Database System Lab

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DB LAB Task: 10

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Exercise # 1

DELIMITER $$

CREATE PROCEDURE summary_insert (IN id INT,IN total INT,IN yahoo INT,IN hotmail INT,IN gmail INT)

BEGIN

INSERT INTO `summary` VALUES(id,total,yahoo,hotmail,gmail);

END$$

DELIMITER ;

call summary_insert(1,3,1,0,2);

SELECT * FROM summary;

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE summary_insert (IN id INT,IN total INT,IN yahoo INT,IN hotmail INT,IN gmail INT)
    -> BEGIN
    -> INSERT INTO `summary` VALUES(id,total,yahoo,hotmail,gmail);
    -> END$$
Query OK, 0 rows affected (0.05 sec)

mysql> DELIMITER ;
```

```
mysql> call summary_insert(1,3,1,0,2);
Query OK, 1 row affected (0.01 sec)

mysql> select * from summary;
+----+-------------+-------+---------+-------+
| id | total_users | yahoo | hotmail | gmail |
+----+-------------+-------+---------+-------+
|  1 |           3 |     1 |       0 |     2 |
+----+-------------+-------+---------+-------+
1 row in set (0.00 sec)
```

Exercise # 2

DELIMITER $$

CREATE PROCEDURE users_insert (IN id INT,IN user VARCHAR(20),IN pass VARCHAR(20),IN email VARCHAR(20))

BEGIN

INSERT INTO `users` VALUES(id,user,pass,email);

END$$

DELIMITER ;

call users_insert(1,'asjid','abc123','asjid@nu.edu.pk');

select * from users;

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE users_insert (IN id INT,IN user VARCHAR(20),IN pass VARCHAR(20),IN email VARCHAR(20))
    -> BEGIN
    -> INSERT INTO `users` VALUES(id,user,pass,email);
    -> END$$
Query OK, 0 rows affected (0.00 sec)

mysql> DELIMITER ;
mysql> call users_insert(1,'asjid','abc123','asjid@nu.edu.pk');
Query OK, 1 row affected (0.01 sec)

mysql> select * from users;
+---------+----------+----------+----------------+
| user_id | username | password | email          |
+---------+----------+----------+----------------+
|       1 | asjid    | abc123   | asjid@nu.edu.pk |
+---------+----------+----------+----------------+
1 row in set (0.00 sec)

mysql>
```

Exercise # 3

DELIMITER $$

CREATE PROCEDURE avg_yahoo (OUT avg DECIMAL)

BEGIN

SELECT avg(yahoo) INTO avg from `summary`;

END$$

DELIMITER ;

call avg_yahoo(@out);

select @out;

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE avg_yahoo (OUT avg DECIMAL)
    -> BEGIN
    -> SELECT avg(yahoo) INTO avg from `summary`;
    -> END$$
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> call avg_yahoo(@out);
Query OK, 1 row affected, 1 warning (0.01 sec)
```

```
mysql> select @out;
+------+
| @out |
+------+
|    2 |
+------+
1 row in set (0.00 sec)
```

Exercise # 4

DELIMITER $$

CREATE PROCEDURE min_gmail (OUT min INT)

BEGIN

SELECT min(gmail) INTO min from `summary`;

END$$

DELIMITER ;

call min_gmail(@out);

select @out;

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE min_gmail (OUT min INT)
    -> BEGIN
    -> SELECT min(gmail) INTO min from `summary`;
    -> END$$
Query OK, 0 rows affected (0.00 sec)

mysql> DELIMITER ;
mysql> call min_gmail(@out);
Query OK, 1 row affected (0.01 sec)

mysql> select @out;
+------+
| @out |
+------+
|    2 |
+------+
1 row in set (0.00 sec)
```

Exercise # 5

DELIMITER $$

CREATE PROCEDURE max_hotmail (OUT max INT)

BEGIN

SELECT max(hotmail) INTO max from `summary`;

END$$

DELIMITER ;

call max_hotmail(@out);

select @out;

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE max_hotmail (OUT max INT)
    -> BEGIN
    -> SELECT max(hotmail) INTO max from `summary`;
    -> END$$
Query OK, 0 rows affected (0.00 sec)

mysql> DELIMITER ;
mysql> call max_hotmail(@out);
Query OK, 1 row affected (0.00 sec)

mysql> select @out;
+------+
| @out |
+------+
|    1 |
+------+
1 row in set (0.00 sec)
```

Exercise # 6

DELIMITER $$

CREATE PROCEDURE increment ()

BEGIN

UPDATE summary SET total_users=total_users+1 where yahoo<=hotmail;

END $$

DELIMITER ;

Select total_users from summary;

CALL increment();

Select total_users from summary;

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE increment ()
    -> BEGIN
    -> UPDATE summary SET total_users=total_users+1 where yahoo<=hotmail;
    -> END $$
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> select total_users from summary;
+-------------+
| total_users |
+-------------+
|           5 |
+-------------+
1 row in set (0.00 sec)

mysql> call increment();
Query OK, 1 row affected (0.01 sec)

mysql> select total_users from summary;
+-------------+
| total_users |
+-------------+
|           6 |
+-------------+
1 row in set (0.00 sec)

mysql>
```

Exercise # 7

Part 1

DELIMITER $$

CREATE TRIGGER `update_summ` AFTER INSERT

ON users

FOR EACH ROW

BEGIN

UPDATE summary SET total_users=total_users+1 where id=1;

END $$

DELIMITER ;

Select * from summary;

call users_insert(1,'asjid','abc123','asjid@gmail.com');

Select * from summary;

```
mysql> CREATE TRIGGER `update_summ` AFTER INSERT
    -> ON users
    -> FOR EACH ROW
    -> BEGIN
    -> UPDATE summary SET total_users=total_users+1 where id=1;
    -> END $$
Query OK, 0 rows affected (0.02 sec)

mysql> DELIMITER ;
mysql> select * from summary;
+----+-------------+-------+---------+-------+
| id | total_users | yahoo | hotmail | gmail |
+----+-------------+-------+---------+-------+
| 1  |           2 |     1 |       4 |     2 |
+----+-------------+-------+---------+-------+
1 row in set (0.00 sec)
```

```
mysql> call users_insert(3,'khan','grt657','khan@gmail.com');
Query OK, 1 row affected (0.02 sec)

mysql> select * from summary;
+----+-------------+-------+---------+-------+
| id | total_users | yahoo | hotmail | gmail |
+----+-------------+-------+---------+-------+
| 1  |           3 |     1 |       4 |     2 |
+----+-------------+-------+---------+-------+
1 row in set (0.00 sec)

mysql>
```

Part 2

DELIMITER $$

CREATE TRIGGER `update_summ_del` AFTER DELETE

ON users

FOR EACH ROW

BEGIN

UPDATE summary SET total_users=total_users-1 where id=1;

END $$

DELIMITER ;

select * from summary;

DELETE from users where user_id=1;

select * from summary;

```
mysql> DELIMITER $$
mysql> CREATE TRIGGER `update_summ_del` AFTER DELETE
    -> ON users
    -> FOR EACH ROW
    -> BEGIN
    -> UPDATE summary SET total_users=total_users-1 where id=1;
    -> END $$
Query OK, 0 rows affected (0.01 sec)

mysql> DELIMITER ;
mysql> select * from summary;
+----+-------------+-------+---------+-------+
| id | total_users | yahoo | hotmail | gmail |
+----+-------------+-------+---------+-------+
|  1 |           3 |     1 |       4 |     2 |
+----+-------------+-------+---------+-------+
1 row in set (0.00 sec)
```

```
mysql> DELETE from users where user_id=1;
Query OK, 1 row affected (0.01 sec)

mysql> select * from summary;
+----+-------------+-------+---------+-------+
| id | total_users | yahoo | hotmail | gmail |
+----+-------------+-------+---------+-------+
|  1 |           2 |     1 |       4 |     2 |
+----+-------------+-------+---------+-------+
1 row in set (0.00 sec)
```

call users_insert(5,'Ahsan','ahn123','ahsan@yahoo.com');

call users_insert(6,'Asad','asd123','asad@yahoo.com');

call users_insert(7,'Hiba','hib123','hiba@hotmail.com');

call users_insert(8,'Zuba','zba123','zuba@gmail.com');

call users_insert(9,'Feroz','frz123','feroz@yahoo.com');

```
mysql> call users_insert(5,'Ahsan','ahn123','ahsan@yahoo.com');
Query OK, 1 row affected (0.01 sec)

mysql> call users_insert(6,'Asad','asd123','asad@yahoo.com');
Query OK, 1 row affected (0.00 sec)

mysql> call users_insert(7,'Hiba','hib123','hiba@hotmail.com');
Query OK, 1 row affected (0.01 sec)

mysql> call users_insert(8,'Zuba','zba123','zuba@gmail.com');
Query OK, 1 row affected (0.00 sec)

mysql> call users_insert(9,'Feroz','frz123','feroz@yahoo.com');
Query OK, 1 row affected (0.01 sec)

mysql> select * from users;
+---------+----------+----------+-------------------+
| user_id | username | password | email             |
+---------+----------+----------+-------------------+
|       2 | hassaan  | qwe453   | hassaan@gmail.com |
|       3 | khan     | grt657   | khan@gmail.com    |
|       5 | Ahsan    | ahn123   | ahsan@yahoo.com   |
|       6 | Asad     | asd123   | asad@yahoo.com    |
|       7 | Hiba     | hib123   | hiba@hotmail.com  |
|       8 | Zuba     | zba123   | zuba@gmail.com    |
|       9 | Feroz    | frz123   | feroz@yahoo.com   |
+---------+----------+----------+-------------------+
7 rows in set (0.00 sec)

mysql> select * from summary;
+----+-------------+-------+---------+-------+
| id | total_users | yahoo | hotmail | gmail |
+----+-------------+-------+---------+-------+
|  1 |           7 |     1 |       4 |     2 |
+----+-------------+-------+---------+-------+
1 row in set (0.00 sec)
```