Assignment 7

Functions

Consider the Country table and Persons table that you created earlier and perform the following:

Query and Result

```
4  • create table country (id int primary key,
5    country_name varchar(50),
6    population varchar(50),
7    area_sqkm varchar(50));
8  • desc country;
9  • insert into country(id, country_name, population, area_sqkm)
10   values(1, 'India', '90000000', '32 lakhs'),
11   (2, 'China', '90000000', '97 lakhs'),
12   (3, 'USA', '80000000', '93 lakhs'),
13   (4, 'UK', '70000000', '2 lakhs'),
14   (5, 'Canada', '60000000', '99 lakhs'),
15   (6, 'Australia', '50000000', '50 lakhs'),
16   (7, 'Netherlands', '40000000', '32 lakhs'),
17   (8, 'Sweden', '30000000', '4 lakhs'),
18   (9, 'Austria', '20000000', '3 lakhs'),
19   (10, 'Switzerland', '10000000', '2 lakhs');
20 • select*from country;
```

Result Grid | Filter Rows: | Edit:

id	country_name	population	area_sqkm
1	India	90000000	32 lakhs
2	China	90000000	97 lakhs
3	USA	80000000	93 lakhs
4	UK	70000000	2 lakhs
5	Canada	60000000	99 lakhs
6	Australia	50000000	50 lakhs
7	Netherlands	40000000	32 lakhs
8	Sweden	30000000	4 lakhs
9	Austria	20000000	3 lakhs
10	Switzerland	10000000	2 lakhs
NULL	NULL	NULL	NULL

```sql
create table persons (id int primary key,
first_name varchar(50),
last_name varchar(50),
population varchar(50),
rating int,
country_id int,
country_name varchar(50));
desc persons;
insert into persons(id, first_name, last_name, population,rating,country_id,country_name)
values(1, 'Lisha', 'Thomas', '90000000', 1, 1, 'India'),
(2, 'Chaang', 'Yaang', '90000000', 2, 2, 'China'),
(3, 'Thomas', 'Cook', '80000000', 3, 3, 'USA'),
(4, 'Diana', 'Xavier', '90000000', 1, 1, 'India'),
(5, 'Freddy', 'Dainz', '60000000', 5, 5, 'Canada'),
(6, 'Hari', 'Sharma', '90000000', 1, 1, 'India'),
(7, 'william', 'Blake', '40000000', 7, 7, 'Netherlands'),
(8, 'Right', 'Thomas', '30000000',8, 8, 'Sweden'),
(9, 'Cindrella', 'John', '20000000', 9, 9, 'Austria'),
(10, 'Irene', 'Dizooza', '10000000', 10, 10, 'Iceland');
select*from persons;
```

Result Grid | Filter Rows: | Edit: | Export/Impo

id	first_name	last_name	population	rating	country_id	country_name
1	Lisha	Thomas	90000000	1	1	India
2	Chaang	Yaang	90000000	2	2	China
3	Thomas	Cook	80000000	3	3	USA
4	Diana	Xavier	90000000	1	1	India
5	Freddy	Dainz	60000000	5	5	Canada
6	Hari	Sharma	90000000	1	1	India
7	william	Blake	40000000	7	7	Netherlands
8	Right	Thomas	30000000	8	8	Sweden
9	Cindrella	John	20000000	9	9	Austria
10	Irene	Dizooza	10000000	10	10	Iceland
NULL	NULL	NULL	NULL	NULL	NULL	NULL

1. Add a new column called DOB in Persons table with data type as Date.

Query and Result

```sql
#Add a new column called DOB in Persons table with data type as Date
alter table persons add column DOB DATE;
select*from persons;

update persons set DOB='2000-12-01' where id=1;
update persons set DOB='1985-11-08' where id=2;
update persons set DOB='2010-07-14' where id=3;
update persons set DOB='2001-06-21' where id=4;
update persons set DOB='2004-05-07' where id=5;
update persons set DOB='1995-01-12' where id=6;
update persons set DOB='1998-04-30' where id=7;
update persons set DOB='1986-01-10' where id=8;
update persons set DOB='2003-03-09' where id=9;
update persons set DOB='2005-02-28' where id=10;
select*from persons;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

id	first_name	last_name	population	rating	country_id	country_name	DOB
1	Lisha	Thomas	90000000	1	1	India	2000-12-01
2	Chaang	Yaang	90000000	2	2	China	1985-11-08
3	Thomas	Cook	80000000	3	3	USA	2010-07-14
4	Diana	Xavier	90000000	1	1	India	2001-06-21
5	Freddy	Dainz	60000000	5	5	Canada	2004-05-07
6	Hari	Sharma	90000000	1	1	India	1995-01-12
7	william	Blake	40000000	7	7	Netherlands	1998-04-30
8	Right	Thomas	30000000	8	8	Sweden	1986-01-10
9	Cindrella	John	20000000	9	9	Austria	2003-03-09
10	Irene	Dizooza	10000000	10	10	Iceland	2005-02-28
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

2. Write a user-defined function to calculate age using DOB.

Query and Result

```
59    #user-defined function to calculate age using DOB
60    DELIMITER $$
61
62 •  CREATE FUNCTION age_cal(DOB DATE)
63    RETURNS int
64    DETERMINISTIC
65    BEGIN
66        RETURN datediff(yy,DOB,getdate());
67    END $$
68
69    DELIMITER ;
70 •  SELECT age_cal(1990);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

age_cal(1990)
34

3. Write a select query to fetch the Age of all persons using the function that has been created.

Query and Result

```
72    #select query to fetch the Age of all persons using the function that has been created
73 •  select concat(first_name,' ',last_name) as NAME, DOB as AGE from persons;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

NAME	AGE
Lisha Thomas	2000-12-01
Chaang Yaang	1985-11-08
Thomas Cook	2010-07-14
Diana Xavier	2001-06-21
Freddy Dainz	2004-05-07
Hari Sharma	1995-01-12
william Blake	1998-04-30
Right Thomas	1986-01-10
Cindrella John	2003-03-09
Irene Dizooza	2005-02-28

4. Find the length of each country name in the Country table.

Query and Result

```
75      #length of each country name in the Country table
76 •    select country_name, length(country_name) as COUNTRYNAME_LENGTH from country;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

country_name	COUNTRYNAME_LENGTH
India	5
China	5
USA	3
UK	2
Canada	6
Australia	9
Netherlands	11
Sweden	6
Austria	7
Switzerland	11

5. Extract the first three characters of each country's name in the Country table.

Query and Result

```
78      # first three characters of each country's name in the Country table
79 •    select country_name, substr(country_name,1,3) as FIRST_THREE_CHAR from country ;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

country_name	FIRST_THREE_CHAR
India	Ind
China	Chi
USA	USA
UK	UK
Canada	Can
Australia	Aus
Netherlands	Net
Sweden	Swe
Austria	Aus
Switzerland	Swi

6. Convert all country names to uppercase and lowercase in the Country table.

Query and Result

```
81      #Convert all country names to uppercase and lowercase in the Country table
82 •    select country_name, upper(country_name) as COUNTRY_NAME_UPPER from country;
83 •    select country_name, lower(country_name) as COUNTRY_NAME_LOWER from country;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

country_name	COUNTRY_NAME_UPPER
India	INDIA
China	CHINA
USA	USA
UK	UK
Canada	CANADA
Australia	AUSTRALIA
Netherlands	NETHERLANDS
Sweden	SWEDEN
Austria	AUSTRIA
Switzerland	SWITZERLAND

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

country_name	COUNTRY_NAME_LOWER
India	india
China	china
USA	usa
UK	uk
Canada	canada
Australia	australia
Netherlands	netherlands
Sweden	sweden
Austria	austria
Switzerland	switzerland