

## Solution LAB#4

### Inserting data from other existing table: -

1.

```
mysql> create table customer1 as select Customer_ID, Store_ID, First_Name, Last_name from
customer where customer_ID<11;
Query OK, 10 rows affected (0.47 sec)
```

2.

```
mysql> select * from customer1;
+-----+-----+-----+-----+
| Customer_ID | Store_ID | First_Name | Last_name |
+-----+-----+-----+-----+
| 1 | 2 | MARY | SMITH |
| 2 | 2 | PATRICIA | JOHNSON |
| 3 | 2 | LINDA | WILLIAMS |
| 4 | 1 | BARBARA | JONES |
| 5 | 2 | ELIZABETH | BROWN |
| 6 | 1 | JENNIFER | DAVIS |
| 7 | 2 | MARIA | MILLER |
| 8 | 1 | SUSAN | WILSON |
| 9 | 1 | MARGARET | MOORE |
| 10 | 2 | DOROTHY | TAYLOR |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> desc customer1;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Customer_ID | smallint(5) unsigned | NO | | 0 | |
| Store_ID | tinyint(3) unsigned | NO | | NULL | |
| First_Name | varchar(45) | NO | | NULL | |
| Last_name | varchar(45) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
```

3.

```
mysql> select Store_ID, count(customer_ID) as total_customer_visits from customer1 group
by store_id;
+-----+-----+
| Store_ID | total_customer_visits |
+-----+-----+
| 1 | 6 |
| 2 | 4 |
+-----+-----+
2 rows in set (0.10 sec)
```

4.

```
mysql> update customer1 set store_ID = case store_id
-> when 1 then 2
-> when 2 then 1
-> else store_id
-> end;
Query OK, 10 rows affected (0.10 sec)
```

### Concatenate two or more columns:-

```
mysql> create table customer2 as select customer_id, concat(first_name, " ", Last_name)
-> as name from customer1;
Query OK, 10 rows affected (0.39 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

### Split columns:-

```
mysql> select customer_id, substring_index(name, " ", 1) as first_name, substring_index
(name, " ", -1) as last_name from customer2;
+-----+-----+-----+
| customer_id | first_name | last_name |
+-----+-----+-----+
```

### Few important functions used in Mysql or in other tools:-

1. Revesre- Print all names in reverse order in customer2 table.

```
mysql> select customer_id, reverse(name) as Reverse_name from customer2;
+-----+-----+
| customer_id | Reverse_name |
+-----+-----+
```

2. Replace- Replace all M with R in name column in customer2 table.

```
mysql> select replace(name,"M", "R") from customer2;
+-----+
| replace(name,"M", "R") |
+-----+
| RARY SRITH              |
+-----+
```

3. Length- Display the length of every name in customer2 table.

```
mysql> select name, length(name) as length from customer2;
+-----+-----+
| name          | length |
+-----+-----+
| MARY SMITH    | 10     |
+-----+
```

4. Repeat-Repeat every name 2 times in customer2 table.

```
mysql> select repeat(name,3) from customer2;
+-----+
| repeat(name,3) |
+-----+
| MARY SMITHMARY SMITHMARY SMITH |
+-----+
```

## 5. Date functions:-

- Print today's date

```
mysql> select curdate();
+-----+
| curdate() |
+-----+
```

- Print current time

```
mysql> select curtime();
+-----+
| curtime() |
+-----+
```

- Print the day of month of any date

```
mysql> SELECT DAYOFMONTH('1998-02-09');
+-----+
| DAYOFMONTH('1998-02-09') |
+-----+
| 9 |
+-----+
```

- Print the day of week of any date

```
mysql> SELECT DAYOFWEEK('1998-02-09');
+-----+
| DAYOFWEEK('1998-02-09') |
+-----+
| 2 |
+-----+
```

- Print the day of year(return 1 to 366)

```
mysql> SELECT DAYOFYEAR('1998-02-03');
+-----+
| DAYOFYEAR('1998-02-03') |
+-----+
| 34 |
+-----+
```

- Print month of the year

```
mysql> SELECT MONTHNAME('1998-02-05');
+-----+
| MONTHNAME('1998-02-05') |
+-----+
| February |
+-----+
```

- Date difference- find the difference between '2016-04-13' and '2014-09-23' in months, Days and years  
select timestampdiff(month, '2014-04-13', '2014-09-23');

```
mysql> select timestampdiff(month, '2014-04-13', '2014-09-23');
+-----+
| timestampdiff(month, '2014-04-13', '2014-09-23') |
+-----+
| 5 |
+-----+
```

```
select timestampdiff(day, '2014-09-23', '2016-04-13');
```

```
mysql> select timestampdiff(day, '2014-09-23', '2016-04-13');
+-----+
| timestampdiff(day, '2014-09-23', '2016-04-13') |
+-----+
| 568 |
+-----+
1 row in set (0.00 sec)
```

```
select timestampdiff(year, '2014-09-23', '2016-04-13');
```

```
mysql> select timestampdiff(year, '2014-09-23', '2016-04-13');
+-----+
| timestampdiff(year, '2014-09-23', '2016-04-13') |
+-----+
| 1 |
+-----+
```

## Index:

1.

```
mysql> select name from customer2;
+-----+
| name |
+-----+
| MARY SMITH |
| PATRICIA JOHNSON |
+-----+
```

2. & 3.

```
mysql> create index name_index on customer2(name);
Query OK, 0 rows affected (0.35 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> select name from customer2;
+-----+
| name |
+-----+
| BARBARA JONES |
| DOROTHY TAYLOR |
| ELIZABETH BROWN |
| JENNIFER DAVIS |
| LINDA WILLIAMS |
| MARGARET MOORE |
| MARIA MILLER |
| MARY SMITH |
| PATRICIA JOHNSON |
| SUSAN WILSON |
+-----+
```

4.

```
mysql> show index from customer2;
+-----+-----+-----+-----+-----+-----+-----+
| Table      | Non_unique | Key_name  | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+-----+-----+-----+-----+-----+-----+-----+

```

5.

```
mysql> drop index name_index on customer2;
Query OK, 0 rows affected (0.21 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> show index from customer2;
Empty set (0.00 sec)
```

#### Pattern Matching:

```
mysql> select * from customer2 where name like "M%";
+-----+-----+
| customer_id | name          |
+-----+-----+
|          1 | MARY SMITH   |
|          7 | MARIA MILLER |
|          9 | MARGARET MOORE |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from customer2 where name like "%ER";
+-----+-----+
| customer_id | name          |
+-----+-----+
|          7 | MARIA MILLER |
+-----+-----+
1 row in set (0.00 sec)

mysql> select * from customer2 where name like "%R%";
+-----+-----+
| customer_id | name          |
+-----+-----+
|          1 | MARY SMITH   |
|          2 | PATRICIA JOHNSON |
|          4 | BARBARA JONES |
|          5 | ELIZABETH BROWN |
|          6 | JENNIFER DAVIS |
|          7 | MARIA MILLER |
|          9 | MARGARET MOORE |
|         10 | DOROTHY TAYLOR |
+-----+-----+
8 rows in set (0.00 sec)
```