

# LAB ASSIGNMENT 1

Q1 Write SQL for

Create a table student with the data [ name char(20), rollno number(3), marks number(3) ].

1. Insert some record into the table
2. List name and rollno of all students.
3. List name and rollno of students having marks > 600.

```

mysql> use lab1
Database changed
mysql> CREATE TABLE student (
  ->     name CHAR(20),
  ->     rollno INT(3),
  ->     marks INT(3)
  -> );
ERROR 1050 (42S01): Table 'student' already exists
mysql> DESCRIBE student;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | char(20) | YES  |     | NULL    |       |
| rollno | int      | YES  |     | NULL    |       |
| marks | int      | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)

mysql> INSERT INTO student (name, rollno, marks) VALUES ('Jeni', 101, 650);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO student (name, rollno, marks) VALUES ('Anu', 102, 720);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO student (name, rollno, marks) VALUES ('Bala', 103, 580);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO student (name, rollno, marks) VALUES ('Elizabeth', 104, 680);
Query OK, 1 row affected (0.03 sec)

mysql> SELECT name, rollno FROM student;
+-----+-----+
| name  | rollno |
+-----+-----+
| Jeni  | 101    |
| Anu   | 102    |
| Bala  | 103    |
| Elizabeth | 104    |
+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT * FROM student;
+-----+-----+-----+
| name  | rollno | marks |
+-----+-----+-----+
| Jeni  | 101    | 650   |
| Anu   | 102    | 720   |
| Bala  | 103    | 580   |
| Elizabeth | 104    | 680   |
+-----+-----+-----+
4 rows in set (0.00 sec)

```

```
mysql> SELECT name, rollno FROM student WHERE marks > 600;
+-----+-----+
| name   | rollno |
+-----+-----+
| Jeni   | 101    |
| Anu    | 102    |
| Elizabeth | 104    |
+-----+-----+
3 rows in set (0.00 sec)
```

Q2 The structure of the table EMPLOYEE is given below;

empcode Numeric

empname String

basicpay Numeric

DA Numeric

grosspay Numeric

Write SQL statements for the following;

A. Insert a record into the table

B. Update DA with 60% of basic pay

C. Display the details of employees whose basic pay is greater than 20000.

```
mysql> use lab1;
Database changed
mysql> describe employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| empcode | decimal(10,0) | YES  |     | NULL    |       |
| empname | varchar(255)   | YES  |     | NULL    |       |
| basicpay | decimal(10,0) | YES  |     | NULL    |       |
| DA      | decimal(10,0) | YES  |     | NULL    |       |
| grosspay | decimal(10,0) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql> INSERT INTO EMPLOYEE (empcode, empname, basicpay, DA, grosspay)VALUES (1, 'John', 25000, NULL, NULL);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO EMPLOYEE (empcode, empname, basicpay, DA, grosspay)VALUES (2, 'Jeni', 45000, NULL, NULL);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO EMPLOYEE (empcode, empname, basicpay, DA, grosspay)VALUES (3, 'Nisha', 65000, NULL, NULL);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO EMPLOYEE (empcode, empname, basicpay, DA, grosspay)VALUES (4, 'Elizabeth', 15000, NULL, NULL);
Query OK, 1 row affected (0.02 sec)

mysql> select * employee;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server v
mysql> select * from employee;
+-----+-----+-----+-----+-----+
| empcode | empname | basicpay | DA | grosspay |
+-----+-----+-----+-----+-----+
| 1 | John | 25000 | NULL | NULL |
| 2 | Jeni | 45000 | NULL | NULL |
| 3 | Nisha | 65000 | NULL | NULL |
| 4 | Elizabeth | 15000 | NULL | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
mysql> UPDATE EMPLOYEE
-> SET DA = basicpay * 0.60;
Query OK, 4 rows affected (0.02 sec)
Rows matched: 4 Changed: 4 Warnings: 0
```

```

mysql>
mysql> UPDATE EMPLOYEE
    -> SET DA = basicpay * 0.60;
Query OK, 4 rows affected (0.02 sec)
Rows matched: 4  Changed: 4  Warnings: 0

mysql> select * from employee;
+-----+-----+-----+-----+-----+
| empcode | empname | basicpay | DA | grosspay |
+-----+-----+-----+-----+-----+
| 1 | John | 25000 | 15000 | NULL |
| 2 | Jeni | 45000 | 27000 | NULL |
| 3 | Nisha | 65000 | 39000 | NULL |
| 4 | Elizabeth | 15000 | 9000 | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> SELECT empcode, empname, basicpay, DA, grosspay
    -> FROM EMPLOYEE
    -> WHERE basicpay > 20000;
+-----+-----+-----+-----+-----+
| empcode | empname | basicpay | DA | grosspay |
+-----+-----+-----+-----+-----+
| 1 | John | 25000 | 15000 | NULL |
| 2 | Jeni | 45000 | 27000 | NULL |
| 3 | Nisha | 65000 | 39000 | NULL |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

```

Q3 Write SQL commands to perform the following

Create a table STUDENT with the following attributes

ROLLNO NUMBER PRIMARY KEY

NAME VARCHAR2(10) NOT NULL

ADDRESS CHAR(20)

EMAILID VARCHAR2(30)

TOTAL MARK

ii) Insert few records inside the table.

iii) Insert a new student to STUDENT table specifying only the ROLLNO and NAME

iv) Display all the records of the table

```

ERROR 1050 (42501): Table 'student' already exists
mysql> DROP TABLE STUDENT;
Query OK, 0 rows affected (0.10 sec)

mysql> CREATE TABLE STUDENT (
->     ROLLNO INT PRIMARY KEY,
->     NAME VARCHAR(10) NOT NULL,
->     ADDRESS CHAR(20),
->     EMAILID VARCHAR(30),
->     TOTAL_MARK INT
-> );
Query OK, 0 rows affected (0.08 sec)

mysql> describe student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ROLLNO | int | NO | PRI | NULL | |
| NAME | varchar(10) | NO | | NULL | |
| ADDRESS | char(20) | YES | | NULL | |
| EMAILID | varchar(30) | YES | | NULL | |
| TOTAL_MARK | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> INSERT INTO STUDENT (ROLLNO, NAME, ADDRESS, EMAILID, TOTAL_MARK) VALUES (1, 'jaya', 'Kollam', 'jaya@example.com', 85);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO STUDENT (ROLLNO, NAME, ADDRESS, EMAILID, TOTAL_MARK)VALUES (2, 'Alice', 'Pune', 'alice@example.com', 92);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO STUDENT (ROLLNO, NAME, ADDRESS, EMAILID, TOTAL_MARK)VALUES (3, 'Anu', 'Kottayam', 'anu@example.com', 78);
Query OK, 1 row affected (0.01 sec)

mysql> describe student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ROLLNO | int | NO | PRI | NULL | |
| NAME | varchar(10) | NO | | NULL | |
| ADDRESS | char(20) | YES | | NULL | |
| EMAILID | varchar(30) | YES | | NULL | |
| TOTAL_MARK | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql> INSERT INTO STUDENT (ROLLNO, NAME)VALUES(5, 'Ammu');
Query OK, 1 row affected (0.04 sec)

```

```

mysql> INSERT INTO STUDENT (ROLLNO, NAME)VALUES(5, 'Ammu');
Query OK, 1 row affected (0.04 sec)

mysql> SELECT * FROM STUDENT;
+-----+-----+-----+-----+-----+
| ROLLNO | NAME | ADDRESS | EMAILID | TOTAL_MARK |
+-----+-----+-----+-----+-----+
| 1 | jaya | Kollam | jaya@example.com | 85 |
| 2 | Alice | Pune | alice@example.com | 92 |
| 3 | Anu | Kottayam | anu@example.com | 78 |
| 5 | Ammu | NULL | NULL | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

Q4 Write SQL commands to perform the following Using above Table

1. Add a new column PHONE NUMBER(10) in the STUDENT table
2. Alter STUDENT table and make name as its Primary key.
3. Change the data type of ADDRESS column to VARCHAR2(20) in the STUDENT
4. Change the name of ADDRESS column to ADDR in the STUDENT table.

```
mysql> ALTER TABLE STUDENT
-> ADD COLUMN PHONE INT(10);
Query OK, 0 rows affected, 1 warning (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 1
```

```
mysql> SELECT * FROM STUDENT;
```

ROLLNO	NAME	ADDRESS	EMAILID	TOTAL_MARK	PHONE
1	jaya	Kollam	jaya@example.com	85	NULL
2	Alice	Pune	alice@example.com	92	NULL
3	Anu	Kottayam	anu@example.com	78	NULL
5	Ammu	NULL	NULL	NULL	NULL

```
4 rows in set (0.00 sec)
```

```
mysql> ALTER TABLE STUDENT DROP PRIMARY KEY;
Query OK, 4 rows affected (0.16 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM STUDENT;
```

ROLLNO	NAME	ADDRESS	EMAILID	TOTAL_MARK	PHONE
1	jaya	Kollam	jaya@example.com	85	NULL
2	Alice	Pune	alice@example.com	92	NULL
3	Anu	Kottayam	anu@example.com	78	NULL
5	Ammu	NULL	NULL	NULL	NULL

```
4 rows in set (0.02 sec)
```

```
mysql> describe student;
```

Field	Type	Null	Key	Default	Extra
ROLLNO	int	NO		NULL	
NAME	varchar(10)	NO		NULL	
ADDRESS	char(20)	YES		NULL	
EMAILID	varchar(30)	YES		NULL	
TOTAL_MARK	int	YES		NULL	
PHONE	int	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> ALTER TABLE STUDENT ADD PRIMARY KEY (NAME);
Query OK, 0 rows affected (0.23 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> describe student;
```

Field	Type	Null	Key	Default	Extra
ROLLNO	int	NO		NULL	
NAME	varchar(10)	NO	PRI	NULL	
ADDRESS	char(20)	YES		NULL	
EMAILID	varchar(30)	YES		NULL	
TOTAL_MARK	int	YES		NULL	
PHONE	int	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> ALTER TABLE STUDENT
```

```
-> MODIFY ADDRESS VARCHAR(20);
```

```
Query OK, 4 rows affected (0.16 sec)
```

```
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> describe student;
```

Field	Type	Null	Key	Default	Extra
ROLLNO	int	NO		NULL	
NAME	varchar(10)	NO	PRI	NULL	
ADDRESS	varchar(20)	YES		NULL	
EMAILID	varchar(30)	YES		NULL	
TOTAL_MARK	int	YES		NULL	
PHONE	int	YES		NULL	

```
6 rows in set (0.00 sec)
```



```
mysql> ALTER TABLE STUDENT CHANGE COLUMN ADDRESS ADDR VARCHAR(20);
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> describe student;
```

Field	Type	Null	Key	Default	Extra
ROLLNO	int	NO		NULL	
NAME	varchar(10)	NO	PRI	NULL	
ADDR	varchar(20)	YES		NULL	
EMAILID	varchar(30)	YES		NULL	
TOTAL_MARK	int	YES		NULL	
PHONE	int	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM STUDENT;
```

ROLLNO	NAME	ADDR	EMAILID	TOTAL_MARK	PHONE
2	Alice	Pune	alice@example.com	92	NULL
5	Ammu	NULL	NULL	NULL	NULL
3	Anu	Kottayam	anu@example.com	78	NULL
1	jaya	Kollam	jaya@example.com	85	NULL

```
4 rows in set (0.00 sec)
```