

DBMS LAB RECORD

WEEK-1

AIM:

To demonstrate about numeric, string and date functions using sql commands.

DESCRIPTION:

What is DUAL table?

The DUAL is special one row, one column table present by default in all Oracle databases. The owner of DUAL is SYS (SYS owns the data dictionary, therefore DUAL is part of the data dictionary.) but DUAL can be accessed by every user. The table has a single VARCHAR2(1) column called DUMMY that has a value of 'X'.

Some of the following are different functions used:

1.NUMERIC FUNCTIONS:

ABS(),CEIL(),COS(),TAN(),DIV(),FLOOR(),GREATEST(),LEAST(),ROUND(),SQRT().

- **ABS():** It returns the absolute value of a number.
- **Syntax:** SELECT ABS(-243.5);
- **CEIL():** It returns the smallest integer value that is greater than or equal to a number.
- **Syntax:** SELECT CEIL(25.75);
- **COS():** It returns the cosine of a number.
- **Syntax:** SELECT COS(30);
- **DIV():** It is used for integer division.
- **Syntax:** SELECT 10 DIV 5;
- **FLOOR():** It returns the largest integer value that is less than or equal to a number.
- **Syntax:** SELECT FLOOR(25.75);

- **GREATEST():** It returns the greatest value in a list of expressions.
- **Syntax:** SELECT GREATEST(30, 2, 36, 81, 125);
- **LEAST():** It returns the smallest value in a list of expressions.

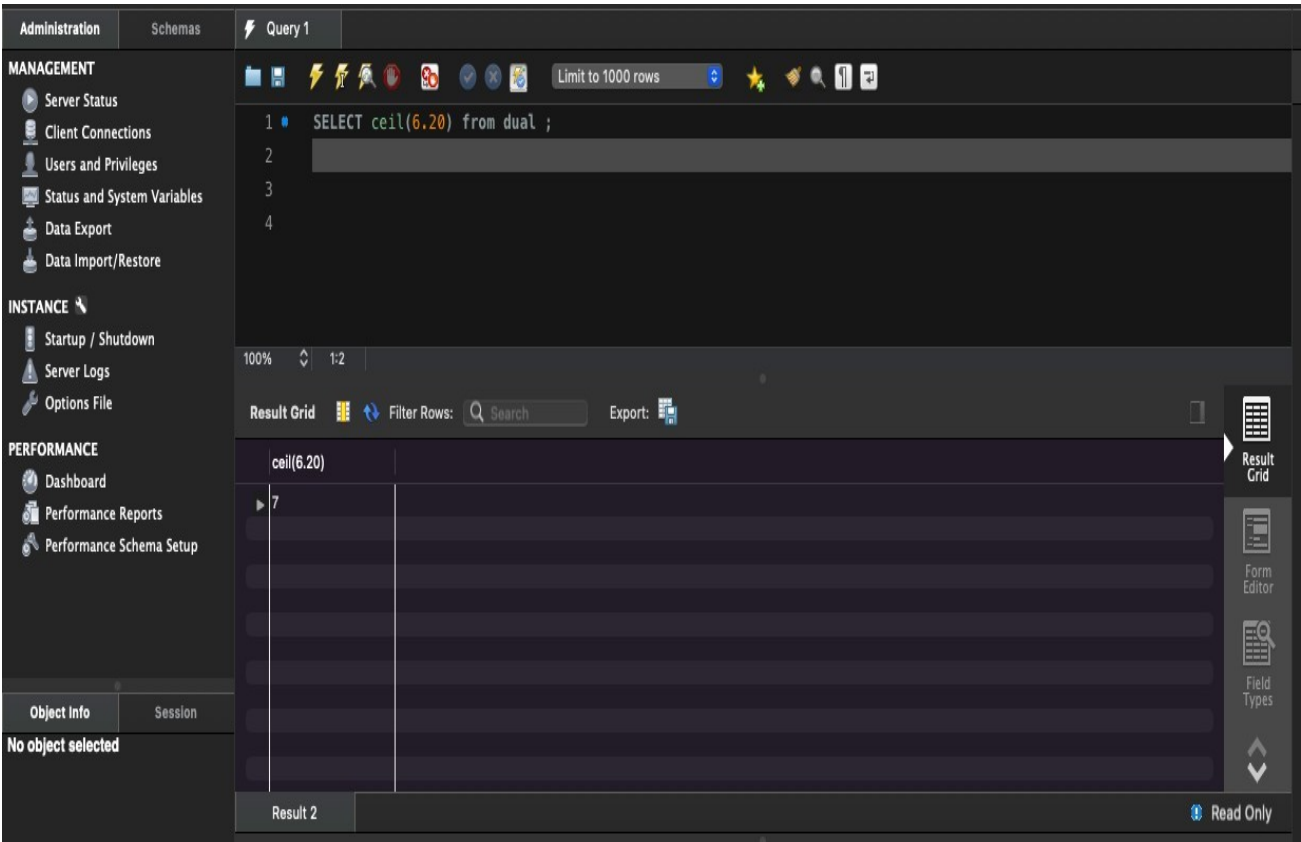
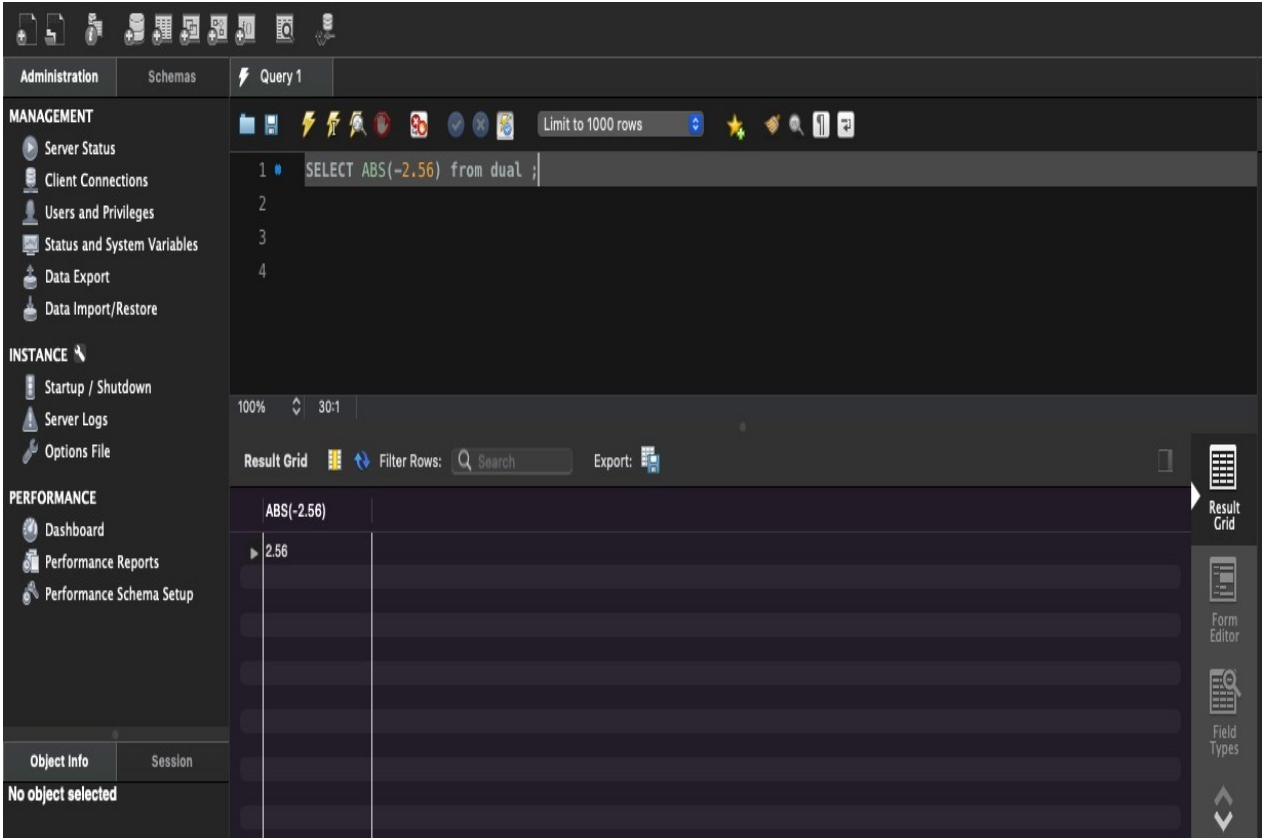
- **Syntax:** SELECT LEAST(30, 2, 36, 81, 125);
- **ROUND():** It returns a number rounded to a certain number of decimal places.
- **Syntax:** SELECT ROUND(5.553);
-
- **SQRT():** It returns the square root of a number.
- **Syntax:** SELECT SQRT(25);
- **RAND():** It returns a random number.
- **Syntax:** SELECT RAND();

2.STRING FUNCTIONS:

ASCII(),CHAR_LENGTH(),CONCAT(),FORMAT(),INSERT(),LCASE(),LEFT(),LOWER(),MID(),POSITION()

- **ASCII():** This function is used to find the ASCII value of a character.
- **Syntax:** SELECT ascii('t');
- **CHAR_LENGTH():** Doesn't work for SQL Server. Use LEN() for SQL Server. This function is used to find the length of a word.
 - **Syntax:** SELECT char_length('Hello!');
- **CONCAT():** This function is used to add two words or strings.
- **Syntax:** SELECT 'Geeks' || ' ' || 'forGeeks' FROM dual;
- **FORMAT():** This function is used to display a number in the given format.
- **Syntax:** Format("0.981", "Percent");
- **INSERT():** This function is used to insert the data into a database.
- **Syntax:** INSERT INTO database (geek_id, geek_name) VALUES (5000, 'abc');
- **LCASE():** This function is used to convert the given string into lower case.
- **Syntax:** LCASE ("GeeksFor Geeks To Learn");
- **LEFT():** This function is used to SELECT a sub string from the left of given size or characters.
- **Syntax:** SELECT LEFT('geeksforgeeks.org', 5);
- **LENGTH():** This function is used to find the length of a word.
- **Syntax:** LENGTH('GeeksForGeeks');
- **LOWER():** This function is used to convert the upper case string into lower case.
- **Syntax:** SELECT LOWER('GEEKSFORGEEKS.ORG');
- **MID():** This function is to find a word from the given position and of the given size.
- **Syntax:** Mid ("geeksforgeeks", 6, 2);

OUTPUT SCREEN SHOTS:



AdministrationSchemasQuery 1

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

Object infoSession

No object selected

Limit to 1000 rows

1SELECT sqrt(36) from dual ;

2

3

4

100%28:1

Result GridFilter Rows: SearchExport

sqrt(36)

6

Result 3

Read Only

Result Grid

Form Editor

Field Types

AdministrationSchemasQuery 1

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Object infoSession

No object selected

Limit to 1000 rows

1SELECT floor(5.765) from dual ;

2

3

4

100%32:1

Result GridFilter Rows: SearchExport

floor(5.765)

5

Result 4

Read Only

Result Grid

Form Editor

Field Types

Action Output

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Object InfoSession

No object selected

1234

SELECT sign(-456) from dual ;

100%30:1

Result GridFilter Rows: SearchExport

sign(-456)
-1

Result Grid

Form Editor

Field Types

Result 5Read Only

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Object InfoSession

No object selected

1234

SELECT sin(60) from dual ;

100%27:1

Result GridFilter Rows: SearchExport

sin(60)
-0.3048106211022167

Result Grid

Form Editor

Field Types

Result 6Read Only

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Object Info

Session

No object selected

Query 1

Limit to 1000 rows

SELECT REPEAT("SQL Tutorial", 3);

100%

1:3

Result Grid

Filter Rows: Search

Export:

REPEAT("SQL Tutorial", 3)

SQL TutorialSQL TutorialSQL Tutorial

Result 21

Read Only

Administration

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Query 1

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Object Info

Session

No object selected

Limit to 1000 rows

1

2

3

4

SELECT LOWER('WELCOME HI') "Capitals" FROM DUAL;

100%

50:1

Result Grid

Filter Rows:

Search

Export:

Capitals

welcome hi

Result 12

Read Only

Result Grid

Form Editor

Field Types

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Object Info

Session

No object selected

Query 1

Limit to 1000 rows

SELECT UPPER('welcome hi') "Capitals" FROM DUAL;

100%

50:1

Result Grid

Filter Rows:

Search

Export:

Capitals
WELCOME HI

Result 13

Read Only

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Object Info

Session

No object selected

Query 1

Limit to 1000 rows

SELECT CONCAT('welcome',' HL0000000') "Capitals" FROM DUAL;

100%

36:1

Result Grid

Filter Rows:

Search

Export:

Capitals
welcome HL0000000

Result 14

Read Only

Administration

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Query 1

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Object Info

Session

No object selected

Limit to 1000 rows

1

2

3

4

SELECT SUBSTR('MONKEYY',4,2) "Capitals" FROM DUAL;

100%

52:1

Result Grid

Filter Rows:

Search

Export:

Capitals

KE

Result 15

Read Only

Administration

Schemas

Query 1

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Object Info

Session

No object selected

Limit to 1000 rows

1

2

3

4

SELECT LENGTH('MONKEYY') FROM DUAL;

100%

25:1

Result Grid

Filter Rows:

Search

Export:

LENGTH('MONKEYY')

7

Result 16

Read Only

AdministrationSchemas

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Object InfoSession

No object selected

Query 1

Limit to 1000 rows

1

2

3

4

SELECT LTRIM(' MONKEYY') FROM DUAL ;

100%

1:2

Result Grid

Filter Rows: Search

Export:

LTRIM(' MONKEYY')

MONKEYY

Result 17

Read Only

Result Grid

Form Editor

Field Types

Action Output

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Object InfoSession

No object selected

Query 1

Limit to 1000 rows

1

2

3

4

SELECT RTRIM(' MONKEYY. ') FROM DUAL ;

100%

9:1

Result Grid

Filter Rows: Search

Export:

RTRIM(' MONKEYY. ')

MONKEYY.

Result 19

Read Only

Result Grid

Form Editor

Field Types

Action Output