RDBMS Lab

ACCS-16408

B.Tech(CSE) – IV – 2 Batch 2020-2024

Machine Exercise 2

[Based on Create table, constraints and SQL Functions]

(Write your answers in detail and submit on A4 sheets, one side plain and one side ruled. Write answers on ruled side and outputs on plain side. Write partial outputs for queries returning long outputs.)

1. Create a table "student" with the following columns and constraints. Assume suitable data types.

COLUMN NAME	CONSTRAINT	CONSTRAINT NAME
ROLLNO	PRIMARY KEY	
NAME	NOT NULL	NN_NULL
DOB	NOT NULL	
CITY	DEFAULT	
SEX	'M' OR 'F'	CHECK_SEX
MARKS	0 AND 500	MARKS_CHECK
SECTION	VALID SECTIONS are 'A', 'B', 'C', 'D'	
GRADES	VALID GRADES are 'A', 'B', 'C', 'D' Grade A, marks>=80 Grade B marks>=60 but less than 80 Grade C marks>=40 but less than 60 Grade D marks<40	

2. Answer the following queries based on the "student " table:
   (a) Display all the students who secured 'A' grade and are from 'Delhi'.
   (b) Display rollno, name and marks of all the students whose name starts with letter 'S' and who were born in the month of 'November'.
   (c) Add a column 'hobbies' to this table;
   (d) Display all the female students who were born on 'Sunday' and are from 'Amritsar.

(e) Update the marks of all students from ‘mumbai’ by an increase of 10%.

3. List and explain with examples the various categories of functions in Oracle SQL.
    a. Arithmetic Functions: CEIL, MOD, SIGN, TRUNC, ROUND, ABS, SQRT, FLOOR, SIGN, POWER.
    b. Character Functions: CHR, ASCII, INITCAP, CONCAT, LPAD, RPAD, LTRIM, RTRIM, SUBSTR,LENGTH, LOWER, UPPER
    c. Date Functions: SYSDATE, MONTHS_BETWEEN, LAST_DAY, NEXT_DAY, ADD_MONTHS, TO_CHAR, TO_DATE,TRUNC, ROUND
    d. Aggregate functions: COUNT, SUM, AVG, MAX, MIN,STDDEV, VAR
    e. General Functions: GREATEST, LEAST, NVL, UID, USER
4. Explain distinct clause in SQL.
5. Explain the concept of NULL values in SQL.
6. How a pattern can be matched in SQL?
7. Explain the order by clause in SQL.