

Practice Problems Instructions:

When working with a database, it is important to know what tables it contains. It is also essential to have information about the structure of each table, including column names, data types, constraints, etc. to retrieve data. This kind of information (and much more!) can be found in the data dictionary, which is a collection of read-only tables that contain metadata, or data about the database.

See more on the [data dictionary here](#).

Use the following commands to obtain information about the tables in the database:

- `select table_name from user_tables; /* to display a list of tables */`
- `select * from all_tab_columns where table_name='table_name'; /* to display the structure of a table */`
- `select * from table_name; /* to display the content of a table */`

In the commands above, substitute *table_name* with the actual name of the table. If '*table_name*' is enclosed in single quotation marks, the name of the table must be entered in capital letters.

Important Note:

For the practice problems below, follow examples shown in the PowerPoint presentations and textbooks but do not copy their solutions unless it is the only possible answer to the problem.

General Instructions:

The practice problems are arranged in order of increasing difficulty – the last several problems might present the most challenge. Students are expected to work out and submit the solutions to at least 5 problems. If you have previous experience in SQL you can select the 5 most challenging problems though it is still recommended to complete all problems. This will help you be better prepared for the Midterm and Final Exams. Challenge yourself to complete all problems!

Instructions: For each problem

- Write and execute an SQL query in Oracle Live SQL or SQL*Plus
- Execute the following command: `select sysdate, 'your_name' from dual;` where *your_name* is substituted with your name
- Take a screenshot that includes both SQL statements and all results
- Copy and paste the screenshot into a Word file containing your solutions

Practice Problems: Joining Data from Multiple Tables

Before starting these problems, update the JustLee Books database by executing the JLDB_Build_Extended.sql script. You can find the script in the "Class Databases" folder.

- List the book title and retail price for all books with a retail price lower than the average retail price of all books sold by JustLee Books.
- Determine which books cost less than the average cost of other books in the same category.
- Determine which orders were shipped to the same state as order 1014.
- Determine which orders had a higher total amount due than order 1008.
- Determine which author or authors wrote the books most frequently purchased by customers of JustLee Books.

- List the title of all books in the same category as books previously purchased by customer 1007. Don't include books this customer has already purchased.
- List the shipping city and state for the order that had the longest shipping delay.
- Determine which customers placed orders for the least expensive book (in terms of the regular retail price) carried by JustLee Books.
- Determine the number of different customers who have placed an order for books written or co-written by James Austin.
- Determine which books were published by the publisher of The Wok Way to Cook.

Assignment Submission

Save all your solution screenshots in a Word file, type your name and course number in that file, name it M7_1_Practice_Problems.

Due Date

This assignment is due by Monday, 11:59 pm ET.

Statement 209

SELECT sysdate, 'Chrissie Raj' FROM dual

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 210

SELECT TITLE, RETAIL
FROM BOOKS
WHERE RETAIL < (SELECT AVG(RETAIL) FROM BOOKS)

TITLE	RETAIL
BODYBUILD IN 10 MINUTES A DAY	30.95
REVENGE OF MICKEY	22
COOKING WITH MUSHROOMS	19.95
HANDCRANKED COMPUTERS	25
THE WOK WAY TO COOK	28.75
BIG BEAR AND LITTLE DOVE	8.95
HOW TO GET FASTER PIZZA	29.95
HOW TO MANAGE THE MANAGER	31.95

Statement 211

SELECT sysdate, 'Chrissie Raj' FROM dual

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 212

SELECT TITLE, CATEGORY, RETAIL
FROM BOOKS B1
WHERE RETAIL < (
SELECT AVG(RETAIL)
FROM BOOKS B2
WHERE B1.CATEGORY = B2.CATEGORY
)

TITLE	CATEGORY	RETAIL
REVENGE OF MICKEY	FAMILY LIFE	22
COOKING WITH MUSHROOMS	COOKING	19.95
HANDCRANKED COMPUTERS	COMPUTER	25
BIG BEAR AND LITTLE DOVE	CHILDREN	8.95

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4 rows selected.

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Statement 212

SELECT TITLE, CATEGORY, RETAIL
FROM BOOKS B1
WHERE RETAIL < (
SELECT AVG(RETAIL)
FROM BOOKS B2
WHERE B1.CATEGORY = B2.CATEGORY
)

TITLE	CATEGORY	RETAIL
REVENGE OF MICKEY	FAMILY LIFE	22
COOKING WITH MUSHROOMS	COOKING	19.95
HANDCRANKED COMPUTERS	COMPUTER	25
BIG BEAR AND LITTLE DOVE	CHILDREN	8.95

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4 rows selected.

Statement 213

SELECT sysdate, 'Chrissie Raj' FROM dual

My Session

Statement 213

SELECT sysdate, 'Chrissie Raj' FROM dual

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 214

SELECT ORDER#, SHIPSTATE
FROM ORDERS
WHERE SHIPSTATE = (
SELECT SHIPSTATE
FROM ORDERS
WHERE ORDER# = 1014
)
AND ORDER# != 1014

ORDER#	SHIPSTATE
1007	TX

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Statement 215

SELECT sysdate, 'Chrissie Raj' FROM dual

Statement 215



```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSTERAJ'
17-DEC-24	Chrissie Raj

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Statement 216



```
SELECT O.ORDER#, SUM(OI.QUANTITY * OI.PAIDEACH) AS TOTAL_AMOUNT
FROM ORDERS O
JOIN ORDERITEMS OI ON O.ORDER# = OI.ORDER#
GROUP BY O.ORDER#
HAVING SUM(OI.QUANTITY * OI.PAIDEACH) > (
  SELECT SUM(OI.QUANTITY * OI.PAIDEACH)
  FROM ORDERITEMS OI
  WHERE OI.ORDER# = 1008
)
```

ORDER#	TOTAL_AMOUNT
1013	55.95
1014	44
1007	335.85
1011	85.45
1004	170.9



1014	44
1007	335.85
1011	85.45
1004	170.9
1009	41.95
1006	54.5
1010	55.95
1018	75.9
1001	117.4
1002	111.9
1005	39.95
1003	106.85
1012	166.4
1016	85.45

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15 rows selected.




Statement 217



```
SELECT sysdate, 'Chrissie Raj' FROM dual
```



Statement 217






```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 218






```
SELECT A.AUTHORNAME, COUNT(*) AS PURCHASE_COUNT
FROM AUTHOR A
JOIN BOOKAUTHOR BA ON A.AUTHORID = BA.AUTHORID
JOIN ORDERITEMS OI ON BA.ISBN = OI.ISBN
GROUP BY A.AUTHORNAME
HAVING COUNT(*) = (
  SELECT MAX(COUNT(*))
  FROM AUTHOR A2
  JOIN BOOKAUTHOR BA2 ON A2.AUTHORID = BA2.AUTHORID
  JOIN ORDERITEMS OI2 ON BA2.ISBN = OI2.ISBN
  GROUP BY A2.AUTHORNAME
)
```

ORA-00904: "A"."AUTHORNAME": invalid identifier

More Details: <https://docs.oracle.com/error-help/db/ora-00904>

Statement 219






```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 219






```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 220






```
SELECT ORDER#, SHIPCITY, SHIPSTATE, (SHIPDATE - ORDERDATE) AS DELAY
FROM ORDERS
WHERE (SHIPDATE - ORDERDATE) = (
  SELECT MAX(SHIPDATE - ORDERDATE)
  FROM ORDERS
)
```

ORDER#	SHIPCITY	SHIPSTATE	DELAY
1004	TRENTON	NJ	4

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Statement 221



```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 221



```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 222



```
SELECT DISTINCT B1.TITLE
FROM BOOKS B1
WHERE B1.CATEGORY IN (
  SELECT DISTINCT B2.CATEGORY
  FROM BOOKS B2
  JOIN ORDERITEMS OI ON B2.ISBN = OI.ISBN
  JOIN ORDERS O ON OI.ORDER# = O.ORDER#
  WHERE O.CUSTOMER# = 1007
)
AND B1.ISBN NOT IN (
  SELECT DISTINCT OI.ISBN
  FROM ORDERITEMS OI
  JOIN ORDERS O ON OI.ORDER# = O.ORDER#
  WHERE O.CUSTOMER# = 1007
)
```

TITLE
PAINLESS CHILD-REARING
HANDCRANKED COMPUTERS



TITLE
PAINLESS CHILD-REARING
HANDCRANKED COMPUTERS
BUILDING A CAR WITH TOOTHPICKS

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3 rows selected.

Statement 223



```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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Statement 224



```
SELECT TITLE
FROM BOOKS
WHERE PUBID = (
  SELECT PUBID
  FROM BOOKS
  WHERE TITLE = 'The Wok Way to Cook'
)
```



Statement 226



```
SELECT DISTINCT C.CUSTOMER#, C.LASTNAME, C.FIRSTNAME
FROM CUSTOMERS C
JOIN ORDERS O ON C.CUSTOMER# = O.CUSTOMER#
JOIN ORDERITEMS OI ON O.ORDER# = OI.ORDER#
WHERE OI.ISBN = (
  SELECT ISBN
  FROM BOOKS
  WHERE RETAIL = (SELECT MIN(RETAIL) FROM BOOKS)
)
```

CUSTOMER#	LASTNAME	FIRSTNAME
1007	GIAIA	TAMMY
1017	NELSON	BECCA
1015	SHELL	STEVE

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3 rows selected.

Statement 227



```
SELECT sysdate, 'Chrissie Raj' FROM dual
```

SYSDATE	'CHRISSIERAJ'
17-DEC-24	Chrissie Raj

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