

SQL Task

Date: 15-July-2022

2. Aim: Design and Develop SQL DDL statements which demonstrate the use of SQL objects such as Table, View, Index, Sequence, Synonym Problem Statement:

1. Create table customers with schema (cust_id, cust_name, product, quantity, total_price)

```
C:\Windows\System32\cmd.exe - mysql -u root -p
mysql> create table customers (
  -> cust_id int auto_increment primary key,
  -> cust_name varchar(40),
  -> product varchar(40),
  -> quantity int,
  -> total_price int);
Query OK, 0 rows affected (0.04 sec)
```

2. Use sequence/ auto-increment for incrementing customer ID and insert 5 customer records to the customers

```
mysql> describe customers;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| cust_id    | int           | NO   | PRI | NULL    | auto_increment |
| cust_name  | varchar(40)   | YES  |     | NULL    |                |
| product    | varchar(40)   | YES  |     | NULL    |                |
| quantity   | int           | YES  |     | NULL    |                |
| total_price | int           | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

C:\Windows\System32\cmd.exe - mysql -u root -p

```
mysql> insert into customers
-> values
-> (1,'usman','mobile',3,15000);
Query OK, 1 row affected (0.01 sec)

mysql> insert into customers (cust_name,product,quantity,total_price)
-> values
-> ('akash','tv',10,100000),
-> ('vivek','smartwatch',5,25000),
-> ('preeti','desktop',2,50000),
-> ('dev','neckband',20,20000);
Query OK, 4 rows affected (0.04 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> select * from customers;
```

cust_id	cust_name	product	quantity	total_price
1	usman	mobile	3	15000
2	akash	tv	10	100000
3	vivek	smartwatch	5	25000
4	preeti	desktop	2	50000
5	dev	neckband	20	20000

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

3. Alter the table customers by adding one column 'price_per_qnty'

```
mysql> alter table customers
-> add column price_per_qnty float;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe customers;
```

Field	Type	Null	Key	Default	Extra
cust_id	int	NO	PRI	NULL	auto_increment
cust_name	varchar(40)	YES		NULL	
product	varchar(40)	YES		NULL	
quantity	int	YES		NULL	
total_price	int	YES		NULL	
price_per_qnty	float	YES		NULL	

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

4. Create view 'cust_view' on customers displaying customer_id and customer name

```
C:\Windows\System32\cmd.exe - mysql -u root -p
```

```
mysql> create view cust_view
```

```
-> as select cust_id, cust_name
```

```
-> from customers;
```

```
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> describe cust_view;
```

Field	Type	Null	Key	Default	Extra
cust_id	int	NO		0	
cust_name	varchar(40)	YES		NULL	

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

5. Update the view 'cust_view' to display customer ID, product and total price

```
mysql> alter view cust_view
```

```
-> as select cust_id, product, total_price
```

```
-> from customers;
```

```
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> select * from cust_view;
```

cust_id	product	total_price
1	mobile	15000
2	tv	100000
3	smartwatch	25000
4	desktop	50000
5	neckband	20000

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

6. Drop the view 'cust_view'

```
mysql> drop view cust_view;
```

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

7. Create index 'cust_index' on customer name

```
mysql>
mysql>
mysql> create index cust_index
    -> on customers(cust_name);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8. Drop index 'cust_index'

```
C:\Windows\System32\cmd.exe - mysql -u root -p
mysql> drop index cust_index on customers;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

9. Use sequence/ auto-increment for incrementing customer id

10. Use the name alias for table customers(rename the table in query)

```
mysql> alter table customers
    -> rename to cust_table;
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
+-----+
| Tables_in_mydata |
+-----+
| cust_table        |
| student           |
| student_facebook  |
| te_students       |
+-----+
4 rows in set (0.04 sec)
```

11. Drop the table customers

```
mysql> drop table cust_table;
Query OK, 0 rows affected (0.05 sec)

mysql> show table;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that c
mysql> show tables;
+-----+
| Tables_in_mydata |
+-----+
| student          |
| student_facebook |
| te_students      |
+-----+
3 rows in set (0.00 sec)

mysql> _
```

1. For facebook user, make sure only age>=18 user can able to register in table.

```
mysql> create table student_facebook (
  -> name varchar(30),
  -> address varchar(30),
  -> age int check(age>=18)
  -> );
Query OK, 0 rows affected (0.04 sec)

mysql> desc student_facebook;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(30)   | YES  |     | NULL    |       |
| address | varchar(30)   | YES  |     | NULL    |       |
| age   | int           | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p
mysql> insert into
-> student_facebook (name,address,age)
-> values
-> ('usman','up',21),
-> ('amit','hp',18),
-> ('raju','delhi',25),
-> ('akaash','uk',19);
Query OK, 4 rows affected (0.05 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> select * from student_facebook;
+-----+-----+-----+
| name | address | age |
+-----+-----+-----+
| usman | up      | 21 |
| amit  | hp      | 18 |
| raju  | delhi   | 25 |
| akaash | uk      | 19 |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p
mysql> insert into student_facebook values ('rohit','pune',17);
ERROR 3819 (HY000): Check constraint 'student_facebook_chk_1' is violated.
mysql>
mysql>
```

2. Alter add column email=>"@&". and age=>18

```
C:\Windows\System32\cmd.exe - mysql -u root -p
mysql> alter table student_facebook add email varchar(50) check(email like '%@%' and email like '%.%');
Query OK, 4 rows affected (0.07 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> desc student_facebook;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(30)   | YES  |     | NULL    |       |
| address | varchar(30)   | YES  |     | NULL    |       |
| age   | int           | YES  |     | NULL    |       |
| email | varchar(50)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from student_facebook;
+-----+-----+-----+-----+
| name | address | age | email |
+-----+-----+-----+-----+
| usman | up      | 21 | NULL  |
| amit  | hp      | 18 | NULL  |
| raju  | delhi   | 25 | NULL  |
| akaash | uk      | 19 | NULL  |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

C:\Windows\System32\cmd.exe - mysql -u root -p

```
mysql> update student_facebook set email='abcd@gmail.com' where age=21;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from student_facebook;
```

name	address	age	email
usman	up	21	abcd@gmail.com
amit	hp	18	NULL
raju	delhi	25	NULL
akaash	uk	19	NULL

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

```
mysql> update student_facebook set email='abcdgmailcom' where age=21;
ERROR 3819 (HY000): Check constraint 'student_facebook_chk_2' is violated.
```

```
mysql>
```

```
mysql>
```

```
mysql>
```

```
mysql> update student_facebook set email='abcd@gmailcom' where age=21;
ERROR 3819 (HY000): Check constraint 'student_facebook_chk_2' is violated.
```

```
mysql>
```

```
mysql>
```