

Practical - 2

```
/*
```

SQL Queries:

a. Design and Develop SQL DDL statements which demonstrate the use of SQL objects such as Table, View, Index, Sequence, Synonym, different constraints etc.

b. Write at least 10 SQL queries on the suitable database application using SQL DML statements.

```
*/
```

```
mysql> show databases;
```

```
+-----+
```

```
| Database      |
```

```
+-----+
```

```
| information_schema |
```

```
| mysql          |
```

```
| performance_schema |
```

```
| sys            |
```

```
| testDB         |
```

```
+-----+
```

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

```
mysql> create database DBMSL_Exp_2;
```

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

```
mysql> use DBMSL_Exp_2;
```

```
Database changed
```

```
mysql> create table StudentInformation (StuRoll int, StuName varchar(45) not null, StuStatus varchar(45), primary key(StuRoll));
```

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

```
mysql> desc StudentInformation;
```

```
+-----+-----+-----+-----+-----+
```

```
| Field    | Type     | Null | Key | Default | Extra |
```

```
+-----+-----+-----+-----+-----+
```

```
| StuRoll   | int      | NO  | PRI | NULL   |       |
```

```
| StuName   | varchar(45) | NO  |     | NULL   |       |
```

```
| StuStatus | varchar(45) | YES |     | NULL   |       |
```

```
+-----+-----+-----+-----+-----+
```

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

```
mysql> alter table StudentInformation add column YearofBirth year;
```

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

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

```
mysql> desc StudentInformation;
```

```
+-----+-----+-----+-----+-----+
```

```
| Field    | Type     | Null | Key | Default | Extra |
```

```
+-----+-----+-----+-----+-----+
```

```
| StuRoll   | int      | NO  | PRI | NULL   |       |
```

```
| StuName   | varchar(45) | NO  |     | NULL   |       |
```

```
| StuStatus | varchar(45) | YES |   | NULL  |   |
| YearofBirth | year      | YES |   | NULL  |   |
+-----+-----+-----+-----+-----+

```

4 rows in set (0.00 sec)

```
mysql> alter table StudentInformation modify StuStatus varchar(15) default 'Incomplete';
```

Query OK, 0 rows affected (0.06 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc StudentInformation;
```

```
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| StuRoll  | int      | NO  | PRI | NULL   |   |
| StuName  | varchar(45) | NO  |   | NULL   |   |
| StuStatus | varchar(15) | YES |   | Incomplete |   |
| YearofBirth | year      | YES |   | NULL   |   |
+-----+-----+-----+-----+-----+

```

4 rows in set (0.00 sec)

```
mysql> alter table StudentInformation rename column YearofBirth to Year;
```

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc StudentInformation;
```

```
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| StuRoll  | int      | NO  | PRI | NULL   |   |
| StuName  | varchar(45) | NO  |   | NULL   |   |
| StuStatus | varchar(15) | YES |   | Incomplete |   |
| Year     | year      | YES |   | NULL   |   |
+-----+-----+-----+-----+-----+

```

4 rows in set (0.00 sec)

```
mysql> alter table StudentInformation add check(Year between 2002 and 2005);
```

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc StudentInformation;
```

```
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| StuRoll  | int      | NO  | PRI | NULL   |   |
| StuName  | varchar(45) | NO  |   | NULL   |   |
| StuStatus | varchar(15) | YES |   | Incomplete |   |
| Year     | year      | YES |   | NULL   |   |
+-----+-----+-----+-----+-----+

```

4 rows in set (0.00 sec)

```
mysql> alter table StudentInformation modify StuRoll int auto_increment;
```

Query OK, 0 rows affected (0.07 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc StudentInformation;

Field	Type	Null	Key	Default	Extra
StuRoll	int	NO	PRI	NULL	auto_increment
StuName	varchar(45)	NO		NULL	
StuStatus	varchar(15)	YES		Incomplete	
Year	year	YES		NULL	

4 rows in set (0.00 sec)

mysql> create index StuIndex on StudentInformation(StuName);

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table StudentInformation auto_increment = 44;

Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc StudentInformation;

Field	Type	Null	Key	Default	Extra
StuRoll	int	NO	PRI	NULL	auto_increment
StuName	varchar(45)	NO	MUL	NULL	
StuStatus	varchar(15)	YES		Incomplete	
Year	year	YES		NULL	

4 rows in set (0.00 sec)

mysql> insert into StudentInformation (StuRoll, StuName, StuStatus, Year) values (55, 'Adil Khan', 'Complete','03');

Query OK, 1 row affected (0.01 sec)

mysql> select * from StudentInformation;

StuRoll	StuName	StuStatus	Year
55	Adil Khan	Complete	2003

1 row in set (0.00 sec)

mysql> insert into StudentInformation (StuName, StuStatus, Year) values ('Suhani Badhe', 'Complete','03');

Query OK, 1 row affected (0.01 sec)

mysql> select * from StudentInformation;

StuRoll	StuName	StuStatus	Year
55	Adil Khan	Complete	2003
	Suhani Badhe	Complete	2003

```
| 55 | Adil Khan | Complete | 2003 |
| 56 | Suhani Badhe | Complete | 2003 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> delete from StudentInformation where StuRoll=56;
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from StudentInformation;
+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
| 55 | Adil Khan | Complete | 2003 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> alter table StudentInformation auto_increment = 44;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> insert into StudentInformation (StuName, StuStatus, Year) values ('Suhani Badhe',
'Incomplete','03');
Query OK, 1 row affected (0.02 sec)
```

```
mysql> select * from StudentInformation;
+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
| 55 | Adil Khan | Complete | 2003 |
| 56 | Suhani Badhe | Complete | 2003 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> update StudentInformation set StuStatus = 'Incomplete' where StuRoll = 56;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from StudentInformation;
+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
| 55 | Adil Khan | Complete | 2003 |
| 56 | Suhani Badhe | Incomplete | 2003 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> update StudentInformation set StuRoll = 44 where StuName like 'v%';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from StudentInformation;
+-----+-----+-----+
```

```

| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
|   44 | Suhani Badhe  | Incomplete | 2003 |
|   55 | Adil Khan    | Complete   | 2003 |
+-----+-----+-----+
2 rows in set (0.00 sec)

```

```

mysql> insert into StudentInformation (StuName, StuStatus, Year) values ('Atharva Gholap',
'Complete','04');
Query OK, 1 row affected (0.01 sec)

```

```

mysql> select * from StudentInformation;
+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
|   44 | Suhani Badhe  | Incomplete | 2003 |
|   55 | Adil Khan    | Complete   | 2003 |
|   57 | Atharva Gholap | Complete   | 2004 |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

```

mysql> update StudentInformation set StuRoll =23, Year ='03' where StuName like '%y';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> select * from StudentInformation;
+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
|   23 | Atharva Gholap | Complete   | 2003 |
|   44 | Suhani Badhe  | Incomplete | 2003 |
|   55 | Adil Khan    | Complete   | 2003 |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

```

mysql> select * from StudentInformation where StuStatus='Incomplete';
+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year |
+-----+-----+-----+
|   44 | Suhani Badhe  | Incomplete | 2003 |
+-----+-----+-----+
1 row in set (0.00 sec)

```

```

mysql> alter table StudentInformation add StuMarks int not null;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

```

```

mysql> desc StudentInformation;
+-----+-----+-----+-----+
| Field  | Type   | Null | Key | Default | Extra       |
+-----+-----+-----+-----+
| StuRoll | int    | NO   | PRI | NULL    | auto_increment |
+-----+-----+-----+-----+

```

```

| StuName | varchar(45) | NO | MUL | NULL    |      |
| StuStatus | varchar(15) | YES |      | Incomplete |      |
| Year    | year     | YES |      | NULL    |      |
| StuMarks | int      | NO  |      | NULL    |      |
+-----+-----+-----+-----+-----+

```

5 rows in set (0.00 sec)

```

mysql> select * from StudentInformation where StuStatus='Incomplete';
+-----+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year | StuMarks |
+-----+-----+-----+-----+
| 44 | Suhani Badhe | Incomplete | 2003 | 0 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

```

mysql> select * from StudentInformation;
+-----+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year | StuMarks |
+-----+-----+-----+-----+
| 23 | Atharva Gholap | Complete  | 2003 | 0 |
| 44 | Suhani Badhe  | Incomplete | 2003 | 0 |
| 55 | Adil Khan     | Complete  | 2003 | 0 |
+-----+-----+-----+-----+
3 rows in set (0.01 sec)

```

```

mysql> update StudentInformation set StuMarks = 75 where StuRoll =23;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> update StudentInformation set StuMarks = 60 where StuRoll = 44;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> update StudentInformation set StuMarks = 69 where StuRoll = 55;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> select * from StudentInformation;
+-----+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year | StuMarks |
+-----+-----+-----+-----+
| 23 | Atharva Gholap | Complete  | 2003 | 75 |
| 44 | Suhani Badhe  | Incomplete | 2003 | 60 |
| 55 | Adil Khan     | Complete  | 2003 | 69 |
+-----+-----+-----+-----+
3 rows in set (0.01 sec)

```

```

mysql> select * from StudentInformation having StuStatus = 'Complete' order by StuMarks desc;
+-----+-----+-----+-----+
| StuRoll | StuName      | StuStatus | Year | StuMarks |
+-----+-----+-----+-----+
| 23 | Atharva Gholap | Complete  | 2003 | 75 |

```

```
| 55 | Adil Khan | Complete | 2003 | 69 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> alter table StudentInformation add StuDoB date;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> desc StudentInformation;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+
| StuRoll | int    | NO   | PRI | NULL    | auto_increment |
| StuName | varchar(45) | NO   | MUL | NULL    |           |
| StuStatus | varchar(15) | YES  |     | Incomplete |           |
| Year   | year   | YES  |     | NULL    |           |
| StuMarks | int    | NO   |     | NULL    |           |
| StuDoB  | date   | YES  |     | NULL    |           |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

```
mysql> alter table StudentInformation drop column StuDoB;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> desc StudentInformation;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+
| StuRoll | int    | NO   | PRI | NULL    | auto_increment |
| StuName | varchar(45) | NO   | MUL | NULL    |           |
| StuStatus | varchar(15) | YES  |     | Incomplete |           |
| Year   | year   | YES  |     | NULL    |           |
| StuMarks | int    | NO   |     | NULL    |           |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```