**mysql> use mydb;**

**Database changed**

**mysql> show tables;**

**+----------------+**

**| Tables\_in\_mydb |**

**+----------------+**

**| tbl\_employee1 |**

**+----------------+**

**1 row in set (0.00 sec)**

**mysql> select \* from tbl\_employee1;**

**Empty set (0.00 sec)**

**mysql> use db;**

**Database changed**

**mysql> show tables;**

**+--------------+**

**| Tables\_in\_db |**

**+--------------+**

**| employee1 |**

**| tbl\_employee |**

**+--------------+**

**2 rows in set (0.00 sec)**

**mysql> select \* from tbl\_employee;**

**+------+----------+---------+**

**| eid | ename | esalary |**

**+------+----------+---------+**

**| 101 | swetha | 2000 |**

**| 102 | Arun | 2000 |**

**| 103 | NULL | 2000 |**

**| 104 | harishva | 2000 |**

**+------+----------+---------+**

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

**mysql> select eid,ename from tbl\_employee;**

**+------+----------+**

**| eid | ename |**

**+------+----------+**

**| 101 | swetha |**

**| 102 | Arun |**

**| 103 | NULL |**

**| 104 | harishva |**

**+------+----------+**

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

**mysql> select eid as "Employee Id" ,ename "Employee name" from tbl\_employee;**

**+-------------+---------------+**

**| Employee Id | Employee name |**

**+-------------+---------------+**

**| 101 | swetha |**

**| 102 | Arun |**

**| 103 | NULL |**

**| 104 | harishva |**

**+-------------+---------------+**

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

**Dispaly system date and time**

**mysql> select now();**

**+---------------------+**

**| now() |**

**+---------------------+**

**| 2023-10-03 09:52:33 |**

**+---------------------+**

**1 row in set (0.00 sec)**

**mysql> alter table tbl\_employee add edno int(3);**

**Query OK, 0 rows affected, 1 warning (0.02 sec)**

**Records: 0 Duplicates: 0 Warnings: 1**

**mysql> select \* from tbl\_employee;**

**+------+----------+---------+------+**

**| eid | ename | esalary | edno |**

**+------+----------+---------+------+**

**| 101 | swetha | 2000 | NULL |**

**| 102 | Arun | 2000 | NULL |**

**| 103 | NULL | 2000 | NULL |**

**| 104 | harishva | 2000 | NULL |**

**+------+----------+---------+------+**

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

**Update table**

**mysql> update tbl\_employee set edno=10 where eid in(101,102);**

**Query OK, 2 rows affected (0.01 sec)**

**Rows matched: 2 Changed: 2 Warnings: 0**

**mysql> update tbl\_employee set edno=20 where eid in(103,104);**

**Query OK, 2 rows affected (0.01 sec)**

**Rows matched: 2 Changed: 2 Warnings: 0**

**mysql> select \* from tbl\_employee;**

**+------+----------+---------+------+**

**| eid | ename | esalary | edno |**

**+------+----------+---------+------+**

**| 101 | swetha | 2000 | 10 |**

**| 102 | Arun | 2000 | 10 |**

**| 103 | NULL | 2000 | 20 |**

**| 104 | harishva | 2000 | 20 |**

**+------+----------+---------+------+**

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

**Create dept table**

**mysql> create table tbl\_dept (dno int(3),dname varchar(20));**

**Query OK, 0 rows affected, 1 warning (0.04 sec)**

**Inserting values**

**mysql> insert into tbl\_dept values(10,"LD");**

**Query OK, 1 row affected (0.01 sec)**

**mysql> insert into tbl\_dept values(20,"Project");**

**Query OK, 1 row affected (0.00 sec)**

**mysql> select \* from tbl\_dept;**

**+------+---------+**

**| dno | dname |**

**+------+---------+**

**| 10 | LD |**

**| 20 | Project |**

**+------+---------+**

**2 rows in set (0.00 sec)**

**mysql> select dno from tbl\_dept where dname="LD";**

**+------+**

**| dno |**

**+------+**

**| 10 |**

**+------+**

**1 row in set (0.00 sec)**

**SubQueries**

**Display employees under LD departmrnt**

**mysql> select \* from tbl\_employee where edno = (select dno from tbl\_dept where dname="LD");**

**+------+--------+---------+------+**

**| eid | ename | esalary | edno |**

**+------+--------+---------+------+**

**| 101 | swetha | 2000 | 10 |**

**| 102 | Arun | 2000 | 10 |**

**+------+--------+---------+------+**

**2 rows in set (0.01 sec)**

**mysql> select dname from tbl\_dept where dno=10;**

**+-------+**

**| dname |**

**+-------+**

**| LD |**

**+-------+**

**1 row in set (0.00 sec)**

**Dispaly department name of employee whose name is harishva**

**mysql> select dname from tbl\_dept where dno=(select edno from tbl\_employee where ename="harishva");**

**+---------+**

**| dname |**

**+---------+**

**| Project |**

**+---------+**

**1 row in set (0.00 sec)**

**mysql> select \* from tbl\_dept;**

**+------+---------+**

**| dno | dname |**

**+------+---------+**

**| 10 | LD |**

**| 20 | Project |**

**+------+---------+**

**2 rows in set (0.00 sec)**

**mysql> select \* from tbl\_employee;**

**+------+----------+---------+------+**

**| eid | ename | esalary | edno |**

**+------+----------+---------+------+**

**| 101 | swetha | 2000 | 10 |**

**| 102 | Arun | 2000 | 10 |**

**| 103 | NULL | 2000 | 20 |**

**| 104 | harishva | 2000 | 20 |**

**+------+----------+---------+------+**

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

**Dispaly department name of employees whose name is null**

**mysql> select dname from tbl\_dept where dno=( select edno from tbl\_employee where ename is null);**

**+---------+**

**| dname |**

**+---------+**

**| Project |**

**+---------+**

**1 row in set (0.00 sec)**

**Increment salary by 200 for all employees belong to LD department**

**mysql> update tbl\_employee set esalary=esalary+200 where edno= (select dno from tbl\_dept where dname="LD");**

**Query OK, 2 rows affected (0.01 sec)**

**Rows matched: 2 Changed: 2 Warnings: 0**

**mysql> select \* from tbl\_employee;**

**+------+----------+---------+------+**

**| eid | ename | esalary | edno |**

**+------+----------+---------+------+**

**| 101 | swetha | 2200 | 10 |**

**| 102 | Arun | 2200 | 10 |**

**| 103 | NULL | 2000 | 20 |**

**| 104 | harishva | 2000 | 20 |**

**+------+----------+---------+------+**

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

**Dispaly department name of 101,103 id**

**mysql> select dname from tbl\_dept where dno in (select edno from tbl\_employee where eid in (101,103));**

**+---------+**

**| dname |**

**+---------+**

**| LD |**

**| Project |**

**+---------+**

**2 rows in set (0.00 sec)**

**Dispaly dname of all employees whose salary >2000 (use IN)**

**mysql> select dname from tbl\_dept where dno=(select edno from tbl\_employee where esalary > 2000);**

**ERROR 1242 (21000): Subquery returns more than 1 row**

**mysql> select dname from tbl\_dept where dno in (select edno from tbl\_employee where esalary > 2000);**

**+-------+**

**| dname |**

**+-------+**

**| LD |**

**+-------+**

**1 row in set (0.00 sec)**

**Constraints in Mysql**

**(Not null,check,Default, Primary key, Auto\_Increment, Unique)**

**Creating student table with constraints**

**mysql> create table tbl\_student (rno int(5) primary key,sname varchar(20) not null, smarks int (3) check(smarks>0),smno int(10) unique,sage int (3) default 15);**

**Query OK, 0 rows affected, 4 warnings (0.06 sec)**

**mysql> desc tbl\_student;**

**+--------+-------------+------+-----+---------+-------+**

**| Field | Type | Null | Key | Default | Extra |**

**+--------+-------------+------+-----+---------+-------+**

**| rno | int | NO | PRI | NULL | |**

**| sname | varchar(20) | NO | | NULL | |**

**| smarks | int | YES | | NULL | |**

**| smno | int | YES | UNI | NULL | |**

**| sage | int | YES | | 15 | |**

**+--------+-------------+------+-----+---------+-------+**

**5 rows in set (0.01 sec)**

**Inserting values**

**mysql> insert into tbl\_student(rno,smarks,smno) values(101,60,123);**

**ERROR 1364 (HY000): Field 'sname' doesn't have a default value**

**mysql> insert into tbl\_student(rno,sname,smarks,smno) values(101,"Swetha",60,123);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from tbl\_student;**

**+-----+--------+--------+------+------+**

**| rno | sname | smarks | smno | sage |**

**+-----+--------+--------+------+------+**

**| 101 | Swetha | 60 | 123 | 15 |**

**+-----+--------+--------+------+------+**

**1 row in set (0.00 sec)**

**mysql> insert into tbl\_student(rno,sname,smarks,smno) values(102,"Harishva",-60,123);**

**ERROR 3819 (HY000): Check constraint 'tbl\_student\_chk\_1' is violated.**

**mysql> insert into tbl\_student(rno,sname,smarks,smno) values(102,"Harishva",60,123);**

**ERROR 1062 (23000): Duplicate entry '123' for key 'tbl\_student.smno'**

**mysql> insert into tbl\_student(rno,sname,smarks,smno) values(102,"Harishva",60,124);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> insert into tbl\_student(rno,sname,smarks,smno) values(102,"Harishva",60,124);**

**ERROR 1062 (23000): Duplicate entry '102' for key 'tbl\_student.PRIMARY'**

**mysql> drop table tbl\_student;**

**Query OK, 0 rows affected (0.03 sec)**

**Primary key- Auto increment**

**mysql> create table tbl\_student (srno int(5) primary key auto\_increment ,name varchar(20),smarks int (3));**

**Query OK, 0 rows affected, 2 warnings (0.04 sec)**

**mysql> insert into tbl\_student(sname,smarks) values ("Swetha",30);**

**ERROR 1054 (42S22): Unknown column 'sname' in 'field list'**

**mysql> insert into tbl\_student(name,smarks) values ("Swetha",30);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from tbl\_student;**

**+------+--------+--------+**

**| srno | name | smarks |**

**+------+--------+--------+**

**| 1 | Swetha | 30 |**

**+------+--------+--------+**

**1 row in set (0.00 sec)**

**mysql> insert into tbl\_student(name,smarks) values ("Harishva" ,40);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from tbl\_student;**

**+------+----------+--------+**

**| srno | name | smarks |**

**+------+----------+--------+**

**| 1 | Swetha | 30 |**

**| 2 | Harishva | 40 |**

**+------+----------+--------+**

**2 rows in set (0.00 sec)**

**mysql> insert into tbl\_student(name,smarks) values ("Swetha",3000);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from tbl\_student;**

**+------+----------+--------+**

**| srno | name | smarks |**

**+------+----------+--------+**

**| 1 | Swetha | 30 |**

**| 2 | Harishva | 40 |**

**| 3 | Swetha | 3000 |**

**+------+----------+--------+**

**3 rows in set (0.00 sec)**

**mysql> desc tbl\_student;**

**+--------+-------------+------+-----+---------+----------------+**

**| Field | Type | Null | Key | Default | Extra |**

**+--------+-------------+------+-----+---------+----------------+**

**| srno | int | NO | PRI | NULL | auto\_increment |**

**| name | varchar(20) | YES | | NULL | |**

**| smarks | int | YES | | NULL | |**

**+--------+-------------+------+-----+---------+----------------+**

**3 rows in set (0.00 sec)**

**mysql> insert into tbl\_student(name,smarks) values ("Arun",3009);**

**Query OK, 1 row affected (0.02 sec)**

**mysql> select \* from tbl\_student;**

**+------+----------+--------+**

**| srno | name | smarks |**

**+------+----------+--------+**

**| 1 | Swetha | 30 |**

**| 2 | Harishva | 40 |**

**| 3 | Swetha | 3000 |**

**| 4 | Arun | 3009 |**

**+------+----------+--------+**

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

**mysql> insert into tbl\_student(name,smarks) values ("Tanishkaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa",4987);**

**ERROR 1406 (22001): Data too long for column 'name' at row 1**

**mysql> select \* from tbl\_student;**

**+------+----------+--------+**

**| srno | name | smarks |**

**+------+----------+--------+**

**| 1 | Swetha | 30 |**

**| 2 | Harishva | 40 |**

**| 3 | Swetha | 3000 |**

**| 4 | Arun | 3009 |**

**+------+----------+--------+**

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

**mysql> delete from tbl\_student where srno=3;**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from tbl\_student;**

**+------+----------+--------+**

**| srno | name | smarks |**

**+------+----------+--------+**

**| 1 | Swetha | 30 |**

**| 2 | Harishva | 40 |**

**| 4 | Arun | 3009 |**

**+------+----------+--------+**

**3 rows in set (0.00 sec)**

**Primary key and foreign key**

**mysql> drop table tbl\_dept;**

**Query OK, 0 rows affected (0.02 sec)**

**mysql> create table tbl\_dept(dno int primary key,dname varchar(20));**

**Query OK, 0 rows affected (0.04 sec)**

**mysql> create table tbl\_employee1 (id int primary key,name varchar(20),salary int,dno int ,foreign key (dno) references tbl\_dept(dno));**

**Query OK, 0 rows affected (0.06 sec)**

**mysql> desc tbl\_employee1;**

**+--------+-------------+------+-----+---------+-------+**

**| Field | Type | Null | Key | Default | Extra |**

**+--------+-------------+------+-----+---------+-------+**

**| id | int | NO | PRI | NULL | |**

**| name | varchar(20) | YES | | NULL | |**

**| salary | int | YES | | NULL | |**

**| dno | int | YES | MUL | NULL | |**

**+--------+-------------+------+-----+---------+-------+**

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

**mysql> desc tbl\_dept;**

**+-------+-------------+------+-----+---------+-------+**

**| Field | Type | Null | Key | Default | Extra |**

**+-------+-------------+------+-----+---------+-------+**

**| dno | int | NO | PRI | NULL | |**

**| dname | varchar(20) | YES | | NULL | |**

**+-------+-------------+------+-----+---------+-------+**

**2 rows in set (0.00 sec)**

**mysql> insert into tbl\_employee values(101,"Swetha",50000,10);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> insert into tbl\_employee1 values(101,"Swetha",50000,10);**

**ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`db`.`tbl\_employee1`, CONSTRAINT `tbl\_employee1\_ibfk\_1` FOREIGN KEY (`dno`) REFERENCES `tbl\_dept` (`dno`))**

**mysql> insert into tbl\_dept values(10,"LD");**

**Query OK, 1 row affected (0.02 sec)**

**mysql> insert into tbl\_employee1 values(101,"Swetha",50000,10);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from tbl\_employee1;**

**+-----+--------+--------+------+**

**| id | name | salary | dno |**

**+-----+--------+--------+------+**

**| 101 | Swetha | 50000 | 10 |**

**+-----+--------+--------+------+**

**1 row in set (0.00 s**