

Khoi Duong

Prof. VB

CS457L

10/8/2022

QUIZ 1

1.

```
MariaDB [19610dm]> create table products_tbl(  
    -> PROD_ID CHAR(5),  
    -> PROD_DESC VARCHAR(30),  
    -> COST DECIMAL(10,2));  
Query OK, 0 rows affected (0.015 sec)
```

```
MariaDB [19610dm]> insert into products_tbl(PROD_ID, PROD_DESC, COST)  
    -> values ('11235', 'WITCH COSTUME', '29.99'),  
    -> ('222', 'PLASTIC PUMPKIN 18 INCH', '7.75'),  
    -> ('13', 'FALSE PARAFFIN TEETH', '1.1'),  
    -> ('90', 'LIGHTED LANTERNS', '14.5'),  
    -> ('15', 'ASSORTED COSTUMES', '10'),  
    -> ('9', 'CANDY CORN', '1.35'),  
    -> ('6', 'PUMPKIN CANDY', '1.45'),  
    -> ('87', 'PLASTIC SPIDERS', '1.05'),  
    -> ('119', 'ASSORTED MASKS', '4.95');  
Query OK, 9 rows affected (0.003 sec)  
Records: 9 Duplicates: 0 Warnings: 0
```

```
MariaDB [19610dm]> select * from products_tbl;
```

| PROD_ID | PROD_DESC | COST |
|---------|-------------------------|-------|
| 11235 | WITCH COSTUME | 29.99 |
| 222 | PLASTIC PUMPKIN 18 INCH | 7.75 |
| 13 | FALSE PARAFFIN TEETH | 1.10 |
| 90 | LIGHTED LANTERNS | 14.50 |
| 15 | ASSORTED COSTUMES | 10.00 |
| 9 | CANDY CORN | 1.35 |
| 6 | PUMPKIN CANDY | 1.45 |
| 87 | PLASTIC SPIDERS | 1.05 |
| 119 | ASSORTED MASKS | 4.95 |

```
9 rows in set (0.000 sec)
```

2.

a. The average cost of all the products

```
MariaDB [19610dm]> select avg(COST) from products_tbl;
```

| avg(COST) |
|-----------|
| 8.015556 |

```
1 row in set (0.000 sec)
```

b. Count the number of items whose cost is greater than one and less than two

```
MariaDB [19610dm]> select * from products_tbl where (COST > 1 and COST < 2);
```

| PROD_ID | PROD_DESC | COST |
|---------|----------------------|------|
| 13 | FALSE PARAFFIN TEETH | 1.10 |
| 9 | CANDY CORN | 1.35 |
| 6 | PUMPKIN CANDY | 1.45 |
| 87 | PLASTIC SPIDERS | 1.05 |

```
4 rows in set (0.000 sec)
```

In order to count the number of items, we can use COUNT()

```
MariaDB [19610dm]> select COUNT(PROD_ID) from products_tbl where (COST > 1 and COST < 2);
+-----+
| COUNT(PROD_ID) |
+-----+
|                4 |
+-----+
1 row in set (0.000 sec)
```

c. Count the number of items whose cost is either between 10 and 15 (both inclusive) or between 3 and 8 (both inclusive).

```
MariaDB [19610dm]> select * from products_tbl
-> where (COST >= 10 and COST <= 15)
-> OR (COST >=3 and COST <= 8);
+-----+-----+-----+
| PROD_ID | PROD_DESC                | COST |
+-----+-----+-----+
| 222     | PLASTIC PUMPKIN 18 INCH | 7.75 |
| 90      | LIGHTED LANTERNS        | 14.50 |
| 15      | ASSORTED COSTUMES        | 10.00 |
| 119     | ASSORTED MASKS          | 4.95 |
+-----+-----+-----+
4 rows in set (0.000 sec)
```

COUNT()

```
MariaDB [19610dm]> select COUNT(PROD_ID) from products_tbl
-> where (COST >= 10 and COST <= 15)
-> OR (COST >=3 and COST <= 8);
+-----+
| COUNT(PROD_ID) |
+-----+
|                4 |
+-----+
1 row in set (0.000 sec)
```

- d. Count the number of items whose cost is either less than 5 or greater than 10.

```
MariaDB [19610dm]> select * from products_tbl  
-> where (COST < 5 OR COST > 10);
```

| PROD_ID | PROD_DESC | COST |
|---------|----------------------|-------|
| 11235 | WITCH COSTUME | 29.99 |
| 13 | FALSE PARAFFIN TEETH | 1.10 |
| 90 | LIGHTED LANTERNS | 14.50 |
| 9 | CANDY CORN | 1.35 |
| 6 | PUMPKIN CANDY | 1.45 |
| 87 | PLASTIC SPIDERS | 1.05 |
| 119 | ASSORTED MASKS | 4.95 |

7 rows in set (0.000 sec)

COUNT()

```
MariaDB [19610dm]> select COUNT(PROD_ID) from products_tbl  
-> where (COST < 5 OR COST > 10);
```

| COUNT(PROD_ID) |
|----------------|
| 7 |

1 row in set (0.000 sec)

- e. The maximum cost of all the products.

```
MariaDB [19610dm]> select MAX(COST) from products_tbl;
```

| MAX(COST) |
|-----------|
| 29.99 |

1 row in set (0.000 sec)

- f. The minimum cost of all the products.

```
MariaDB [19610dm]> select MIN(COST) from products_tbl;
+-----+
| MIN(COST) |
+-----+
|      1.05 |
+-----+
1 row in set (0.000 sec)
```

- g. The sum cost of all the products

```
MariaDB [19610dm]> select SUM(COST) from products_tbl;
+-----+
| SUM(COST) |
+-----+
|      72.14 |
+-----+
1 row in set (0.000 sec)
```

- h. Nearest integer to the cost provided on the 3rd column.

```
MariaDB [19610dm]> select ROUND(COST) from products_tbl;
+-----+
| ROUND(COST) |
+-----+
|           30 |
|            8 |
|             1 |
|            15 |
|            10 |
|             1 |
|             1 |
|             1 |
|             5 |
+-----+
9 rows in set (0.000 sec)
```

- i. Truncate the value in the 3rd column.

```
MariaDB [19610dm]> select TRUNCATE(COST,0) from products_tbl;
+-----+
| TRUNCATE(COST,0) |
+-----+
|                29 |
|                7  |
|                1  |
|               14  |
|               10  |
|                1  |
|                1  |
|                1  |
|                4  |
+-----+
9 rows in set (0.000 sec)
```

- j. Find product IDs that are either 5 digits long or 3 digits long.

```
MariaDB [19610dm]> select * from products_tbl where CHAR_LENGTH(PROD_ID) = 5 or CHAR_LENGTH(PROD_ID) = 3;
+-----+-----+-----+
| PROD_ID | PROD_DESC                | COST |
+-----+-----+-----+
| 11235   | WITCH COSTUME            | 29.99 |
| 222     | PLASTIC PUMPKIN 18 INCH | 7.75  |
| 119     | ASSORTED MASKS           | 4.95  |
+-----+-----+-----+
3 rows in set (0.000 sec)
```

3.

```
MariaDB [19610dm]> alter table products_tbl
-> add column STORES VARCHAR(20) after COST;
Query OK, 0 rows affected (0.004 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```

MariaDB [19610dm]> insert into products_tbl(PROD_ID, PROD_DESC, COST, STORES)
-> values ('11235', 'WITCH COSTUME', '29.99', 'PARTY CITY'),
->      ('222', 'PLASTIC PUMPKIN 18 INCH', '7.75', 'TOYS R US'),
->      ('13', 'FALSE PARAFFIN TEETH', '1.1', 'WALGREENS'),
->      ('90', 'LIGHTED LANTERNS', '14.5', 'WALMART'),
->      ('15', 'ASSORTED COSTUMES', '10', 'COSTCO'),
->      ('9', 'CANDY CORN', '1.35', 'SAFEWAY'),
->      ('6', 'PUMPKIN CANDY', '1.45', 'TRADER JOE'S'),
->      ('87', 'PLASTIC SPIDERS', '1.05', 'DOLLAR TREE'),
->      ('119', 'ASSORTED MASKS', '4.95', 'TARGET')
-> ON DUPLICATE KEY UPDATE
->     PROD_ID = values(PROD_ID), PROD_DESC = values(PROD_DESC),
->     COST = values(COST), STORES = values(STORES);
Query OK, 9 rows affected (0.003 sec)
Records: 9  Duplicates: 0  Warnings: 0

```

```

MariaDB [19610dm]> select * from products_tbl;
+-----+-----+-----+-----+
| PROD_ID | PROD_DESC | COST | STORES |
+-----+-----+-----+-----+
| 11235 | WITCH COSTUME | 29.99 | PARTY CITY |
| 222 | PLASTIC PUMPKIN 18 INCH | 7.75 | TOYS R US |
| 13 | FALSE PARAFFIN TEETH | 1.10 | WALGREENS |
| 90 | LIGHTED LANTERNS | 14.50 | WALMART |
| 15 | ASSORTED COSTUMES | 10.00 | COSTCO |
| 9 | CANDY CORN | 1.35 | SAFEWAY |
| 6 | PUMPKIN CANDY | 1.45 | TRADER JOE'S |
| 87 | PLASTIC SPIDERS | 1.05 | DOLLAR TREE |
| 119 | ASSORTED MASKS | 4.95 | TARGET |
+-----+-----+-----+-----+
9 rows in set (0.000 sec)

```

4.

a.

```
MariaDB [19610dm]> select * from products_tbl where STORES like 'W%';
```

| PROD_ID | PROD_DESC | COST | STORES |
|---------|----------------------|-------|-----------|
| 13 | FALSE PARAFFIN TEETH | 1.10 | WALGREENS |
| 90 | LIGHTED LANTERNS | 14.50 | WALMART |

2 rows in set (0.000 sec)

b.

```
MariaDB [19610dm]> select * from products_tbl where STORES like 'T%';
```

| PROD_ID | PROD_DESC | COST | STORES |
|---------|-------------------------|------|--------------|
| 222 | PLASTIC PUMPKIN 18 INCH | 7.75 | TOYS R US |
| 6 | PUMPKIN CANDY | 1.45 | TRADER JOE'S |
| 119 | ASSORTED MASKS | 4.95 | TARGET |

3 rows in set (0.000 sec)

c.

```
MariaDB [19610dm]> select * from products_tbl where STORES like '%O%';
```

| PROD_ID | PROD_DESC | COST | STORES |
|---------|-------------------------|-------|--------------|
| 222 | PLASTIC PUMPKIN 18 INCH | 7.75 | TOYS R US |
| 15 | ASSORTED COSTUMES | 10.00 | COSTCO |
| 6 | PUMPKIN CANDY | 1.45 | TRADER JOE'S |
| 87 | PLASTIC SPIDERS | 1.05 | DOLLAR TREE |

4 rows in set (0.000 sec)

d.


```
MariaDB [19610dm]> select * from products_tbl where CHAR_LENGTH(STORES) > 10;
+-----+-----+-----+-----+
| PROD_ID | PROD_DESC          | COST | STORES          |
+-----+-----+-----+-----+
| 6        | PUMPKIN CANDY      | 1.45 | TRADER JOE'S   |
| 87       | PLASTIC SPIDERS    | 1.05 | DOLLAR TREE    |
+-----+-----+-----+-----+
2 rows in set (0.000 sec)
```

e.

```
MariaDB [19610dm]> select * from products_tbl where STORES like '%Y%';
+-----+-----+-----+-----+
| PROD_ID | PROD_DESC          | COST | STORES          |
+-----+-----+-----+-----+
| 11235   | WITCH COSTUME      | 29.99 | PARTY CITY     |
| 222     | PLASTIC PUMPKIN 18 INCH | 7.75 | TOYS R US      |
| 9       | CANDY CORN         | 1.35 | SAFEWAY        |
+-----+-----+-----+-----+
3 rows in set (0.000 sec)
```

f.

```
MariaDB [19610dm]> select * from products_tbl where STORES like '%AL%';
+-----+-----+-----+-----+
| PROD_ID | PROD_DESC          | COST | STORES          |
+-----+-----+-----+-----+
| 13      | FALSE PARAFFIN TEETH | 1.10 | WALGREENS      |
| 90      | LIGHTED LANTERNS    | 14.50 | WALMART        |
+-----+-----+-----+-----+
2 rows in set (0.000 sec)
```

5.

The date is in the wrong format and there should be a “,” at the end of the query

CREATE TABLE emp (

empno INT PRIMARY KEY,

ename VARCHAR(10),

job VARCHAR(9),

mgr INT NULL,

hiredate DATETIME,

sal NUMERIC(7,2),

comm NUMERIC(7,2) NULL,

dept INT)

begin

insert into emp values

(1,'JOHNSON','ADMIN',6,'1990-12-17',18000,NULL,4);

insert into emp values

(2,'HARDING','MANAGER',9,'1998-02-02',52000,300,3);

insert into emp values

(3,'TAFT','SALES I',2,'1996-01-02',25000,500,3);

insert into emp values

(4,'HOOVER','SALES I',2,'1990-04-02',27000,NULL,3);

insert into emp values

(5,'LINCOLN','TECH',6,'1994-06-23',22500,1400,4);

insert into emp values

(6,'GARFIELD','MANAGER',9,'1993-05-01',54000,NULL,4);

insert into emp values

(7,'POLK','TECH',6,'1997-09-22',25000,NULL,4);

insert into emp values

```
(8,'GRANT','ENGINEER',10,'1997-03-30',32000,NULL,2);
```

insert into emp values

```
(9,'JACKSON','CEO',NULL,'1990-01-01',75000,NULL,4);
```

insert into emp values

```
(10,'FILLMORE','MANAGER',9,'1994-08-09',56000,NULL,2);
```

insert into emp values

```
(11,'ADAMS','ENGINEER',10,'1996-03-15',34000,NULL,2);
```

insert into emp values

```
(12,'WASHINGTON','ADMIN',6,'1998-04-16',18000,NULL,4);
```

insert into emp values

```
(13,'MONROE','ENGINEER',10,'2000-12-03',30000,NULL,2);
```

insert into emp values

```
(14,'ROOSEVELT','CPA',9,'1995-10-12',35000,NULL,1);
```

End

Run query:

```
MariaDB [19610dm]> CREATE TABLE emp (  
    -> empno INT PRIMARY KEY,  
    -> ename VARCHAR(10),  
    -> job VARCHAR(9),  
    -> mgr INT NULL,  
    -> hiredate DATETIME,  
    -> sal NUMERIC(7,2),  
    -> comm NUMERIC(7,2) NULL,  
    -> dept INT);  
Query OK, 0 rows affected (0.014 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (1, 'JOHNSON', 'ADMIN', 6, '1990-12-17', 18000, NULL, 4);
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (2, 'HARDING', 'MANAGER', 9, '1998-02-02', 52000, 300, 3);
      (3, 'TAFT', 'SALES I', 2, '1996-01-02', 25000, 500, 3);
insert into emp values
      (4, 'HOOVER', 'SALES I', 2, '1990-04-02', 27000, NULL, 3);
insert into emp values
      (5, 'LINCOLN', 'TECH', 6, '1994-06-23', 22500, 1400, 4);
insert into emp values
      (6, 'GARFIELD', 'MANAGER', 9, '1993-05-01', 54000, NULL, 4);
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (3, 'TAFT', 'SALES I', 2, '1996-01-02', 25000, 500, 3);
insert into emp values
      (7, 'POLK', 'TECH', 6, '1997-09-22', 25000, NULL, 4);
insert into emp values
      (8, 'GRANT', 'ENGINEER', 10, '1997-03-30', 32000, NULL, 2);
insert into emp values
      (9, 'JACKSON', 'CEO', NULL, '1990-01-01', 75000, NULL, 4);
insert into emp values
      (10, 'FILLMORE', 'MANAGER', 9, '1994-08-09', 56000, NULL, 2);
insert into emp values
      (11, 'ADAMS', 'ENGINEER', 10, '1996-03-15', 34000, NULL, 2);
insert into emp values
      (12, 'WASHINGTON', 'ADMIN', 6, '1998-04-16', 18000, NULL, 4);
insert into emp values
      (13, 'MONROE', 'ENGINEER', 10, '2000-12-03', 30000, NULL, 2);
insert into emp values
      (14, 'ROOSEVELT', 'CPA', 9, '1995-10-12', 35000, NULL, 1); Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (4, 'HOOVER', 'SALES I', 2, '1990-04-02', 27000, NULL, 3);
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (5, 'LINCOLN', 'TECH', 6, '1994-06-23', 22500, 1400, 4);
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (6, 'GARFIELD', 'MANAGER', 9, '1993-05-01', 54000, NULL, 4);
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (7, 'POLK', 'TECH', 6, '1997-09-22', 25000, NULL, 4);
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [19610dm]> insert into emp values
->      (8, 'GRANT', 'ENGINEER', 10, '1997-03-30', 32000, NULL, 2);
Query OK, 1 row affected (0.002 sec)
```

```

MariaDB [19610dm]> insert into emp values
->      (9, 'JACKSON', 'CEO', NULL, '1990-01-01', 75000, NULL, 4);
Query OK, 1 row affected (0.002 sec)

MariaDB [19610dm]> insert into emp values
->      (10, 'FILLMORE', 'MANAGER', 9, '1994-08-09', 56000, NULL, 2);
Query OK, 1 row affected (0.002 sec)

MariaDB [19610dm]> insert into emp values
->      (11, 'ADAMS', 'ENGINEER', 10, '1996-03-15', 34000, NULL, 2);
Query OK, 1 row affected (0.002 sec)

MariaDB [19610dm]> insert into emp values
->      (12, 'WASHINGTON', 'ADMIN', 6, '1998-04-16', 18000, NULL, 4);
Query OK, 1 row affected (0.003 sec)

MariaDB [19610dm]> insert into emp values
->      (13, 'MONROE', 'ENGINEER', 10, '2000-12-03', 30000, NULL, 2);
Query OK, 1 row affected (0.003 sec)

MariaDB [19610dm]> insert into emp values
->      (14, 'ROOSEVELT', 'CPA', 9, '1995-10-12', 35000, NULL, 1);
Query OK, 1 row affected (0.003 sec)

```

```

MariaDB [19610dm]> select * from emp
-> ;

```

| empno | ename | job | mgr | hiredate | sal | comm | dept |
|-------|------------|----------|------|---------------------|----------|---------|------|
| 1 | JOHNSON | ADMIN | 6 | 1990-12-17 00:00:00 | 18000.00 | NULL | 4 |
| 2 | HARDING | MANAGER | 9 | 1998-02-02 00:00:00 | 52000.00 | 300.00 | 3 |
| 3 | TAFT | SALES I | 2 | 1996-01-02 00:00:00 | 25000.00 | 500.00 | 3 |
| 4 | HOOVER | SALES I | 2 | 1990-04-02 00:00:00 | 27000.00 | NULL | 3 |
| 5 | LINCOLN | TECH | 6 | 1994-06-23 00:00:00 | 22500.00 | 1400.00 | 4 |
| 6 | GARFIELD | MANAGER | 9 | 1993-05-01 00:00:00 | 54000.00 | NULL | 4 |
| 7 | POLK | TECH | 6 | 1997-09-22 00:00:00 | 25000.00 | NULL | 4 |
| 8 | GRANT | ENGINEER | 10 | 1997-03-30 00:00:00 | 32000.00 | NULL | 2 |
| 9 | JACKSON | CEO | NULL | 1990-01-01 00:00:00 | 75000.00 | NULL | 4 |
| 10 | FILLMORE | MANAGER | 9 | 1994-08-09 00:00:00 | 56000.00 | NULL | 2 |
| 11 | ADAMS | ENGINEER | 10 | 1996-03-15 00:00:00 | 34000.00 | NULL | 2 |
| 12 | WASHINGTON | ADMIN | 6 | 1998-04-16 00:00:00 | 18000.00 | NULL | 4 |
| 13 | MONROE | ENGINEER | 10 | 2000-12-03 00:00:00 | 30000.00 | NULL | 2 |
| 14 | ROOSEVELT | CPA | 9 | 1995-10-12 00:00:00 | 35000.00 | NULL | 1 |

14 rows in set (0.000 sec)

6.

The query needs the “;” at the end.

```

CREATE TABLE dept (
deptno INT NOT NULL,
dname VARCHAR(14),
loc VARCHAR(13));

insert into dept values (1,'ACCOUNTING','ST LOUIS');

insert into dept values (2,'RESEARCH','NEW YORK');

insert into dept values (3,'SALES','ATLANTA');

insert into dept values (4, 'OPERATIONS','SEATTLE');

```

Run query:

```

MariaDB [19610dm]> CREATE TABLE dept (
    -> deptno INT NOT NULL,
    -> dname VARCHAR(14),
    -> loc VARCHAR(13));
Query OK, 0 rows affected (0.012 sec)

MariaDB [19610dm]> insert into dept values (1,'ACCOUNTING','ST LOUIS');
Query OK, 1 row affected (0.003 sec)

MariaDB [19610dm]> insert into dept values (2,'RESEARCH','NEW YORK');
Query OK, 1 row affected (0.002 sec)

MariaDB [19610dm]> insert into dept values (3,'SALES','ATLANTA');
Query OK, 1 row affected (0.003 sec)

MariaDB [19610dm]> insert into dept values (4, 'OPERATIONS','SEATTLE');
Query OK, 1 row affected (0.003 sec)

MariaDB [19610dm]> select * from dept;
+-----+-----+-----+
| deptno | dname      | loc      |
+-----+-----+-----+
|      1 | ACCOUNTING | ST LOUIS |
|      2 | RESEARCH   | NEW YORK |
|      3 | SALES      | ATLANTA  |
|      4 | OPERATIONS | SEATTLE  |
+-----+-----+-----+
4 rows in set (0.000 sec)

```