

DBMS

Exercise 1:

DDL commands-create,alter,drop **Create table:**

Commands: create table student_

(regd_no int,name varchar(20),gender char(1),dob int, mobile_number int); **Output:**

```
mysql> desc student_;
```

Field	Type	Null	Key	Default	Extra
regd_no	int	YES		NULL	
Name	varchar(20)	YES		NULL	
gender	char(1)	YES		NULL	
dob	int	YES		NULL	
mobile_number	int	YES		NULL	

5 rows in set (0.02 sec)

Alter table:

Command:alter table student_(table name)

Add age int;(constraint datatype)

Output:

```
mysql> alter table student_
-> add age int;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc student_;
```

Field	Type	Null	Key	Default	Extra
regd_no	int	YES		NULL	
Name	varchar(20)	YES		NULL	
gender	char(1)	YES		NULL	
dob	int	YES		NULL	
mobile_number	int	YES		NULL	
age	int	YES		NULL	

```
6 rows in set (0.01 sec)
```

Truncate:

```
mysql> truncate hostel_;
Query OK, 0 rows affected (0.04 sec)
```

Drop:

```
mysql> drop table hostel_;
Query OK, 0 rows affected (0.04 sec)
```

Exercise 2:

DDL commands with constraints:

Command:

```
mysql> alter table student_ add primary key(age);
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Output:

```
mysql> desc student_;
```

Field	Type	Null	Key	Default	Extra
regd_no	int	YES		NULL	
Name	varchar(20)	YES		NULL	
gender	char(1)	YES		NULL	
dob	int	YES		NULL	
mobile_number	int	YES		NULL	
age	int	NO	PRI	NULL	

```
6 rows in set (0.01 sec)
```

Exercise 3;

DML Commands – INSERT, SELECT, UPDATE, DELETE

INSERT:

Commands:

```
mysql> insert into student_ values('1020192','nithish','M','2002','930289276','18');
Query OK, 1 row affected (0.02 sec)

mysql> insert into student_ values('192011342','jashwanth','M','2001','830189301','19');
Query OK, 1 row affected (0.01 sec)

mysql> insert into student_ values('192011332','ramya','F','2000','830189301','20');
Query OK, 1 row affected (0.01 sec)

mysql> insert into student_ values('192011011','anil','M','2003','830189301','17');
Query OK, 1 row affected (0.01 sec)
```

Output:

```
mysql> select *from student_;
+-----+-----+-----+-----+-----+-----+
| regd_no | Name      | gender | dob   | mobile_number | age |
+-----+-----+-----+-----+-----+-----+
| 192011011 | anil      | M      | 2003 | 830189301     | 17 |
| 1020192   | nithish   | M      | 2002 | 930289276     | 18 |
| 192011342 | jashwanth | M      | 2001 | 830189301     | 19 |
| 192011332 | ramya     | F      | 2000 | 830189301     | 20 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)
```

Select;

Command:

```
mysql> select*from student_;
```

Select*(table_name); Output:

```
mysql> select*from student_;
+-----+-----+-----+-----+-----+-----+
| regd_no | Name      | gender | dob   | mobile_number | age |
+-----+-----+-----+-----+-----+-----+
| 192011011 | anil      | M      | 2003 | 830189301     | 17 |
| 1020192   | nithish   | M      | 2002 | 930289276     | 18 |
| 192011342 | jashwanth | M      | 2001 | 830189301     | 19 |
| 192011332 | ramya     | F      | 2000 | 830189301     | 20 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

Delete:

Command:

```
mysql> delete from student_  
-> where dob=2003;  
Query OK, 1 row affected (0.01 sec)
```

Output:

```
mysql> select*from student;  
ERROR 1146 (42S02): Table 'student_.student' doesn't exist  
mysql> select*from student_  
+-----+-----+-----+-----+-----+-----+  
| regd_no | Name      | gender | dob  | mobile_number | age |  
+-----+-----+-----+-----+-----+-----+  
| 1020192 | nithish   | M      | 2002 | 930289276     | 18  |  
| 192011342 | jashwanth | M      | 2001 | 830189301     | 19  |  
| 192011332 | ramya     | F      | 2000 | 830189301     | 20  |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.01 sec)
```

Update;

Command:

```
mysql> update student_  
-> set name=192011469 where dob='2002';  
Query OK, 1 row affected (0.01 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

Output:

```
mysql> select*from student_  
+-----+-----+-----+-----+-----+-----+  
| regd_no | Name      | gender | dob  | mobile_number | age |  
+-----+-----+-----+-----+-----+-----+  
| 1020192 | 192011469 | M      | 2002 | 930289276     | 18  |  
| 192011342 | jashwanth | M      | 2001 | 830189301     | 19  |  
| 192011332 | ramya     | F      | 2000 | 830189301     | 20  |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.01 sec)
```

Exercise 4;

Command:

Select*from student where gender='F';

```
mysql> select*from student_ where gender='F';
```

Output:

```
mysql> select*from student_ where gender='F';
```

regd_no	Name	gender	dob	mobile_number	age
192011332	ramya	F	2000	830189301	20

```
1 row in set (0.01 sec)
```

Command:

```
mysql> select*from student_ where name like'%sh';
```

Output:

regd_no	Name	gender	dob	mobile_number	age
1020192	Nithish	M	2002	930289276	18

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

Command:

```
mysql> select*from student_ where name like'ra%';
```

Output:

```
mysql> select*from student_ where name like'ra%';
```

regd_no	Name	gender	dob	mobile_number	age
192011332	ramya	F	2000	830189301	20

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

Exercise 5;

Between;

Command:

```
mysql> select*from student_ where age between 13 and 19;
```

Output:

```
mysql> select*from student_ where age between 13 and 19;
```

regd_no	Name	gender	dob	mobile_number	age
1020192	Nithish	M	2002	930289276	18
192011342	jashwanth	M	2001	830189301	19

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

In;

Command:

```
mysql> select*from student_ where age in(20,19);
```

Output;

```
mysql> select*from student_ where age in(20,19);
```

regd_no	Name	gender	dob	mobile_number	age
192011342	jashwanth	M	2001	830189301	19
192011332	ramya	F	2000	830189301	20

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

Aggregate Function:

Average;

Commands:

```
mysql> select avg(age) from student_;
```

Output;

```
mysql> select avg(age) from student_;
```

avg(age)
19.0000

```
1 row in set (0.01 sec)
```

Maximum and minimum; **Commands:**

```
mysql> select max(age),min(age) from student_;
```

Output:


```
mysql> select max(age),min(age) from student_;
+-----+-----+
| max(age) | min(age) |
+-----+-----+
|      20 |      18 |
+-----+-----+
1 row in set (0.01 sec)
```

Average, minimum, maximum; **Command:**

```
mysql> select avg(age),max(age),min(age) from student_;
+-----+-----+-----+
|
```

Output:

```
mysql> select avg(age),max(age),min(age) from student_;
+-----+-----+-----+
| avg(age) | max(age) | min(age) |
+-----+-----+-----+
|  19.0000 |      20 |      18 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

Count:

Command:

```
mysql> select count(regd_no),name,gender from student_ where regd_no like '1020%';
+-----+-----+-----+
| count(regd_no) | name      | gender |
+-----+-----+-----+
|
```

Output:

```
mysql> select count(regd_no),name,gender from student_ where regd_no like '1020%';
+-----+-----+-----+
| count(regd_no) | name      | gender |
+-----+-----+-----+
|              1 | Nithish   | M      |
+-----+-----+-----+
1 row in set (0.01 sec)
```

Exercise 6;

Group by- having; **Command:**

```
mysql> select count(regd_no),age
-> from student_
-> group by dob
-> having count(age);
```

Output:

```
mysql> select regd_no,name,gender,dob,mobile_number,age from student_ order by regd_no;
mysql> select count(regd_no),age
-> from student_
-> group by dob
-> having count(age);
```

count(regd_no)	age
1	18
1	19
1	20

3 rows in set (0.01 sec)

Order by:

Commands;

```
mysql> select regd_no,gender,dob,mobile_number,age from student_ order by age;
```

Ouputs:

```
mysql> select regd_no,name,gender,dob,mobile_number,age from student_ order by regd_no;
```

regd_no	name	gender	dob	mobile_number	age
1020192	Nithish	M	2002	930289276	18
192011332	ramya	F	2000	830189301	20
192011342	jashwanth	M	2001	830189301	19

3 rows in set (0.00 sec)

```
mysql> select regd_no,gender,dob,mobile_number,age from student_ order by age;
```

regd_no	gender	dob	mobile_number	age
1020192	M	2002	930289276	18
192011342	M	2001	830189301	19
192011332	F	2000	830189301	20

3 rows in set (0.00 sec)

Exercise-7;

Subquery:

Command:


```
mysql> select*from akash
-> where Age in(select Age from akash where score>90);
+-----+-----+-----+-----+
```

Output:

```
mysql> select*from akash
-> where Age in(select Age from akash where score>90);
+-----+-----+-----+-----+
| Name | Age | score | room_no |
+-----+-----+-----+-----+
| Anil | 18 | 95 | 201 |
| Akash | 19 | 98 | 98 |
+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

Views:

Command:

```
mysql> create view School_Engineering_School as select Campus,Location from Saveetha where No_of_faculty<100;
Query OK, 0 rows affected (0.02 sec)
```

Output:

```
mysql> select*from School_Engineering_school;
+-----+-----+
| Campus | Location |
+-----+-----+
| SEC | Thandalam |
| Dental | Ponumalae |
+-----+-----+
2 rows in set (0.01 sec)

mysql>
```

Index;

Command:

```
mysql> create index index_No_of_courses on Saveetha(No_of_courses);
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Output:

```
mysql> select*from Saveetha index_No_of_courses;
+-----+-----+-----+-----+-----+
| Campus | No_of_courses | No_of_students | Location | No_of_faculty |
+-----+-----+-----+-----+-----+
| SSE | 10 | 10000 | Thandalam | 100 |
| SEC | 9 | 8000 | Thandalam | 90 |
| Dental | 3 | 2000 | Ponumalae | 50 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

Commit:

Command:

```
mysql> insert into Saveetha values('SIMATS',10,11000,15000,'Thandalam')
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> savepoint B;
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> insert into Saveetha values('Medical',10,5000,10000,'Thandalam',20);
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> commit;
Query OK, 0 rows affected (0.00 sec)
```

Saved point; Command:

Rollback;

Command;

```
mysql> rollback to savepoint A;
Query OK, 0 rows affected (0.00 sec)
```