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ROLLNO:-PD-33

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Perform DDL and DCL commands

Create a table with all constraints ,truncate a table, drop a table ,alter table by adding a column , dropping a column, adding and dropping different constraints, modify data type and length of column, , rename table , column , create a user, grant different privileges and revoke.

Create a database which consist of the following tables with appropriate constraints like primary key, foreign key, check constrains, not null etc.

- Hotel (HotelNo, Name, City) HotelNo is the primary key
- Room (RoomNo, HotelNo, Type, Price)
- Booking (HotelNo, GuestNo, DateFrom, DateTo, RoomNo)
- Guest (GuestNo, GuestName, GuestAddress) GuestNo is primary key

1.) CREATE ALL TABLES AND DESCRIBED USING DESC :-

```
MySQL localhost:33060+ ssl assn2 SQL > create table hotel(
    -> hotelno int primary key ,
    -> name varchar(10) not null ,
    -> city varchar(10) not null);
Query OK, 0 rows affected (1.8198 sec)
MySQL localhost:33060+ ssl assn2 SQL > show tables;
+-----+
| Tables_in_assn2 |
+-----+
| hotel            |
+-----+
1 row in set (0.0209 sec)
MySQL localhost:33060+ ssl assn2 SQL > desc hotel;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelno | int       | NO   | PRI | NULL    |       |
| name    | varchar(10) | NO   |     | NULL    |       |
| city    | varchar(10) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.1321 sec)
```

```
MySQL localhost:33060+ ssl assn2 SQL > create table room(
    -> roomno int primary key ,
    -> type varchar(5) not null ,
    -> price float not null ,
    -> hotelno int ,
    -> foreign key(hotelno) references hotel(hotelno));
Query OK, 0 rows affected (1.6682 sec)
MySQL localhost:33060+ ssl assn2 SQL > desc room;
```

Field	Type	Null	Key	Default	Extra
roomno	int	NO	PRI	NULL	
type	varchar(5)	NO		NULL	
price	float	NO		NULL	
hotelno	int	YES	MUL	NULL	

4 rows in set (0.2520 sec)

```
MySQL localhost:33060+ ssl assn2 SQL > create table guest(
    -> guestno int primary key,
    -> guestname varchar(20) not null,
    -> guestadd varchar(25) );
Query OK, 0 rows affected (0.8343 sec)
MySQL localhost:33060+ ssl assn2 SQL > desc guest;
```

Field	Type	Null	Key	Default	Extra
guestno	int	NO	PRI	NULL	
guestname	varchar(20)	NO		NULL	
guestadd	varchar(25)	YES		NULL	

3 rows in set (0.2703 sec)

```
MySQL localhost:33060+ ssl assn2 SQL > create table booking(
    -> hotelno int ,
    -> roomno int ,
    -> guestno int ,
    -> datefrom date ,
    -> dateto date ,
    -> primary key(roomno , hotelno , guestno) ,
    -> foreign key (guestno) references guest(guestno) ,
    -> foreign key(hotelno , roomno) references room(hotelno , roomno));
Query OK, 0 rows affected (1.3915 sec)
MySQL localhost:33060+ ssl assn2 SQL > desc booking;
```

Field	Type	Null	Key	Default	Extra
hotelno	int	NO	PRI	NULL	
roomno	int	NO	PRI	NULL	
guestno	int	NO	PRI	NULL	
datefrom	date	YES		NULL	
dateto	date	YES		NULL	

5 rows in set (0.3608 sec)

2.) ALTER TABLE BY ADDING A COLUMN :-

```
MySQL localhost:33060+ ssl assn2 SQL > alter table hotel ADD restuarent varchar(15);
Query OK, 0 rows affected (0.7356 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl assn2 SQL > desc hotel;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelno    | int           | NO   | PRI | NULL    |       |
| name       | varchar(10)   | NO   |     | NULL    |       |
| city       | varchar(10)   | NO   |     | NULL    |       |
| restuarent | varchar(15)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.1961 sec)
```

3.) ALTER TABLE BY ADDING NON NULL CONSTRAINTS AND DROPPING A COLUMN :-

```
MySQL localhost:33060+ ssl assn2 SQL > alter table hotel modify restuarent varchar(15) not null;
Query OK, 0 rows affected (1.6360 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl assn2 SQL > desc hotel;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelno    | int           | NO   | PRI | NULL    |       |
| name       | varchar(10)   | NO   |     | NULL    |       |
| city       | varchar(10)   | NO   |     | NULL    |       |
| restuarent | varchar(15)   | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0025 sec)
```

```
MySQL localhost:33060+ ssl assn2 SQL > alter table hotel drop column restuarent;
Query OK, 0 rows affected (2.0535 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl assn2 SQL > desc hotel;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelno    | int           | NO   | PRI | NULL    |       |
| name       | varchar(10)   | NO   |     | NULL    |       |
| city       | varchar(10)   | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0753 sec)
```

4.) ALTER TABLE BY MODIFYING DATATYPE :-

```
MySQL localhost:33060+ ssl assn2 SQL > alter table hotel modify name varchar(20);
Query OK, 0 rows affected (2.1102 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl assn2 SQL > desc hotel;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelno | int       | NO   | PRI | NULL    |      |
| name    | varchar(20) | YES  |     | NULL    |      |
| city    | varchar(10) | NO   |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0028 sec)
```

5.) RENAME OF TABLE :-

```
MySQL localhost:33060+ ssl assn2 SQL > alter table hotel rename to hotels;
Query OK, 0 rows affected (0.5296 sec)
MySQL localhost:33060+ ssl assn2 SQL > show tables;
+-----+
| Tables_in_assn2 |
+-----+
| booking          |
| guest            |
| hotels            |
| room             |
+-----+
4 rows in set (0.1198 sec)
```

6.) RENAME COLUMN USING ALTER :-

```
MySQL localhost:33060+ ssl assn2 SQL > alter table hotels change column name hotelname varchar(20);
Query OK, 0 rows affected (0.9524 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl assn2 SQL > desc hotels;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelno    | int       | NO   | PRI | NULL    |      |
| hotelname  | varchar(20) | YES  |     | NULL    |      |
| city       | varchar(10) | NO   |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.1721 sec)
```

7.) CREATE USER AND GIVE PERMISSION USING GRANT AND THEN REVOKE THEM:-

```
MySQL localhost:33060+ ssl assn2 SQL > create user 'as2'@'localhost' identified by '123';
Query OK, 0 rows affected (0.2377 sec)
MySQL localhost:33060+ ssl assn2 SQL > grant select on assn2.hotels to 'as2'@'localhost';
Query OK, 0 rows affected (0.2071 sec)
MySQL localhost:33060+ ssl assn2 SQL > revoke select on assn2.hotels from 'as2'@'localhost';
ERROR: 1147: There is no such grant defined for user 'as2' on host 'localhost' on table 'hotels'
MySQL localhost:33060+ ssl assn2 SQL > revoke select on assn2.hotels from 'as2'@'localhost';
Query OK, 0 rows affected (0.1244 sec)
```

```
MySQL localhost:33060+ ssl SQL > show databases
-> ;
+-----+
| Database |
+-----+
| assn2    |
| information_schema |
+-----+
2 rows in set (0.0020 sec)
MySQL localhost:33060+ ssl SQL > use assn2
Default schema set to `assn2`.
Fetching table and column names from `assn2` for auto-completion... Press ^C to stop.
MySQL localhost:33060+ ssl assn2 SQL > show tables;
+-----+
| Tables_in_assn2 |
+-----+
| hotels           |
+-----+
1 row in set (0.0028 sec)
MySQL localhost:33060+ ssl assn2 SQL > select * from hotels;
+-----+-----+-----+
| hotelNo | hotelname | city |
+-----+-----+-----+
| 1       | jw marriott | pune |
+-----+-----+-----+
1 row in set (0.0370 sec)
MySQL localhost:33060+ ssl assn2 SQL > select * from hotels;
ERROR: 1142: SELECT command denied to user 'as2'@'localhost' for table 'hotels'
```

8.) DROP A TABLE :-

```
MySQL localhost:33060+ ssl assn2 SQL > drop table booking;
Query OK, 0 rows affected (2.0035 sec)
MySQL localhost:33060+ ssl assn2 SQL > show tables;
+-----+
| Tables_in_assn2 |
+-----+
| guest           |
| hotels          |
| room            |
+-----+
3 rows in set (0.0751 sec)
```

9.) TRUNCATE A TABLE :-

```
MySQL localhost:33060+ ssl assn2 SQL > truncate guest;
Query OK, 0 rows affected (1.0774 sec)
MySQL localhost:33060+ ssl assn2 SQL > select * from guest;
Empty set (0.0015 sec)
```

10.) SETTING A DEFAULT VALUE USING ALTER :-

```
MySQL localhost:33060+ ssl assn2 SQL > alter table room alter type set Default "Doub";
Query OK, 0 rows affected (0.4395 sec)
Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl assn2 SQL > desc room;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| roomno | int | NO | PRI | NULL | |
| type | varchar(5) | NO | | Doub | |
| price | float | NO | | NULL | |
| hotelno | int | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.1242 sec)
```

Create a database which consist of the following tables with appropriate constraints like primary key, foreign key, check constrains, not null etc.

- Employee(emp_no,name,skill,pay-rate) eno primary key
- Position(posting_no,skill) posting_no primary key
- Duty_allocation(posting_no,emp_no,day,shift)

1.) CREATE ALL TABLES AND DESCRIBED USING DESC :-

```
MySQL localhost:33060+ ssl sys SQL > create database ass2emp
-> ;
Query OK, 1 row affected (0.1786 sec)
MySQL localhost:33060+ ssl sys SQL > show databases;
+-----+
| Database |
+-----+
| ass2emp  |
| assn2    |
| hs       |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| sys      |
| test     |
| world    |
+-----+
10 rows in set (0.1169 sec)
MySQL localhost:33060+ ssl sys SQL > use ass2emp;
Default schema set to `ass2emp`.
Fetching table and column names from `ass2emp` for auto-completion... Press ^C to stop.
MySQL localhost:33060+ ssl ass2emp SQL >
```

```
MySQL localhost:33060+ ssl ass2emp SQL > create table emp(
-> eno int primary key ,
-> ename varchar(20) not null ,
-> zip int ,
-> hdate date not null);
Query OK, 0 rows affected (2.1610 sec)
MySQL localhost:33060+ ssl ass2emp SQL > desc emp;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| eno    | int           | NO   | PRI | NULL    |       |
| ename  | varchar(20)   | NO   |     | NULL    |       |
| zip    | int           | YES  |     | NULL    |       |
| hdate  | date          | NO   |     | NULL    |       |
+-----+
4 rows in set (0.0037 sec)
```

```
MySQL localhost:33060+ ssl ass2emp SQL > create table parts(
    -> pno int primary key ,
    -> pname varchar(20) not null,
    -> qtyonhand int ,
    -> price decimal(6,2));
```

Query OK, 0 rows affected (0.5788 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > desc parts;
```

Field	Type	Null	Key	Default	Extra
pno	int	NO	PRI	NULL	
pname	varchar(20)	NO		NULL	
qtyonhand	int	YES		NULL	
price	decimal(6,2)	YES		NULL	

4 rows in set (0.0798 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > create table customer(
    -> cno int primary key ,
    -> cname varchar(30) not null ,
    -> street varchar(20) ,
    -> zip int not null);
```

Query OK, 0 rows affected (0.7764 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > desc customer;
```

Field	Type	Null	Key	Default	Extra
cno	int	NO	PRI	NULL	
cname	varchar(30)	NO		NULL	
street	varchar(20)	YES		NULL	
zip	int	NO		NULL	

4 rows in set (0.2814 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > create table odetails(ono int primary key ,
    -> pno int ,
    -> qty int ,
    -> foreign key(pno) references parts(pno));
```

Query OK, 0 rows affected (0.8268 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > desc odetails;
```

Field	Type	Null	Key	Default	Extra
ono	int	NO	PRI	NULL	
pno	int	YES	MUL	NULL	
qty	int	YES		NULL	

3 rows in set (0.0882 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > create table zipcode(
    -> zip int ,
    -> city varchar(20));
```

Query OK, 0 rows affected (0.9440 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > desc zipcode;
```

Field	Type	Null	Key	Default	Extra
zip	int	YES		NULL	
city	varchar(20)	YES		NULL	

2 rows in set (0.0031 sec)

2.) ALTER TABLE BY ADDING A COLUMN :-

```
MySQL localhost:33060+ ssl ass2emp SQL > show tables;
+-----+
| Tables_in_ass2emp |
+-----+
| customer          |
| emp               |
| odetails          |
| parts             |
| zipcode           |
+-----+
5 rows in set (0.0385 sec)
```

```
MySQL localhost:33060+ ssl ass2emp SQL > alter table customer add ccity varchar(25);
Query OK, 0 rows affected (0.7998 sec)
```

Records: 0 Duplicates: 0 Warnings: 0

```
MySQL localhost:33060+ ssl ass2emp SQL > desc customer;
```

Field	Type	Null	Key	Default	Extra
cno	int	NO	PRI	NULL	
cname	varchar(30)	NO		NULL	
street	varchar(20)	YES		NULL	
zip	int	NO		NULL	
ccity	varchar(25)	YES		NULL	

5 rows in set (0.2276 sec)

3.) ALTER TABLE BY MODIFYING DATATYPE :-

```
MySQL localhost:33060+ ssl ass2emp SQL > alter table zipcode modify zip decimal(6,2);
Query OK, 0 rows affected (4.7613 sec)
```

Records: 0 Duplicates: 0 Warnings: 0

```
MySQL localhost:33060+ ssl ass2emp SQL > desc zipcode;
```

Field	Type	Null	Key	Default	Extra
zip	decimal(6,2)	YES		NULL	
city	varchar(20)	YES		NULL	

2 rows in set (0.0264 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > alter table zipcode modify zip int;
Query OK, 0 rows affected (1.7258 sec)
```

Records: 0 Duplicates: 0 Warnings: 0

```
MySQL localhost:33060+ ssl ass2emp SQL > desc zipcode;
```

Field	Type	Null	Key	Default	Extra
zip	int	YES		NULL	
city	varchar(20)	YES		NULL	

2 rows in set (0.0021 sec)

4.) ALTER TABLE BY ADDING NON NULL CONSTRAINTS AND DROPPING A COLUMN :-

```
MySQL localhost:33060+ ssl ass2emp SQL > alter table customer modify ccity varchar(25) not null;
Query OK, 0 rows affected (2.8029 sec)
```

Records: 0 Duplicates: 0 Warnings: 0

```
MySQL localhost:33060+ ssl ass2emp SQL > desc customer;
```

Field	Type	Null	Key	Default	Extra
cno	int	NO	PRI	NULL	
cname	varchar(30)	NO		NULL	
street	varchar(20)	YES		NULL	
zip	int	NO		NULL	
ccity	varchar(25)	NO		NULL	

5 rows in set (0.0016 sec)

```
MySQL localhost:33060+ ssl ass2emp SQL > alter table customer drop ccity;
Query OK, 0 rows affected (1.5304 sec)
```

Records: 0 Duplicates: 0 Warnings: 0

```
MySQL localhost:33060+ ssl ass2emp SQL > desc customer;
```

Field	Type	Null	Key	Default	Extra
cno	int	NO	PRI	NULL	
cname	varchar(30)	NO		NULL	
street	varchar(20)	YES		NULL	
zip	int	NO		NULL	

4 rows in set (0.1132 sec)

5.) RENAME TABLE USING ALTER :-

```
MySQL localhost:33060+ ssl ass2emp SQL > alter table zipcode rename to zip_code;
Query OK, 0 rows affected (0.4422 sec)
```

```
MySQL localhost:33060+ ssl ass2emp SQL > show tabs;
ERROR: 1064: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'tabs' at line 1
```

```
MySQL localhost:33060+ ssl ass2emp SQL > show tables;
```

Tables_in_ass2emp
customer
emp
odetails
parts
zip_code

5 rows in set (0.1158 sec)

6.) CREATE USER AND GRANT PERMISSIONS AND REVOKE THEM :-

```
MySQL localhost:33060+ ssl ass2emp SQL > create user 'assn2p2'@'localhost';
Query OK, 0 rows affected (0.2495 sec)
MySQL localhost:33060+ ssl ass2emp SQL > create user 'assn2p2'@'localhost' identified by 'abc'
-;
ERROR: 1396: Operation CREATE USER failed for 'assn2p2'@'localhost'
MySQL localhost:33060+ ssl ass2emp SQL > create user 'ass2prob2'@'localhost' identified by '1234';
Query OK, 0 rows affected (0.0801 sec)
MySQL localhost:33060+ ssl ass2emp SQL > grant select on ass2emp.emp to 'ass2prob2'@'localhost';
ERROR: 1410: You are not allowed to create a user with GRANT
MySQL localhost:33060+ ssl ass2emp SQL > insert into emp values(1,'Divyang',311001,31april);
ERROR: 1054: Unknown column '31april' in 'field list'
MySQL localhost:33060+ ssl ass2emp SQL > insert into emp values(1,'Divyang',311001,01/08/2020);
Query OK, 1 row affected (0.1131 sec)
MySQL localhost:33060+ ssl ass2emp SQL > select * from emp;
+-----+-----+-----+-----+
| eno | ename | zip | hdate |
+-----+-----+-----+-----+
| 1 | Divyang | 311001 | 0000-00-00 |
+-----+-----+-----+-----+
1 row in set (0.0009 sec)
MySQL localhost:33060+ ssl ass2emp SQL > insert into emp values(1,'Divyang',311001,2020/04/08);
ERROR: 1292: Incorrect date value: '63.125000000000000000' for column 'hdate' at row 1
MySQL localhost:33060+ ssl ass2emp SQL > select * from emp;
+-----+-----+-----+-----+
| eno | ename | zip | hdate |
+-----+-----+-----+-----+
| 1 | Divyang | 311001 | 0000-00-00 |
+-----+-----+-----+-----+
1 row in set (0.0008 sec)
MySQL localhost:33060+ ssl ass2emp SQL > grant select on ass2emp.emp to 'ass2prob2'@'localhost';
ERROR: 1410: You are not allowed to create a user with GRANT
MySQL localhost:33060+ ssl ass2emp SQL > grant select on ass2emp.emp to 'ass2prob2'@'localhost';
ERROR: 1410: You are not allowed to create a user with GRANT
MySQL localhost:33060+ ssl ass2emp SQL > grant select on ass2emp.emp to 'ass2prob2'@'localhost';
Query OK, 0 rows affected (0.1716 sec)
MySQL localhost:33060+ ssl ass2emp SQL > revoke select on ass2emp.emp from 'ass2prob2'@'localhost';
Query OK, 0 rows affected (0.1973 sec)
```

```
MySQL JS > \sql
Switching to SQL mode... Commands end with ;
MySQL SQL > \connect ass2prob2@localhost
Creating a session to 'ass2prob2@localhost': ****
Please provide the password for 'ass2prob2@localhost': ****
Save password for 'ass2prob2@localhost'? [Y]es/[N]o/[e]x[ist]ing (default No): Y
Fetching schema names for autocompletion... Press ^C to stop.
Your MySQL connection id is 15 (X protocol)
Server version: 8.0.21 MySQL Community Server - GPL
No default schema selected; type \use <schema> to set one.
MySQL localhost:33060+ ssl SQL > show databases;
ERROR: 1064: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'databases' at line 1
MySQL localhost:33060+ ssl SQL > show databases;
+-----+
| Database |
+-----+
| ass2emp |
| information_schema |
+-----+
2 rows in set (0.1022 sec)
MySQL localhost:33060+ ssl SQL > use ass2emp;
Default schema set to 'ass2emp'.
Fetching table and column names from 'ass2emp' for auto-completion... Press ^C to stop.
MySQL localhost:33060+ ssl ass2emp SQL > show tables;
+-----+
| Tables_in_ass2emp |
+-----+
| emp |
+-----+
1 row in set (0.0020 sec)
MySQL localhost:33060+ ssl ass2emp SQL > select * from emp;
+-----+-----+-----+-----+
| eno | ename | zip | hdate |
+-----+-----+-----+-----+
| 1 | Divyang | 311001 | 0000-00-00 |
+-----+-----+-----+-----+
1 row in set (0.0010 sec)
MySQL localhost:33060+ ssl ass2emp SQL > select * from emp;
ERROR: 1142: SELECT command denied to user 'ass2prob2'@'localhost' for table 'emp'
```

7.) TRUNCATE AND DROP TABLES :-

```
MySQL localhost:33060+ ssl ass2emp SQL > truncate emp;
Query OK, 0 rows affected (1.6801 sec)
MySQL localhost:33060+ ssl ass2emp SQL > select *from emp;
Empty set (0.2663 sec)
MySQL localhost:33060+ ssl ass2emp SQL > drop emp;
ERROR: 1064: You have an error in your SQL syntax; check the manual that corresponds to your
MySQL localhost:33060+ ssl ass2emp SQL > drop table emp;
Query OK, 0 rows affected (1.4768 sec)
MySQL localhost:33060+ ssl ass2emp SQL > show tables;
+-----+
| Tables_in_ass2emp |
+-----+
| customer          |
| odetails           |
| parts              |
| zip_code           |
+-----+
4 rows in set (0.0257 sec)
```