Results :-

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 13

Server version: 10.8.3-MariaDB Arch Linux

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

```
MariaDB [(none)]> create database collage;
```

Query OK, 1 row affected (0.001 sec)

```
MariaDB [(none)]> use collage;
```

Database changed

```
MariaDB [collage]> create table product_table(p_id int auto_increment, p_name varchar(50),
p_catagory varchar(20), br_name varchar(20), sup_name varchar(20), p_price int(10));
```

ERROR 1075 (42000): Incorrect table definition; there can be only one auto column and it must be
defined as a key

```
MariaDB [collage]> create table product_table(p_id int auto_increment, p_name varchar(50),
p_catagory varchar(20), br_name varchar(20), sup_name varchar(20), p_price int(10), primary
key(p_id));
```

Query OK, 0 rows affected (0.037 sec)

```
MariaDB [collage]> insert into product_table(p_name,p_category,br_name,sup_name,p_price) values
('Rice','Grocery','Dawat', 'Ramesh',140);
```

ERROR 1054 (42S22): Unknown column 'p_category' in 'field list'

```
MariaDB [collage]> insert into product_table(p_name,p_catagory,br_name,sup_name,p_price) values
('Rice','Grocery','Dawat', 'Ramesh',140);
```

Query OK, 1 row affected (0.006 sec)

```
MariaDB [collage]> insert into product_table(p_name,p_catagory,br_name,sup_name,p_price) values
('Sugar','Grocery','Dawat', 'Ramesh',50);
```

Query OK, 1 row affected (0.005 sec)

Query OK, 1 row affected (0.004 sec)

MariaDB [collage]> insert into fact_dim values('T0002','P0002','ST0004','C0003','S0004',150,15,27);
Query OK, 1 row affected (0.004 sec)

MariaDB [collage]> insert into fact_dim values('T0002','P0003','ST0001','C0004','S0003',220,18,20);
Query OK, 1 row affected (0.005 sec)

MariaDB [collage]> select * from fact_dim;

time_key	product_key	store_key	customer_key	Salesperson_key	sales_amount	sales_quantity	profit
T0001	P0001	ST0003	C0001	S0001	200	20	30
T0001	P0002	ST0001	C0002	S0002	180	17	35
T0002	P0002	ST0004	C0003	S0004	150	15	27
T0002	P0003	ST0001	C0004	S0003	220	18	20

4 rows in set (0.001 sec)

```
| t_id | day        | month | quarter | year |
+------+------------+-------+---------+------+
|   1  | 2021-1-17  | Jan   | Q1      | 2021 |
|   2  | 2021-2-14  | Feb   | Q1      | 2021 |
|   3  | 2021-5-21  | May   | Q3      | 2021 |
|   4  | 2021-06-26 | Jun   | Q4      | 2021 |
+------+------------+-------+---------+------+
4 rows in set (0.001 sec)
```

MariaDB [collage]> create table fact_table(p_id int,t_id int ,loc_id int, no_of_u_s int, total_sales int, constraint fk_type foreign key(p_id) references product_table(p_id), foreign key(t_id) references time_table(t_id));

Query OK, 0 rows affected (0.047 sec)

MariaDB [collage]> desc fact_table;

```
+-------------+----------+------+-----+---------+-------+
| Field       | Type     | Null | Key | Default | Extra |
+-------------+----------+------+-----+---------+-------+
| p_id        | int(11)  | YES  | MUL | NULL    |       |
| t_id        | int(11)  | YES  | MUL | NULL    |       |
| loc_id      | int(11)  | YES  |     | NULL    |       |
| no_of_u_s   | int(11)  | YES  |     | NULL    |       |
| total_sales | int(11)  | YES  |     | NULL    |       |
+-------------+----------+------+-----+---------+-------+
5 rows in set (0.002 sec)
```

MariaDB [collage]> insert into fact_table(p_id,t_id,loc_id, no_of_u_s, total_sales) values (1,1,201,400,80000),(2,2,201,400,90000),(3,3,201,400,70000),(4,4,201,400,90000);

Query OK, 4 rows affected (0.005 sec)

Records: 4 Duplicates: 0 Warnings: 0

MariaDB [collage]> select * from fact_table;

```
 p_    |     loc_id | no_of_u_s | total_sales |
+------+------+------+----------+-------------+
| 1 |  1 |  201 |    400 |      80000 |
| 2 |  2 |  201 |    400 |      90000 |
| 3 |  3 |  201 |    400 |      70000 |
| 4 |  4 |  201 |    400 |      90000 |
+------+------+------+----------+-------------+
```

4 rows in set (0.000 sec)

MariaDB [collage]> select * from time_table;

```
+------+------------+-------+---------+------+
| t_id | day        | month | quarter | year |
+------+------------+-------+---------+------+
|  1 | 2021-1-17  | Jan   | Q1      | 2021 |
|  2 | 2021-2-14  | Feb   | Q1      | 2021 |
|  3 | 2021-5-21  | May   | Q3      | 2021 |
|  4 | 2021-06-26 | Jun   | Q4      | 2021 |
+------+------------+-------+---------+------+
```

4 rows in set (0.000 sec)

MariaDB [collage]> select * from product_table;

```
+------+--------+------------+---------+----------+---------+
| p_id | p_name | p_catagory | br_name | sup_name | p_price |
+------+--------+------------+---------+----------+---------+
|  1 | Rice   | Grocery    | Dawat   | Ramesh   |    140 |
|  2 | Sugar  | Grocery    | Dawat   | Ramesh   |     50 |
|  3 | Kurta  | Cloth      | Max     | lila     |    500 |
|  4 | Jacket | Cloth      | Max     | lila     |    700 |
+------+--------+------------+---------+----------+---------+
```

4 rows in set (0.001 sec)

MariaDB [collage]> select * from fact_table;

p_id	t_id	loc_id	no_of_u_s	total_sales
1	1	201	400	80000
2	2	201	400	90000
3	3	201	400	70000
4	4	201	400	90000

4 rows in set (0.001 sec)

Slice :-

MariaDB [collage]> select total_sales, month from fact_table inner join time_table on fact_table.t_id = time_table.t_id where quarter='Q1';

total_sales	month
80000	Jan
90000	Feb

2 rows in set (0.001 sec)

Dice :-

MariaDB [collage]> select p_name,no_of_u_s from((product_table inner join fact_table on product_table.p_id = fact_table.p_id) join time_table on fact_table.t_id = time_table.t_id) where p_catagory = 'Grocery';

p_name	no_of_u_s

| Rice | 400 |
| Sugar | 400 |
+--------+-----------+

2 rows in set (0.001 sec)

Roll - Up :-

MariaDB [collage]> select year,p_name,sum(p_price)from (fact_table natural join product_table)join time_table on fact_table.t_id=time_table.t_id where br_name='Max'group by year;

+------+--------+--------------+
| year | p_name | sum(p_price) |
+------+--------+--------------+
| 2021 | Kurta | 1200 |
+------+--------+--------------+

1 row in set (0.001 sec)

Drill - Down :-

MariaDB [collage]> select month,p_name,sum(p_price) from (fact_table natural join product_table) join time_table on fact_table.t_id=time_table.t_id where p_name='Rice' group by month;

+-------+--------+--------------+
| month | p_name | sum(p_price) |
+-------+--------+--------------+
| Jan | Rice | 140 |
+-------+--------+--------------+

1 row in set (0.001 sec)

Cravalen
15/8/2