Experiment NO: 01

Experiment Name: Create a database containing following info for 10 students.

Objectives:

1.Design and implement a structured database system using SQL, focusing on DDL and DML operations.

2.Gain practical experience in creating, modifying, and managing database schemas with DDL commands such as CREATE, ALTER, DROP, and TRUNCATE.

3.Learn to manipulate data within database structures using DML commands like INSERT, UPDATE, DELETE, and SELECT.

4.Understand how to define database tables and enforce constraints within a database system.

5.Perform basic data handling tasks to manage real-world applications using SQL.

Query:

1.create database

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	**roll**	int(100)			No	*None*			Change Drop More
2	**name**	varchar(255)	utf8mb4_general_ci		No	*None*			Change Drop More
3	**semester**	varchar(255)	utf8mb4_general_ci		No	*None*			Change Drop More
4	**sub**	varchar(155)	utf8mb4_general_ci		No	*None*			Change Drop More
5	**marks**	int(170)			No	*None*			Change Drop More

Create table

Code:

```
INSERT INTO second_thirty (roll, name, semester, sub, marks)
VALUES
(31, 'sakin', 'even', 'cse', 65),
(32, 'faez', 'even', 'cse', 15),
(33, 'tahsin', 'even', 'cse', 74),
(34, 'trisha', 'even', 'cse', 67),
(35, 'mohona', 'even', 'cse', 70),
(36, 'tariful', 'even', 'cse', 35),
(37, 'nayem', 'even', 'cse', 25),
(38, 'rafiu', 'even', 'cse', 40),
(39, 'orpa', 'even', 'cse', 55),
(40, 'nuha', 'even', 'cse', 25);
```

Output:

roll	name	semester	sub	marks
31	sakin	even	cse	65
32	faez	even	cse	15
33	tahsin	even	cse	74
34	trisha	even	cse	67
35	mohona	even	cse	70
36	tariful	even	cse	35
37	nayem	even	cse	25
38	rafiu	even	cse	40
39	orpa	even	cse	55
40	nuha	even	cse	25

2.Change a specific column name and data type

Code:

```
ALTER TABLE second_thirty
CHANGE roll id INT;
```

Output:

id	name	semester	sub	marks
31	sakin	even	cse	65
32	faez	even	cse	15
33	tahsin	even	cse	74
34	trisha	even	cse	67
35	mohona	even	cse	70
36	tariful	even	cse	35
37	nayem	even	cse	25
38	rafiu	even	cse	40
39	orpa	even	cse	55
40	nuha	even	cse	25

3.add a new column log and add condition

Code:

```
ALTER TABLE second_thirty
ADD COLUMN log INT(155);

UPDATE second_thirty
SET log = 1
WHERE marks < 30;
```

Output:

id	name	semester	sub	marks	log
31	sakin	even	cse	65	*NULL*
32	faez	even	cse	15	1
33	tahsin	even	cse	74	*NULL*
34	trisha	even	cse	67	*NULL*
35	mohona	even	cse	70	*NULL*
36	tariful	even	cse	35	*NULL*
37	nayem	even	cse	25	1
38	rafiu	even	cse	40	*NULL*
39	orpa	even	cse	55	*NULL*
40	nuha	even	cse	25	1

4.Delete the student info whose marks below 30

Code:

```
DELETE FROM second_thirty
WHERE marks<30;
```

Output:

id	name	semester	sub	marks	log
31	sakin	even	cse	65	*NULL*
33	tahsin	even	cse	74	*NULL*
34	trisha	even	cse	67	*NULL*
35	mohona	even	cse	70	*NULL*
36	tariful	even	cse	35	*NULL*
38	rafiu	even	cse	40	*NULL*
39	orpa	even	cse	55	*NULL*