Assignment 4

DDL Commands

```
mysql> USE order_management_system;
ERROR 1049 (42000): Unknown database 'order_management_system'
mysql> CREATE DATABASE order_management_system;
Query OK, 1 row affected (0.00 sec)

mysql> USE order_management_system;
Database changed
mysql>
mysql> CREATE TABLE customer( cust_id int, fname varchar(20),
lname varchar(20), house_no varchar(5), street_no varchar(5),
street_name varchar(15), city varchar(20), zipcode int, phone_no
int, PRIMARY KEY(cust_id));
Query OK, 0 rows affected (0.00 sec)

mysql> desc customer;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| cust_id     | int         | NO   | PRI | NULL    |       |
| fname       | varchar(20) | YES  |     | NULL    |       |
| lname       | varchar(20) | YES  |     | NULL    |       |
| house_no    | varchar(5)  | YES  |     | NULL    |       |
| street_no   | varchar(5)  | YES  |     | NULL    |       |
| street_name | varchar(15) | YES  |     | NULL    |       |
| city        | varchar(20) | YES  |     | NULL    |       |
| zipcode     | int         | YES  |     | NULL    |       |
| phone_no    | int         | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
9 rows in set (0.01 sec)

mysql> ALTER TABLE customer modify fname varchar(20) NOT NULL,
modify lname varchar(20) NOT NULL, modify house_no varchar(5) NOT
NULL, modify street_no varchar(5) NOT NULL, modify street_name
varchar(15) NOT NULL, modify city varchar(20) NOT NULL, modify
zipcode int NOT NULL, modify phone_no int NOT NULL;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc customer;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| cust_id     | int         | NO   | PRI | NULL    |       |
| fname       | varchar(20) | NO   |     | NULL    |       |
| lname       | varchar(20) | NO   |     | NULL    |       |
```

```
| house_no    | varchar(5)  | NO   |     | NULL    |       |
| street_no   | varchar(5)  | NO   |     | NULL    |       |
| street_name | varchar(15) | NO   |     | NULL    |       |
| city        | varchar(20) | NO   |     | NULL    |       |
| zipcode     | int         | NO   |     | NULL    |       |
| phone_no    | int         | NO   |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
9 rows in set (0.00 sec)

mysql> ALTER TABLE customer add UNIQUE(phone_no);
Query OK, 0 rows affected (0.00 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc customer;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| cust_id     | int         | NO   | PRI | NULL    |       |
| fname       | varchar(20) | NO   |     | NULL    |       |
| lname       | varchar(20) | NO   |     | NULL    |       |
| house_no    | varchar(5)  | NO   |     | NULL    |       |
| street_no   | varchar(5)  | NO   |     | NULL    |       |
| street_name | varchar(15) | NO   |     | NULL    |       |
| city        | varchar(20) | NO   |     | NULL    |       |
| zipcode     | int         | NO   |     | NULL    |       |
| phone_no    | int         | NO   | UNI | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
9 rows in set (0.01 sec)

mysql> CREATE TABLE orders( order_id int NOT NULL AUTO_INCREMENT,
cust_id int NOT NULL, total_price float NOT NULL, ts datetime NOT
NULL DEFAULT CURRENT_TIMESTAMP, PRIMARY KEY (order_id), FOREIGN
KEY(cust_id) REFERENCES customer(cust_id) ON DELETE CASCADE);
Query OK, 0 rows affected (0.01 sec)

mysql> desc orders;
+-------------+----------+------+-----+-------------------+-------------------+
| Field       | Type     | Null | Key | Default           | Extra             |
+-------------+----------+------+-----+-------------------+-------------------+
| order_id    | int      | NO   | PRI | NULL              | auto_increment    |
| cust_id     | int      | NO   | MUL | NULL              |                   |
| total_price | float    | NO   |     | NULL              |                   |
| ts          | datetime | NO   |     | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
+-------------+----------+------+-----+-------------------+-------------------+
4 rows in set (0.00 sec)

mysql> CREATE TABLE category(cat_id int PRIMARY KEY, name
varchar(20) NOT NULL);
Query OK, 0 rows affected (0.00 sec)

mysql> desc category;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
```

```
| cat_id | int         | NO   | PRI | NULL    |       |
| name   | varchar(20) | NO   |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> CREATE TABLE product(product_id int, name varchar(20) NOT
NULL, manufacturer varchar(20) NOT NULL, price float NOT NULL,
stock int NOT NULL, cat_id int NOT NULL, PRIMARY KEY(product_id),
FOREIGN KEY(cat_id) REFERENCES category(cat_id));
Query OK, 0 rows affected (0.01 sec)

mysql> desc product;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| product_id   | int         | NO   | PRI | NULL    |       |
| name         | varchar(20) | NO   |     | NULL    |       |
| manufacturer | varchar(20) | NO   |     | NULL    |       |
| price        | float       | NO   |     | NULL    |       |
| stock        | int         | NO   |     | NULL    |       |
| cat_id       | int         | NO   | MUL | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> ALTER TABLE product MODIFY name varchar(35), MODIFY
manufacturer varchar(35);
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc product;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| product_id   | int         | NO   | PRI | NULL    |       |
| name         | varchar(35) | YES  |     | NULL    |       |
| manufacturer | varchar(35) | YES  |     | NULL    |       |
| price        | float       | NO   |     | NULL    |       |
| stock        | int         | NO   |     | NULL    |       |
| cat_id       | int         | NO   | MUL | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> CREATE TABLE selects(order_id int NOT NULL, product_id int
NOT NULL, quantity int NOT NULL, price float NOT NULL, FOREIGN
KEY(order_id) REFERENCES orders(order_id),FOREIGN KEY(product_id)
REFERENCES product(product_id));
Query OK, 0 rows affected (0.01 sec)

mysql> desc selects;
+------------+-------+------+-----+---------+-------+
| Field      | Type  | Null | Key | Default | Extra |
+------------+-------+------+-----+---------+-------+
```

```
| order_id   | int   | NO   | MUL | NULL    |       |
| product_id | int   | NO   | MUL | NULL    |       |
| quantity   | int   | NO   |     | NULL    |       |
| price      | float | NO   |     | NULL    |       |
+------------+-------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> ALTER TABLE selects add PRIMARY KEY(order_id, product_id);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc selects;
+------------+-------+------+-----+---------+-------+
| Field      | Type  | Null | Key | Default | Extra |
+------------+-------+------+-----+---------+-------+
| order_id   | int   | NO   | PRI | NULL    |       |
| product_id | int   | NO   | PRI | NULL    |       |
| quantity   | int   | NO   |     | NULL    |       |
| price      | float | NO   |     | NULL    |       |
+------------+-------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> show tables;
+----------------------------------+
| Tables_in_order_management_system |
+----------------------------------+
| category                         |
| customer                         |
| orders                           |
| product                          |
| selects                          |
+----------------------------------+
5 rows in set (0.00 sec)
```

DCL Commands

```
mysql> select user from mysql.user;
+------------------+
| user             |
+------------------+
| mysql.infoschema |
| mysql.session    |
| mysql.sys        |
| root             |
+------------------+
4 rows in set (0.00 sec)

mysql> create user someshwar;
Query OK, 0 rows affected (0.00 sec)

mysql> select user from mysql.user;
```

```
+------------------+
| user             |
+------------------+
| someshwar        |
| mysql.infoschema |
| mysql.session    |
| mysql.sys        |
| root             |
+------------------+
5 rows in set (0.00 sec)

mysql> use order_management_system;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> grant select on customer to someshwar;
Query OK, 0 rows affected (0.00 sec)

mysql> exit
Bye
Someshwars-MacBook-Pro:~ someshwargaikwad$ mysql -u someshwar
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 12
Server version: 8.0.21 MySQL Community Server - GPL

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reserved.

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current
input statement.

mysql> use order_management_system;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select * from customer;
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+-----------+
| cust_id | fname     | lname     | house_no | street_no | street_name  | city     | zipcode | phone_no  |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+-----------+
|      49 | Harsh     | Sakhrani  | 32/A     | 21        | East Street  | Pune     | 411041  | 999922221 |
|      50 | Saloni    | Parekh    | 20/C     | 29        | S Street     | Pune     | 411039  | 809427221 |
|      51 | Anuj      | Saoji     | 12/C     | 69        | West Street  | Kolhapur | 211039  | 809417221 |
|      52 | Onkar     | Sharma    | 30/D     | 1         | Rich Street  | Mumbai   | 111039  | 609427221 |
|      53 | Prathamesh| Shiralkar | 33/B     | 11        | North Street | Nagpur   | 361232  | 899422221 |
|      54 | Muskaan   | Shraogi   | 32/A     | 91        | Back Street  | Nasik    | 311232  | 999422221 |
|      55 | Shreyas   | Kalrao    | 17/B     | 51        | No Street    | Pune     | 411032  | 899427221 |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+-----------+
7 rows in set (0.00 sec)

mysql> drop table selects;
```

```
ERROR 1142 (42000): DROP command denied to user
'someshwar'@'localhost' for table 'selects'
mysql> select * from orders;
ERROR 1142 (42000): SELECT command denied to user
'someshwar'@'localhost' for table 'orders'
mysql> exit
Bye
Someshwars-MacBook-Pro:~ someshwargaikwad$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.21 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current
input statement.

mysql> revoke select on order_management_system.customer from
someshwar;
Query OK, 0 rows affected (0.01 sec)

mysql> exit
Bye
Someshwars-MacBook-Pro:~ someshwargaikwad$ mysql -u someshwar
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 8.0.21 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current
input statement.

mysql> use order_management_system;
ERROR 1044 (42000): Access denied for user 'someshwar'@'%' to
database 'order_management_system'
mysql> exit
Bye
Someshwars-MacBook-Pro:~ someshwargaikwad$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
```

```
Your MySQL connection id is 15
Server version: 8.0.21 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current
input statement.

mysql> drop user someshwar;
Query OK, 0 rows affected (0.00 sec)

mysql> select user from mysql.user;
+-------------------+
| user              |
+-------------------+
| mysql.infoschema  |
| mysql.session     |
| mysql.sys         |
| root              |
+-------------------+
4 rows in set (0.00 sec)
```

TCL Commands

```
mysql> use order_management_system;
Database changed
mysql> start transaction;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from customer;
+---------+-----------+-----------+----------+----------+-------------+----------+---------+-----------+
| cust_id | fname     | lname     | house_no | street_no | street_name | city     | zipcode | phone_no  |
+---------+-----------+-----------+----------+----------+-------------+----------+---------+-----------+
|      49 | Harsh     | Sakhrani  | 32/A     | 21       | East Street | Pune     | 411041  | 999922221 |
|      50 | Saloni    | Parekh    | 20/C     | 29       | S Street    | Pune     | 411039  | 809427221 |
|      51 | Anuj      | Saoji     | 12/C     | 69       | West Street | Kolhapur | 211039  | 809417221 |
|      52 | Onkar     | Sharma    | 30/D     | 1        | Rich Street | Mumbai   | 111039  | 609427221 |
|      53 | Prathamesh| Shiralkar | 33/B     | 11       | North Street| Nagpur   | 361232  | 899422221 |
|      54 | Muskaan   | Shraogi   | 32/A     | 91       | Back Street | Nasik    | 311232  | 999422221 |
|      55 | Shreyas   | Kalrao    | 17/B     | 51       | No Street   | Pune     | 411032  | 899427221 |
+---------+-----------+-----------+----------+----------+-------------+----------+---------+-----------+
7 rows in set (0.00 sec)

mysql> savepoint s1;
Query OK, 0 rows affected (0.00 sec)

mysql> delete from customer where cust_id=53;
Query OK, 1 row affected (0.01 sec)

mysql> select * from customer;
+---------+---------+---------+----------+----------+-------------+---------+---------+-----------+
| cust_id | fname   | lname   | house_no | street_no | street_name | city    | zipcode | phone_no  |
```

```
+---------+----------+----------+----------+----------+-------------+----------+---------+----------+
|      49 | Harsh    | Sakhrani | 32/A     | 21       | East Street | Pune     |  411041 | 999922221 |
|      50 | Saloni   | Parekh   | 20/C     | 29       | S Street    | Pune     |  411039 | 809427221 |
|      51 | Anuj     | Saoji    | 12/C     | 69       | West Street | Kolhapur |  211039 | 809417221 |
|      52 | Onkar    | Sharma   | 30/D     | 1        | Rich Street | Mumbai   |  111039 | 609427221 |
|      54 | Muskaan  | Shraogi  | 32/A     | 91       | Back Street | Nasik    |  311232 | 999422221 |
|      55 | Shreyas  | Kalrao   | 17/B     | 51       | No Street   | Pune     |  411032 | 899427221 |
+---------+----------+----------+----------+----------+-------------+----------+---------+----------+
6 rows in set (0.00 sec)

mysql> rollback to s1;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from customer;
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
| cust_id | fname     | lname     | house_no | street_no | street_name  | city     | zipcode | phone_no |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
|      49 | Harsh     | Sakhrani  | 32/A     | 21        | East Street  | Pune     |  411041 | 999922221 |
|      50 | Saloni    | Parekh    | 20/C     | 29        | S Street     | Pune     |  411039 | 809427221 |
|      51 | Anuj      | Saoji     | 12/C     | 69        | West Street  | Kolhapur |  211039 | 809417221 |
|      52 | Onkar     | Sharma    | 30/D     | 1         | Rich Street  | Mumbai   |  111039 | 609427221 |
|      53 | Prathamesh| Shiralkar | 33/B     | 11        | North Street | Nagpur   |  361232 | 899422221 |
|      54 | Muskaan   | Shraogi   | 32/A     | 91        | Back Street  | Nasik    |  311232 | 999422221 |
|      55 | Shreyas   | Kalrao    | 17/B     | 51        | No Street    | Pune     |  411032 | 899427221 |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
7 rows in set (0.00 sec)

mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> start transaction;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from customer;
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
| cust_id | fname     | lname     | house_no | street_no | street_name  | city     | zipcode | phone_no |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
|      49 | Harsh     | Sakhrani  | 32/A     | 21        | East Street  | Pune     |  411041 | 999922221 |
|      50 | Saloni    | Parekh    | 20/C     | 29        | S Street     | Pune     |  411039 | 809427221 |
|      51 | Anuj      | Saoji     | 12/C     | 69        | West Street  | Kolhapur |  211039 | 809417221 |
|      52 | Onkar     | Sharma    | 30/D     | 1         | Rich Street  | Mumbai   |  111039 | 609427221 |
|      53 | Prathamesh| Shiralkar | 33/B     | 11        | North Street | Nagpur   |  361232 | 899422221 |
|      54 | Muskaan   | Shraogi   | 32/A     | 91        | Back Street  | Nasik    |  311232 | 999422221 |
|      55 | Shreyas   | Kalrao    | 17/B     | 51        | No Street    | Pune     |  411032 | 899427221 |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
7 rows in set (0.00 sec)

mysql> savepoint s1;
Query OK, 0 rows affected (0.00 sec)

mysql> insert into customer values(56,"Someshwar","Gaikwad","94/
A","31","Sarvodaya","Pune",411036,77506874);
Query OK, 1 row affected (0.00 sec)

mysql> select * from customer;
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
| cust_id | fname     | lname     | house_no | street_no | street_name  | city     | zipcode | phone_no |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
|      49 | Harsh     | Sakhrani  | 32/A     | 21        | East Street  | Pune     |  411041 | 999922221 |
|      50 | Saloni    | Parekh    | 20/C     | 29        | S Street     | Pune     |  411039 | 809427221 |
|      51 | Anuj      | Saoji     | 12/C     | 69        | West Street  | Kolhapur |  211039 | 809417221 |
|      52 | Onkar     | Sharma    | 30/D     | 1         | Rich Street  | Mumbai   |  111039 | 609427221 |
|      53 | Prathamesh| Shiralkar | 33/B     | 11        | North Street | Nagpur   |  361232 | 899422221 |
|      54 | Muskaan   | Shraogi   | 32/A     | 91        | Back Street  | Nasik    |  311232 | 999422221 |
|      55 | Shreyas   | Kalrao    | 17/B     | 51        | No Street    | Pune     |  411032 | 899427221 |
|      56 | Someshwar | Gaikwad   | 94/A     | 31        | Sarvodaya    | Pune     |  411036 |  77506874 |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+----------+
8 rows in set (0.00 sec)

mysql> rollback to s1;
```

```
Query OK, 0 rows affected (0.00 sec)

mysql> select * from customer;
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+-----------+
| cust_id | fname     | lname     | house_no | street_no | street_name  | city     | zipcode | phone_no  |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+-----------+
|      49 | Harsh     | Sakhrani  | 32/A     | 21        | East Street  | Pune     |  411041 | 999922221 |
|      50 | Saloni    | Parekh    | 20/C     | 29        | S Street     | Pune     |  411039 | 809427221 |
|      51 | Anuj      | Saoji     | 12/C     | 69        | West Street  | Kolhapur |  211039 | 809417221 |
|      52 | Onkar     | Sharma    | 30/D     | 1         | Rich Street  | Mumbai   |  111039 | 609427221 |
|      53 | Prathamesh | Shiralkar | 33/B    | 11        | North Street | Nagpur   |  361232 | 899422221 |
|      54 | Muskaan   | Shraogi   | 32/A     | 91        | Back Street  | Nasik    |  311232 | 999422221 |
|      55 | Shreyas   | Kalrao    | 17/B     | 51        | No Street    | Pune     |  411032 | 899427221 |
+---------+-----------+-----------+----------+-----------+--------------+----------+---------+-----------+
7 rows in set (0.00 sec)

mysql> commit;
Query OK, 0 rows affected (0.00 sec)
```