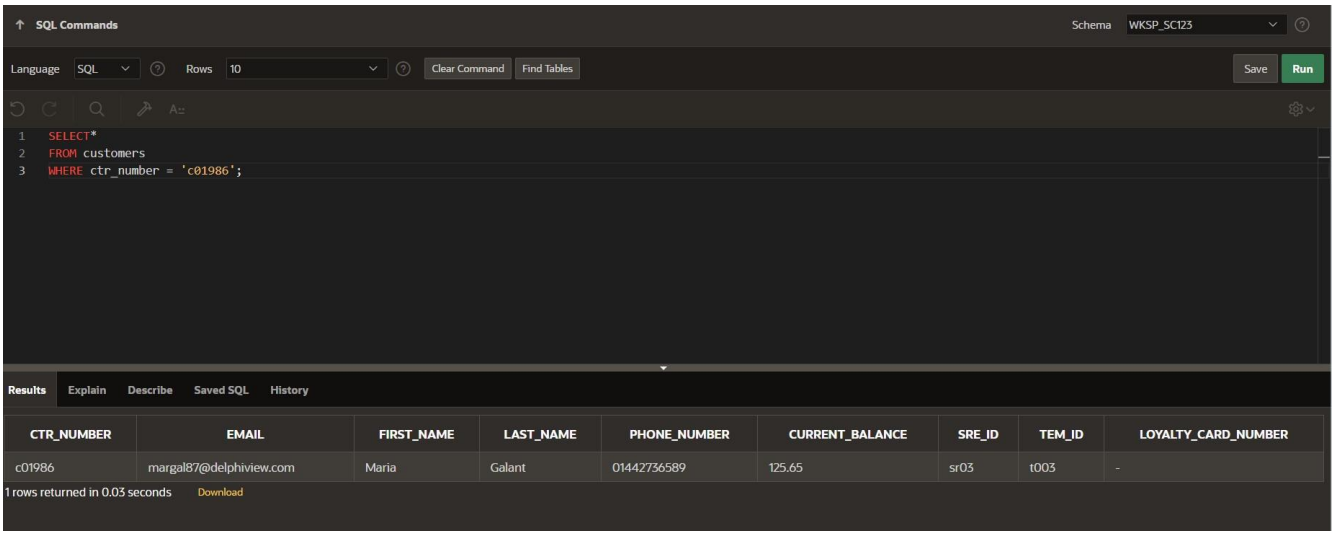
Lab 3:DML 2 -Part 1

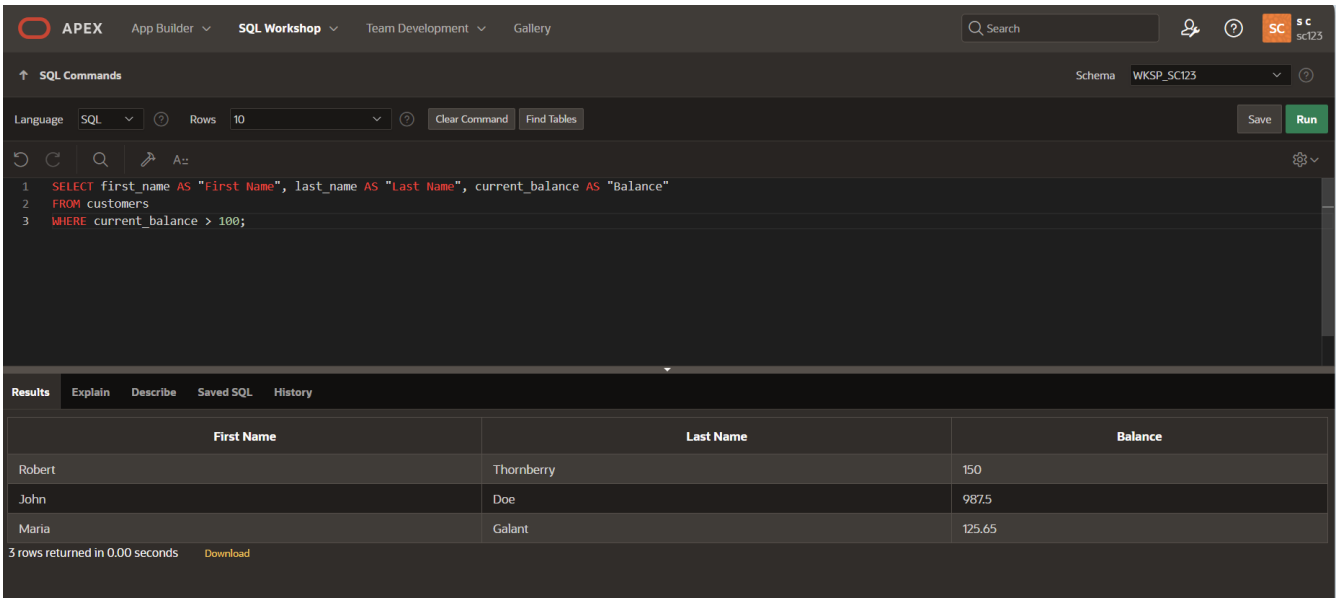
NAME :YASEEN MOHAMED
MATRIC :A22EC4016
LECTURER: DR NOOR HIDAYAH ZAKARIA

Part 1: Using the WHERE Clause.

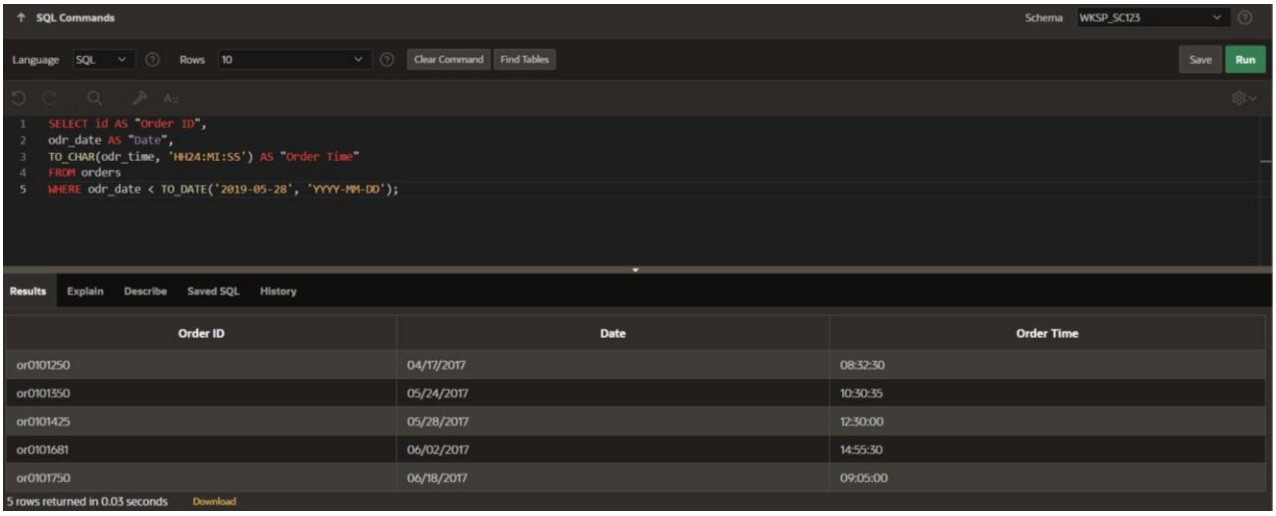
1. Using the unique customer number in the where clause display all columns for Maria Galant.



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

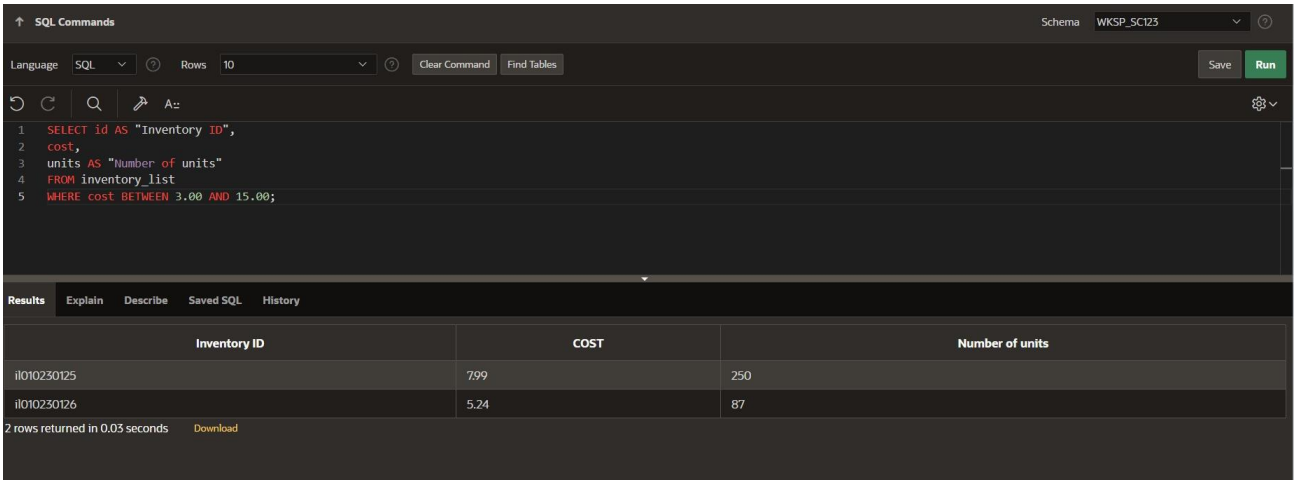


3. Display the order id, date and time of all orders that were placed before the 28th of May 2019. Use anappropriate alias for your column headings.



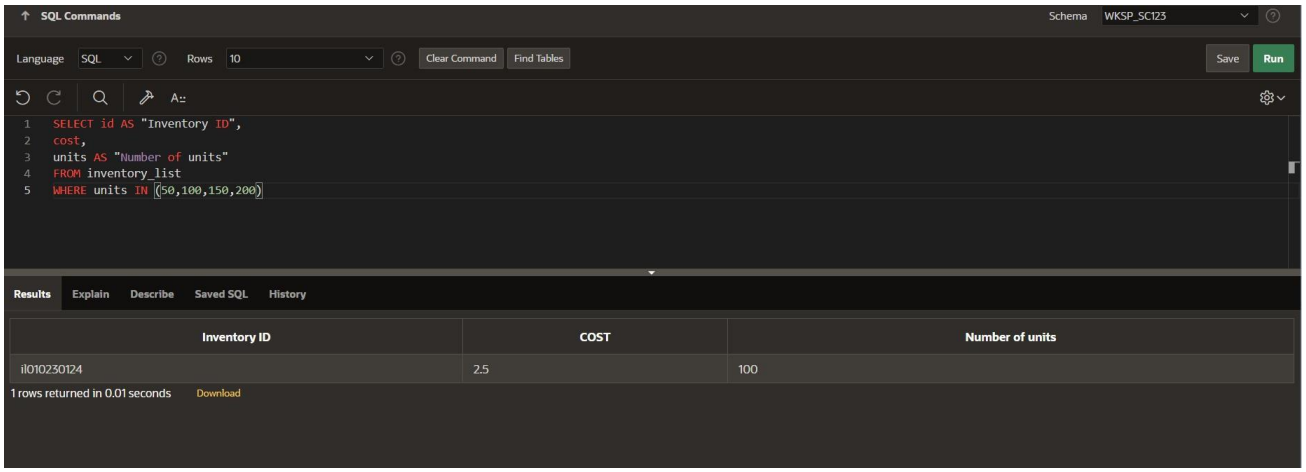
Part 2: Range Conditions: BETWEEN Operator

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



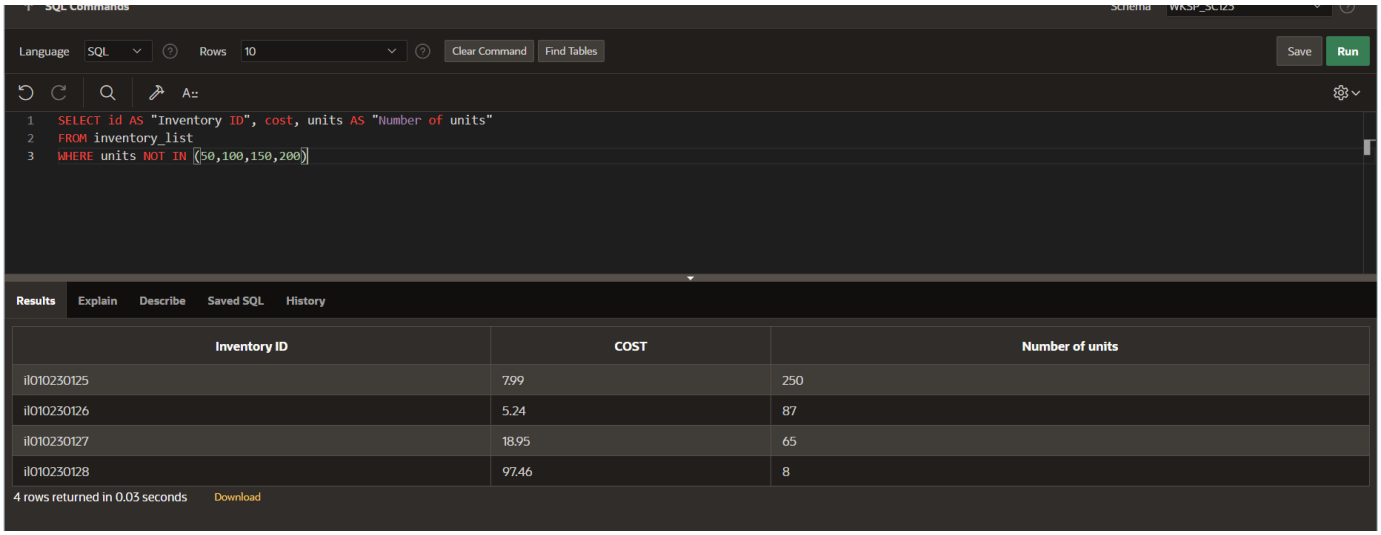
Part 3: Membership Conditions: IN Operator

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



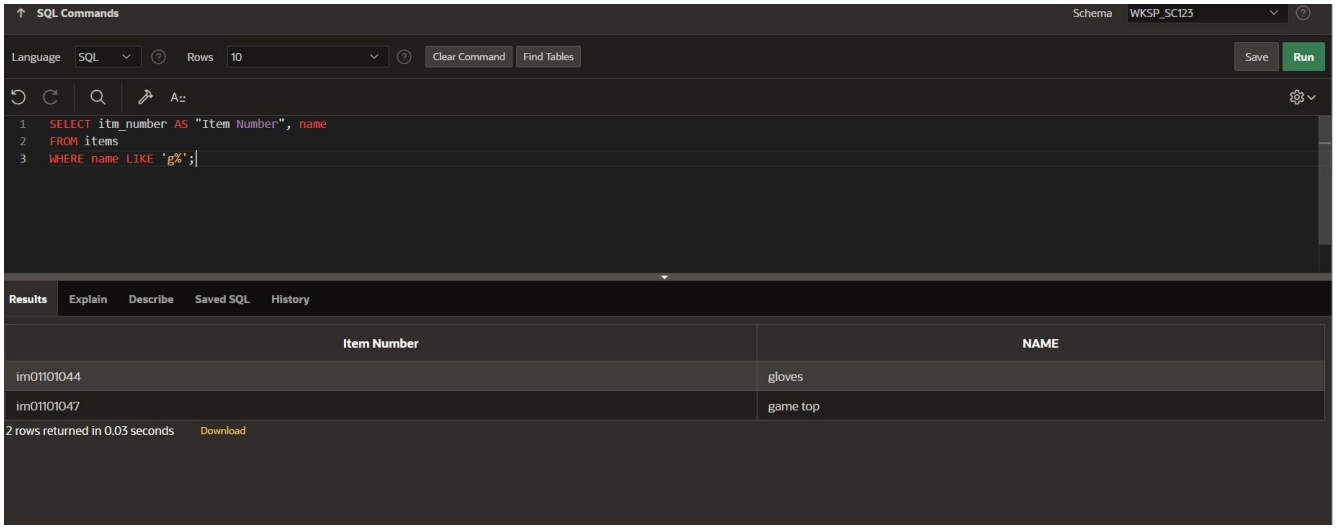
Part 4: Membership Conditions: NOT IN Operator

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.



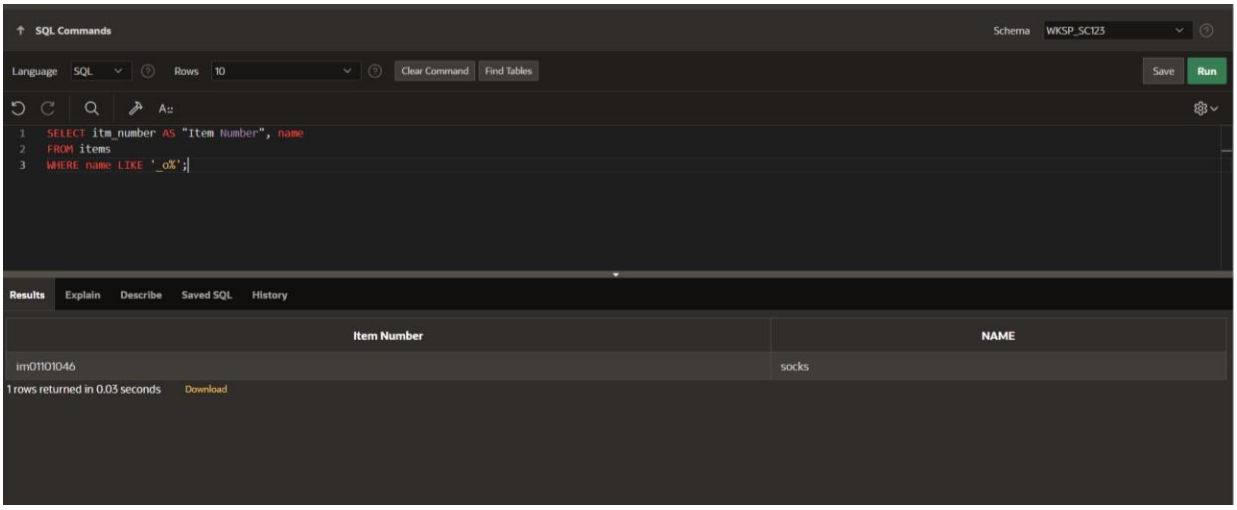
Part 5: Pattern Matching: LIKE Operator

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



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Lab 3:DML 2 -Part 4

NAME :YASEEN MOHAMED
MATRIC :A22EC4016
LECTURER: DR NOOR HIDAYAH ZAKARIA

Section 6 Lesson 7 Exercise 2: Restricting Data Using WHERE

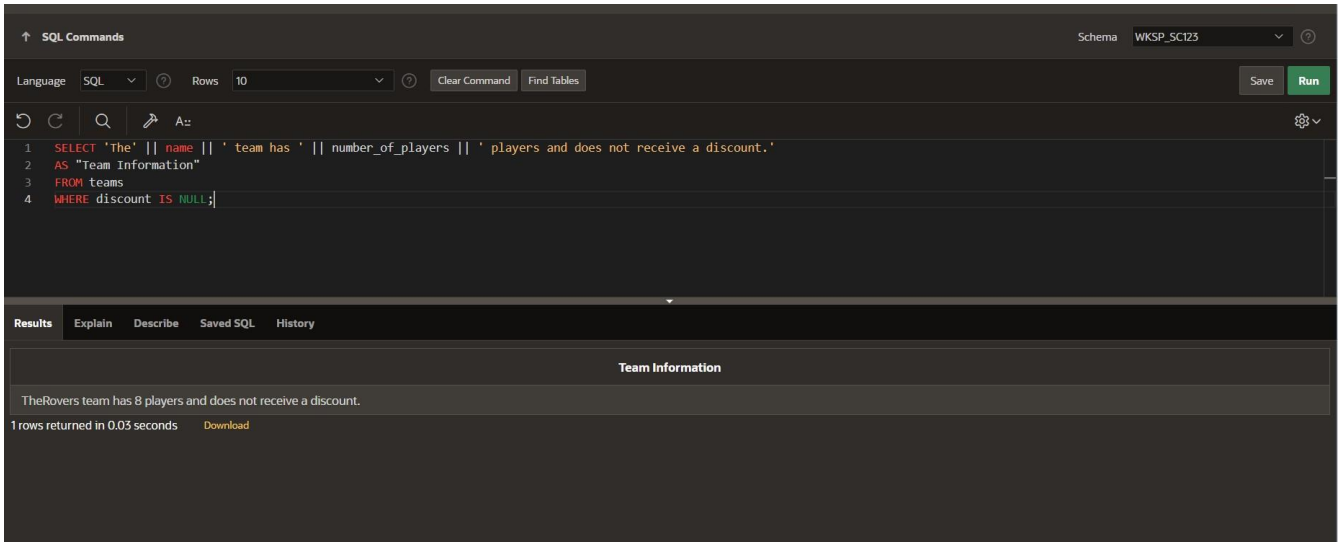
Limit rows using WHERE (S6L7 Objective 1)

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

Part 1: Using the NULL Conditions

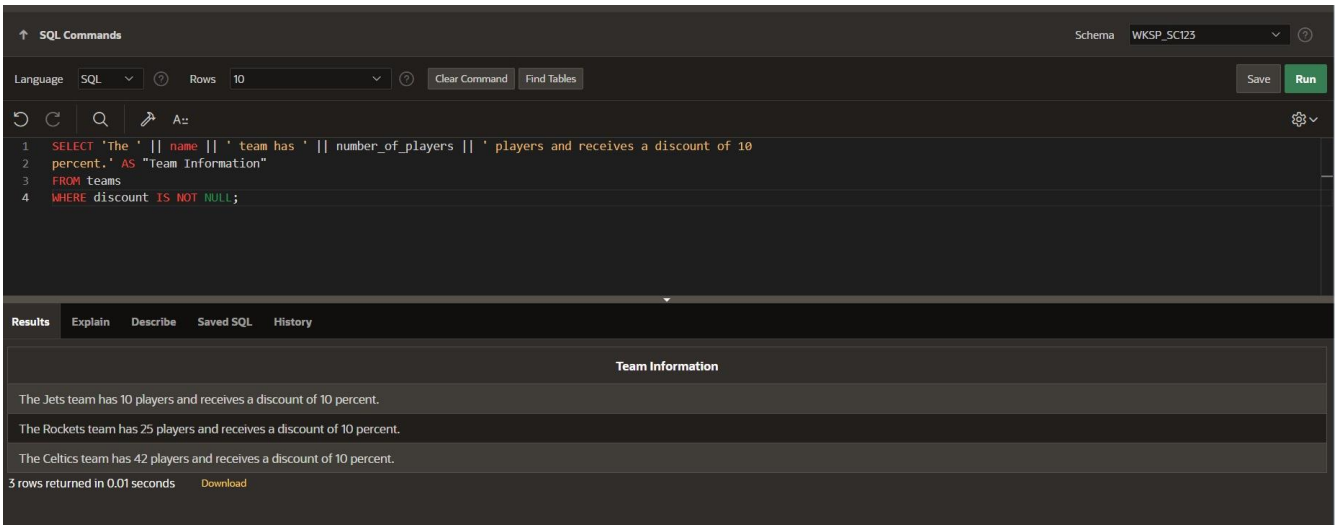
1. Write a query that will display information for teams that don't receive a discount in the following format:The Rovers team has 25 players and does not receive a discount.

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



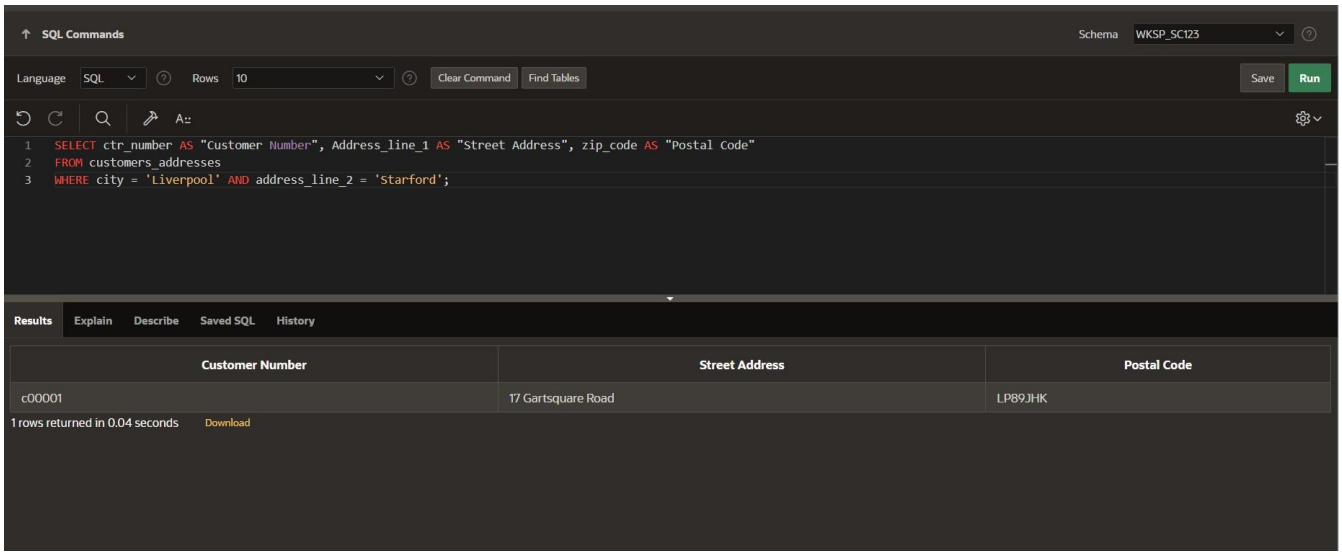
2. Write a query that will display information for only teams that receive a discount in the following format:The Rockets team has 25 players and receives a discount of 10 percent.

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



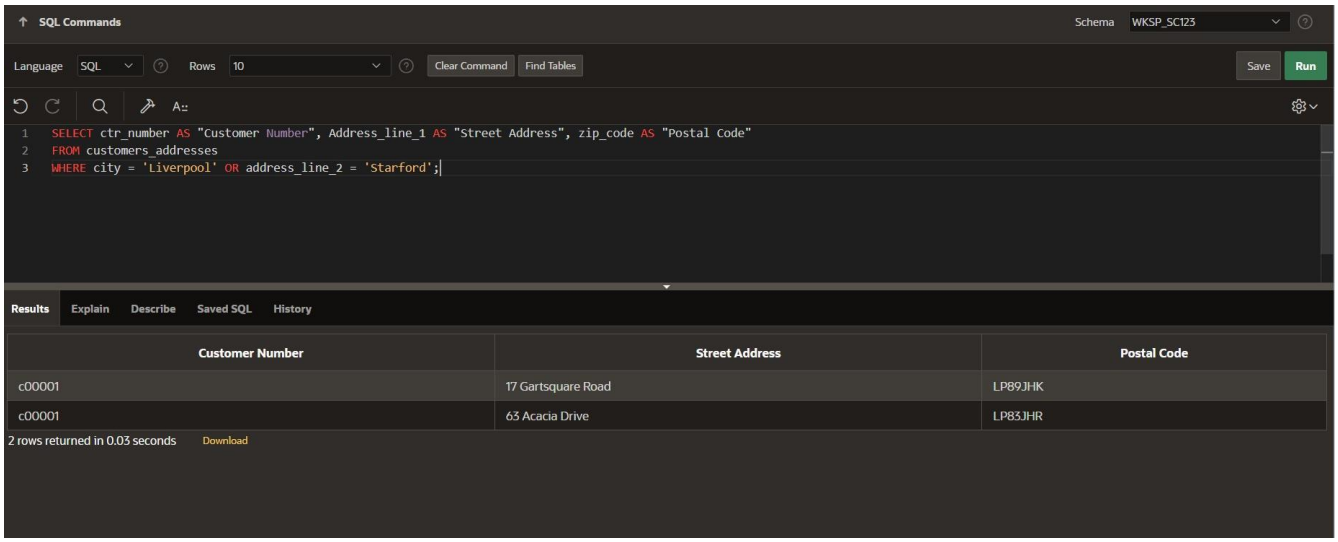
Part 2: Logical Operators: AND

1. Write a query that will display the customer number, address line 1 and postal code for customers that live in thestarford area of Liverpool. Use Customer Number, Street Address and Postal Code as the column aliases.



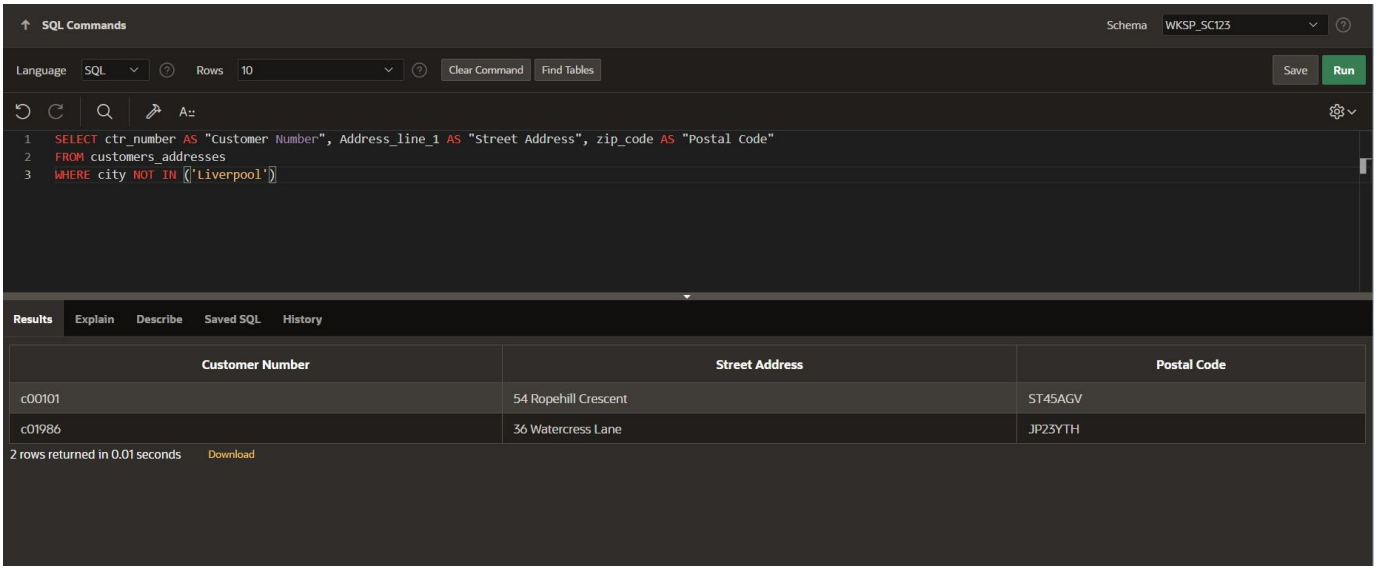
Part 3: Logical Operators: OR

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 columnaliases.



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



Database-SECD 2523

Lab 3:DML 2 -Part 5

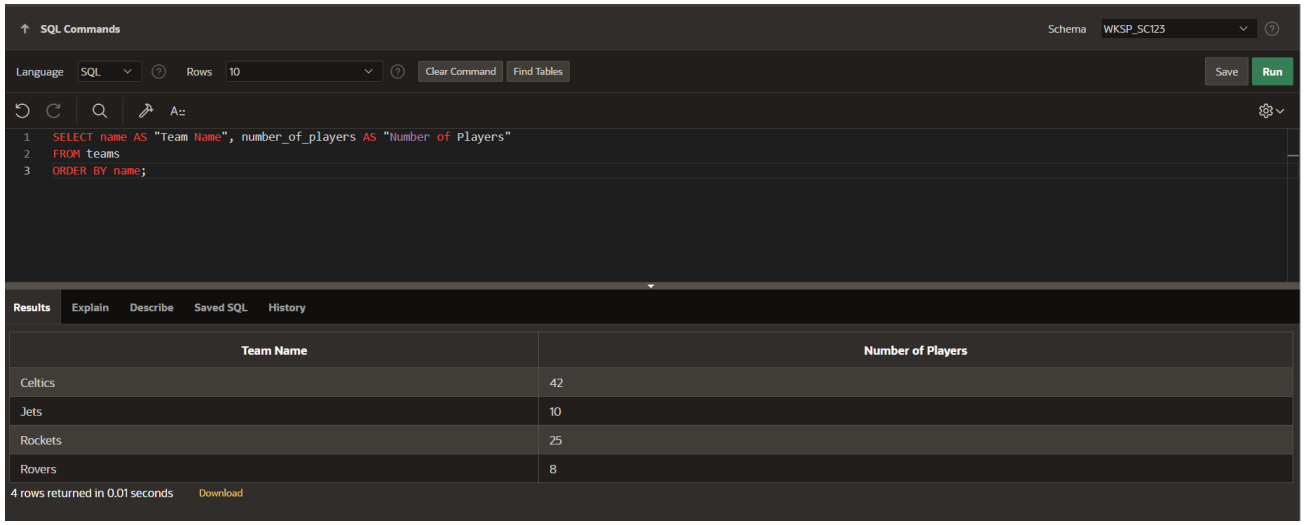
NAME :YASEEN MOHAMED
MATRIC :A22EC4016
LECTURER: DR NOOR HIDAYAH ZAKARIA

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

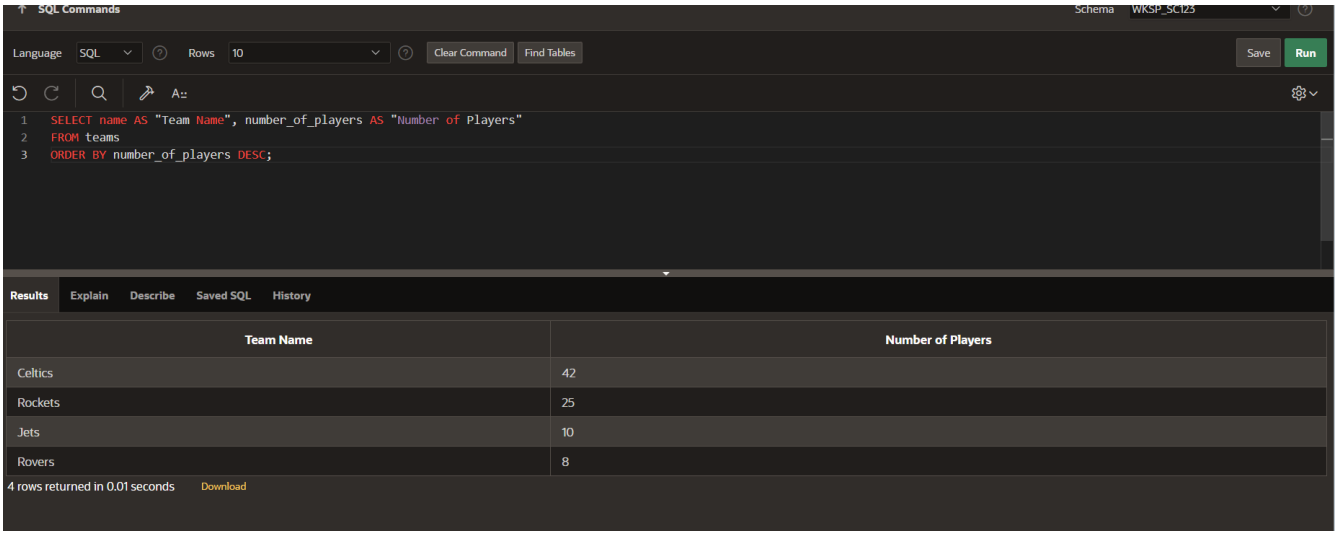
Use the ORDER BY Clause to Sort SQL Results (S6L8 Objective 1)

In this exercise you will sort the order of the data that is returned in your query by adding an ORDER BY clause to the end of your SELECT statement.

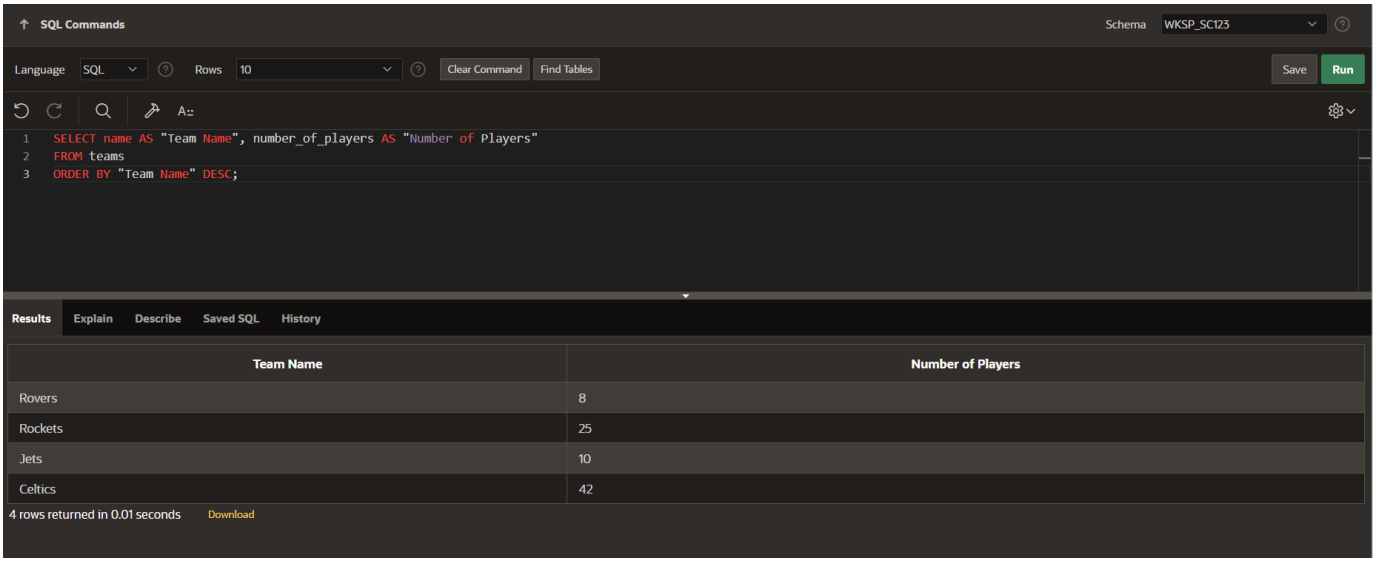
1. Display the team name and number of players alphabetically in order of team name. Use an appropriate alias for your column headings.



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 inthe ORDER BY clause.



Database-SECD 2523

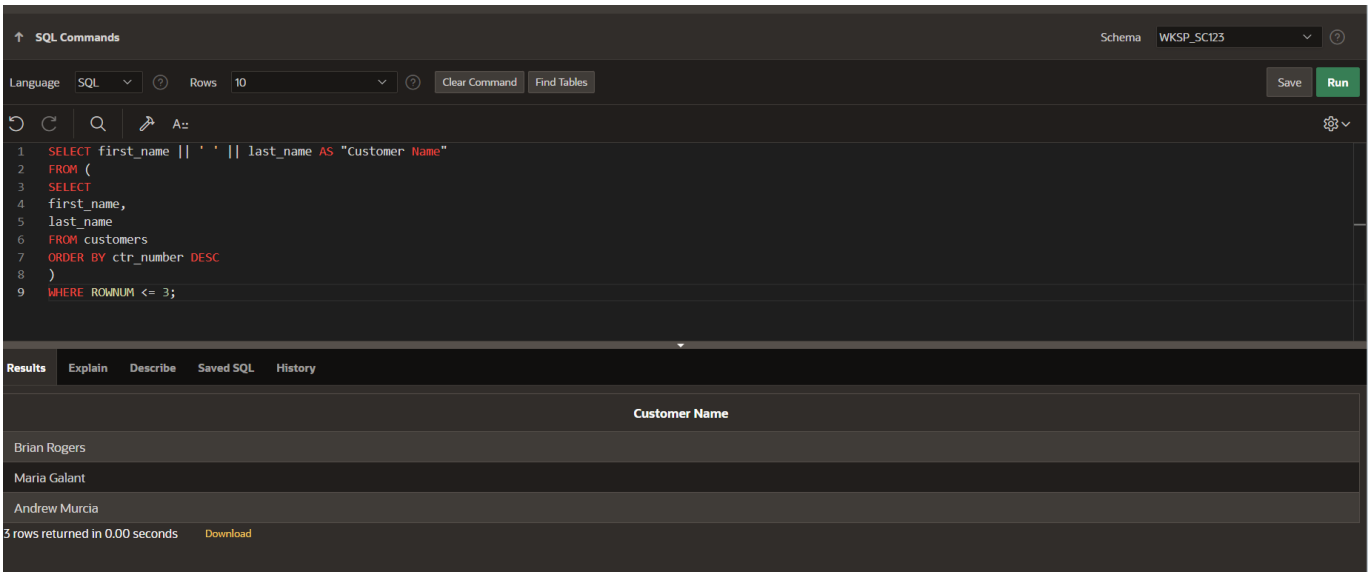
Lab 3:DML 2 -Part 6

NAME :YASEEN MOHAMED
MATRIC :A22EC4016
LECTURER: DR NOOR HIDAYAH ZAKARIA

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