VNRVJIET **NAME OF THE LAB:** **DATABASE MANAGEMENT SYSTEM**	**WEEK NO: 1** **DATE:**

FUNCTIONS

Implement the following using the DUAL table:

A)Character Functions: A character or string function is a function which takes one or more characters or numbers as parameters and returns a character value.

Character functions are of the following two types:

1.Case-Manipulative Functions:

i)UPPER: UPPER() function is used to convert all characters of a string to uppercase.

Syntax: UPPER (*text*)

SQL> select upper('adharsh') from dual;

UPPER('S

ADHARSH

ii)LOWER: LOWER() function is used to convert all characters of a string to lowercase.

Syntax: LOWER (text)

SQL> select lower('ADHARSH') from dual;

LOWER('S

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adharsh

2. Character-Manipulative Functions:

i)CONCAT: The CONCAT() function adds two or more strings together.

Syntax: CONCAT (*string1*, *string2*, ..., *string_n*)

SQL> select concat('adha','rsh') from dual;

CONCAT('

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adharsh

ii)LENGTH: The LENGTH() function returns the length of a string (in bytes).

Syntax: LENGTH (*string*)

SQL> select length('adharsh') from dual;

LENGTH('ADHARSH')

7

iii)SUBSTR: The SUBSTR() function extracts a substring from a string (starting at any position).

Syntax: SUBSTR (*string*, *start*, *length*)

SQL> select substr('adharsh',2,3) from dual;

SUB

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dha

iv)INSTR: The INSTR() function returns the position of the first occurrence of a string in another string. This function performs a case-insensitive search.

Syntax: INSTR (*string1*, *string2*)

SQL> select instr(‘adharsh,'rsh') from dual;

INSTR('ADHARSH','RSH')

5

SQL> select instr('adharsh','mith') from dual;

INSTR('ADHARSH','MITH')

0

v)LPAD: The LPAD() function left-pads a string with another string, to a certain length.

Syntax: LPAD (*string, length, lpad_string*)

SQL> select lpad('adharsh',15,'*') from dual;

LPAD('ADHARSH'

******adharsh

vi)RPAD: The RPAD() function right-pads a string with another string, to a certain length.

Syntax: RPAD (*string, length, rpad_string*)

SQL> select rpad('adharsh',15,'*') from dual;

RPAD('ADHARSH'

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adharsh******

vii)TRIM: The TRIM() function removes the space character OR other specified characters from the start or end of a string.

Syntax: TRIM ([*characters* FROM]*string*)

SQL> select trim('h'FROM'adharsh') from dual;

TRIM('S

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adhars

viii)INITCAP: The INITCAP function is used for setting the first character in each word to uppercase and the rest to lowercase.

Syntax: INITCAP (string)

SQL> select initcap('adharsh') from dual;

INITCAP(

Adharsh

ix)TRANSLATE: The TRANSLATE() function returns the string from the first argument after the characters specified in the second argument are translated into the characters specified in the third argument.

Syntax: TRANSLATE (*string, characters, translations*)

SQL> select translate('adharsh','a','b') from dual;

TRANSLAT

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bdhbrsh

X)REPLACE: The REPLACE() function replaces all occurrences of a substring within a string, with a new substring.

Syntax: REPLACE (*string*, *old_string*, *new_string*)

SQL> select replace('adharsh','a','b') from dual;

REPLACE(

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bdhbrsh

B)Numeric Functions:

i)LEAST: The LEAST() function returns the smallest value of the list of arguments.

Syntax: LEAST (*arg1*, *arg2*, *arg3*, ...)

SQL> select least(2,5,3,10,8) from dual;

LEAST(1,2,5,3,10,8)

1

ii)GREATEST: The GREATEST() function returns the greatest value of the list of arguments.

Syntax: GREATEST (*arg1*, *arg2*, *arg3*, ...)

SQL> select greatest(2,5,3,10,8) from dual;

GREATEST(2,5,3,10,8,7)

10

iii)LENGTH: The LENGTH() function returns the length of a string (in bytes).

Syntax: LENGTH (*string*)

SQL> select length('aadharsh') from dual;

LENGTH('AADHARSH')

8

iv)ABS: The ABS() function returns the absolute value of a number.

Syntax: ABS (*number*)

SQL> select abs(-5) from dual;

ABS(-5)

5

V)MOD: The MOD() function returns the remainder of a number divided by another number.

Syntax: MOD (*x*, *y*)

SQL> select mod(4,2) from dual;

MOD(4,2)

0

vi)SIGN: The SIGN() function returns the sign of a number.

Syntax: SIGN (*number*)

SQL> select sign(-5) from dual;

SIGN(-5)

-1

vii)FLOOR: The FLOOR() function returns the largest integer value that is smaller than or equal to a number.

Syntax: FLOOR (*number*)

SQL> select floor(3.8) from dual;

FLOOR(3.8)

3

viii)CEIL: The CEIL() function returns the smallest integer value that is bigger than or equal to a number.

Syntax: CEIL (*number*)

SQL> select ceil(3.7) from dual;

CEIL(3.7)

4

ix)POWER: The POWER() function returns the value of a number raised to the power of another number.

Syntax: POWER (*a*, *b*)

SQL> select power(4,2) from dual;

POWER(4,2)

16

C)Date Functions:

i)SYSDATE: The SYSDATE() function returns the current date and time.

Syntax: SYSDATE()

SQL> select sysdate from dual;

SYSDATE

22-SEP-23

ii)ADD_MONTHS: SQL ADD_MONTHS function adds integer value to months in date value.

Syntax: ADD_MONTHS (date , integer);

SQL> select add_months(sysdate,2) from dual;

ADD_MONTH

22-NOV-23

iii)MONTHS_BETWEEN: MONTHS_BETWEEN returns number of months between dates date1 and date2.

Syntax: MONTHS_BETWEEN (date1 , date2);

SQL> select months_between(sysdate,sysdate) from dual;

MONTHS_BETWEEN (SYSDATE,SYSDATE)

0

iv)LAST_DAY: The LAST_DAY() function extracts the last day of the month for a given date.

Syntax: LAST_DAY (date)

SQL> select last_day(sysdate) from dual;

LAST_DAY(

30-SEP-23

V)NEXT_DAY: NEXT_DAY() function returns the date of the first weekday specified by day name that is later than a date.

Syntax: NEXT_DAY (date,weekday)

SQL> select next_day(sysdate,'fri')

2

SQL> select next_day(sysdate,'fri') from dual;

NEXT_DAY(

29-SEP-23

SQL> select next_day(sysdate,'mon') from dual;

NEXT_DAY(

25-SEP-23

vi) TO_CHAR(SYSDATE,'DD/MM/YY') : It converts the given date to the required format as specified in the syntax.

Syntax: TO_CHAR (date , format);

SQL> select to_char(sysdate,'dd/mm/yy') from dual;

TO_CHAR(

22/09/23

vii) TO_CHAR(SYSDATE,'DDSP/MMSP/YYSP'): It converts the given date into required word format.

Syntax: TO_CHAR (date , format);

SQL> select to_char(sysdate,'ddsp/mmsp/yysp') from dual;

TO_CHAR(SYSDATE,'DDSP/MMSP/YYSP')

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twenty-two/nine/twenty-three

viii)TO_DATE: It converts the date into required format.

Syntax: TO_DATE (text, datetime format);

SQL> select to_date('November 14,16','Month dd,yyyy') from dual;

TO_DATE('

14-NOV-16