SQL\_DAY2\_NOTES

# Operators in SQL:

1.Arithmatic Operator:

‘+’ (return addition of two numeric),’ -’ (return difference of two numeric), ‘\*’ (return multiplication of two numeric), / (division), %(returns the integer remainder of division)

2.Logical operator:

AND,OR,NOT

3.Pattern Matching:

LIKE (select \* from <tablename> where lastname LIKE ‘%ab%’

4.Comparison Operators:

‘=’ (equals to),’>’ (greater than),’<’ (less than),’>=’ (greater than equals to),;<=’ (less than equals to),’<>’ (not equals to)

5.Bit wise operators:

‘&’ (bitwise AND operator), ‘|’ (bitwise OR operator), ‘^’(bitwise XOR operator),’<<’(bitwise left shift), ‘>>’(bitwise right shift)

6.Set Operators:

Union : all distinct rows from either query

Union all : all distinct rows as well duplicates from either query

Intersect : rows which are present in both the query

Minus: rows which are present in the first query but not in the second query.

## String operations in SQL: (Inbuilt function in sql)

1.SUBSTR (part of the whole string),,(e.g: select substr(‘sayanik’,2,2)),,(result: ‘ay’)

2.TRIM (it omit the white space in both side of a string),,( e.g: select trim(‘ sayanik ’)),,(result: ‘sayanik’)

1. LTRIM (omit the white space in left side of a string)
2. RTRIM (omit the white space in right side of a string)

3.LEN (it returns the length of the string),,(e.g: select len(‘sayanik’),,(result:7)

4.REPLACE (it replaces a part of the string with another string),,(select REPLACE (‘sayanik’,’ya’,’xz’),,(result:’saxznik’)

5.CONCATENATE (combine multiple string together),,(select CONCAT(‘sayanik’,’ ‘ ,’mukherjee’),,(result: ‘sayanik mukherjee’)

6.LEFT (returns no of string from left side),,(select LEFT (‘sayanik’,3)),,(result:say)

7.RIGHT (returns no of string from right side),,(select RIGHT(‘sayanik’,3)),,(result:nik)

8.REPLICATE(repeat the string for a certain no of times),,(select REPLICATE (‘\*’,3)),,(result:\*\*\*)

9.REVERSE(reverse the string),,(select REVERSE (‘sayanik’)),,(result:kinayas)

10.UPPER (return capital letter value of string),,(select UPPER(‘sayanik’)),,(result:SAYANIK)

11.LOWER(return small letter value of string),,(select LOWER(‘SAYANIK’)),,(result:sayanik)

## Date Function:

1.SYSDATE(today's system date),,(select SYSDATE from dual);

2.TO\_CHAR (convert datetime into char in specific format),,(SELECT TO\_CHAR(SYSDATE, 'DD/MM/YYYY HH:MI:SS') AS "sysdate\_time"

FROM dual;)

3.CURRENT\_DATE(returns the current date and time in the particular time zone,can be different from sysdate function),,(select CURRENT\_DATE from dual;)

4.TRUNC (if want to get some days before or some days after the current date,then we can use trunc function with CURRENT\_DATE function),,

(SELECT CURRENT\_DATE,

TRUNC(CURRENT\_DATE)+1 AS "trunc\_tomorrow",

TRUNC(CURRENT\_DATE)-1 AS "trunc\_yesterday"

FROM dual;)

5.SYSTIMESTAMP ( it returns the sysdate with time zone),,

(SELECT SYSTIMESTAMP

FROM dual;)

6.ADD\_MONTHS (here one can add month with inserting no of month in the function),,

(SELECT SYSDATE,

ADD\_MONTHS(SYSDATE, 5) AS new\_date

FROM dual;)

7.LAST\_DAY (returns the last day of the month of the date specified),,

(SELECT SYSDATE,

LAST\_DAY(SYSDATE) AS last\_of\_month

FROM dual;)

8.NEXT\_DAY (returns date of the next week day specified),,

(SELECT NEXT\_DAY(SYSDATE, ‘MONDAY’) AS nextday

FROM dual;)

9.MONTHS\_BETWEEN (return the no of month between two specified dates),,

(SELECT MONTHS\_BETWEEN('12-MAY-2017', '10-FEB-2017') AS months\_bt

FROM dual;)

10.EXTRACT (it extract date or month or year from a date),,(SELECT SYSDATE,

EXTRACT(MONTH FROM SYSDATE) AS extract\_month

FROM dual;)

11.TO\_DATE (convert the string value into date format),,

(SELECT TO\_DATE('21-JAN-2017', 'DD-MON-YYYY') AS converted\_date

FROM dual;)

12.Number of days between two days:

SELECT TO\_DATE('31-DEC-2022') - SYSDATE AS days\_to\_go

FROM dual;

13.Add days to a date:

SELECT SYSDATE + 7 AS next\_week\_date

FROM dual;

14.substracting days from a date:

SELECT SYSDATE - 21 AS old\_date

FROM dual;

15.First\_day of the month:

SELECT TRUNC(SYSDATE, 'MONTH') AS first\_day

FROM dual;

## NUMERIC FUNCTION:

1.GREATEST

2.LEAST

3.ROUND (select ROUND(253.2534,1) from dual,,(result:253.2)

4.ABS (absolute value)

## LOGICAL FUNCTIONS:

NVL(there is one column as input and if it is not null it will return the specific value and if it is null it will return the junk value)

(select first\_name,country,NVL(country,’no country’) as country\_val from <table name>)

COALESCE (there can be multiple input and first not null value will be returned)

## AGGREGATE FUNCTIONS:

SUM (summation of integer values of a column)

AVG ( Average value of a column)

MAX (Maximum value of a column)

MIN (min value of a column)

COUNT (no of entries in a column)