

FUNCTIONS

➤ DISPLAYING TABLES **COUNTRY** AND **PERSONS**

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'Schemas' tree with 'country' selected under the 'country' database. The main query editor contains the following SQL code:

```
1 # USING COUNTRY TABLE AND PERSON TABLE
2
3 SELECT * FROM Country;
4 SELECT * FROM Persons;
```

The 'Result Grid' at the bottom displays the results of the first query, showing a list of countries with their IDs, names, populations, and areas.

Id	Country_name	Population	Area
1	USA	331000000	California
2	India	1380000000	Maharashtra
3	Canada	38000000	Ontario
4	Australia	25600000	New South Wales
5	UK	67000000	London
6	Germany	83000000	Bavaria
7	France	67000000	Île-de-France
8	Japan	125000000	Tokyo
9	Brazil	213000000	São Paulo
10	South Africa	60000000	Gauteng
11	UAE	30150000	Abu Dhabi
12	Turkey	138500000	Istanbul
13	Latvia	30150000	Vinivus
14	Russia	1285000000	Moscow

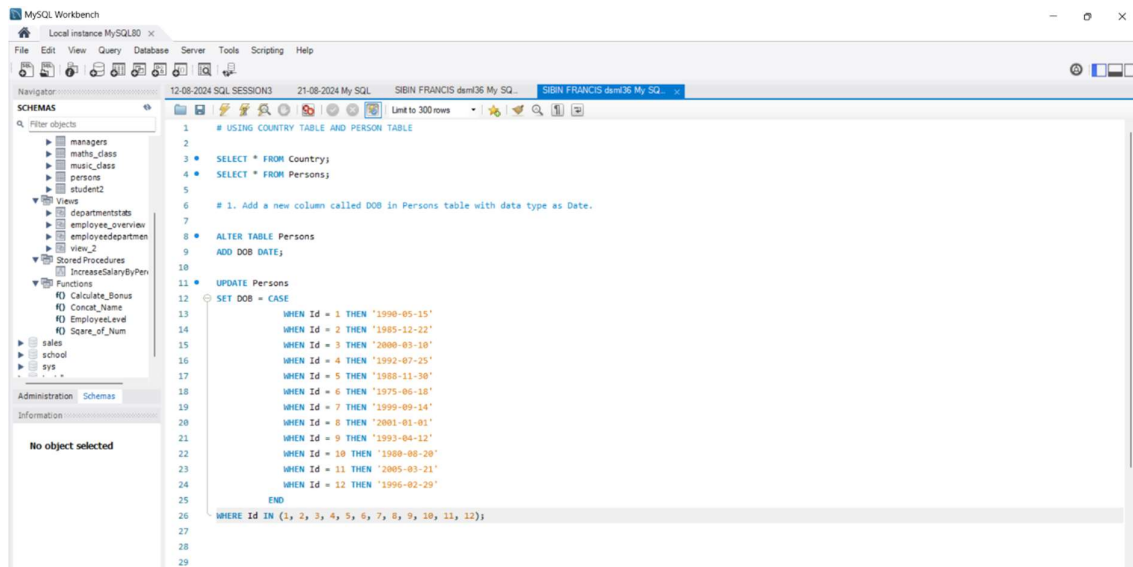
The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'Schemas' tree with 'Persons' selected under the 'country' database. The main query editor contains the following SQL code:

```
1 # USING COUNTRY TABLE AND PERSON TABLE
2
3 SELECT * FROM Country;
4 SELECT * FROM Persons;
```

The 'Result Grid' at the bottom displays the results of the second query, showing a list of persons with their IDs, first names, last names, populations, ratings, country IDs, and country names.

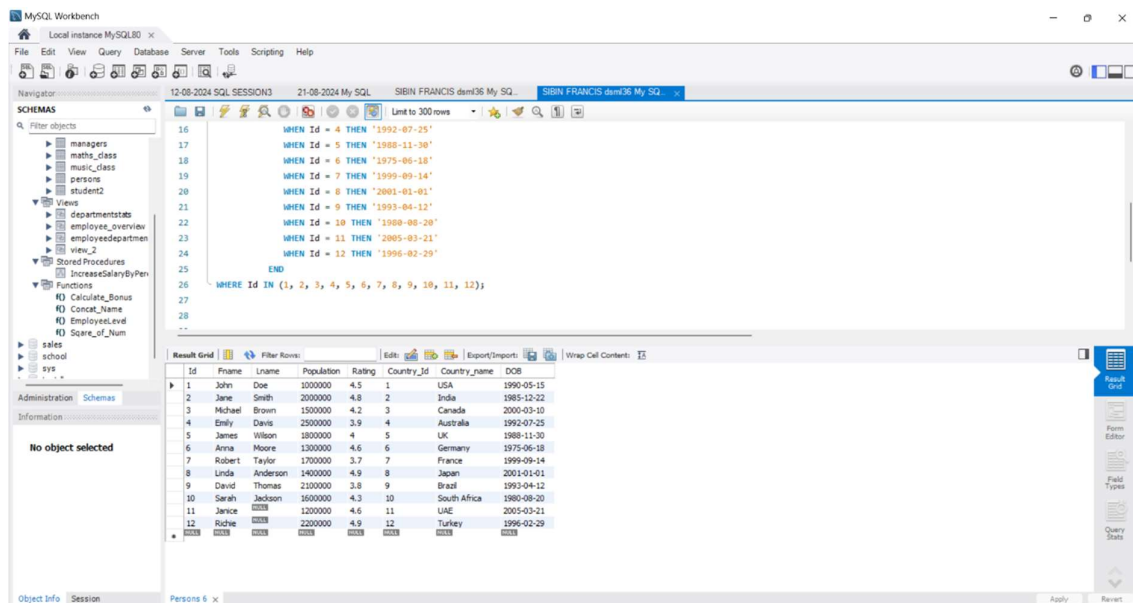
Id	fname	lname	Population	Rating	Country_id	Country_name
1	John	Doe	1000000	4.5	1	USA
2	Jane	Smith	2000000	4.8	2	India
3	Michael	Brown	1500000	4.2	3	Canada
4	Emily	Davis	2500000	3.9	4	Australia
5	James	Wilson	1800000	4	5	UK
6	Anna	Moore	1300000	4.6	6	Germany
7	Robert	Taylor	1700000	3.7	7	France
8	Linda	Anderson	1400000	4.9	8	Japan
9	David	Thomas	2100000	3.8	9	Brazil
10	Sarah	Jackson	1600000	4.3	10	South Africa
11	Janice		1200000	4.6	11	UAE
12	Ruthie		2200000	4.9	12	Turkey

➤ ADDED A NEW COLUMN CALLED **DOB** IN **PERSONS** TABLE WITH DATA TYPE AS DATE.



The screenshot shows the MySQL Workbench interface with a SQL editor. The left sidebar displays the 'SCHEMAS' tree with various databases like 'managers', 'maths_class', 'music_class', 'persons', and 'student2'. The main editor contains the following SQL code:

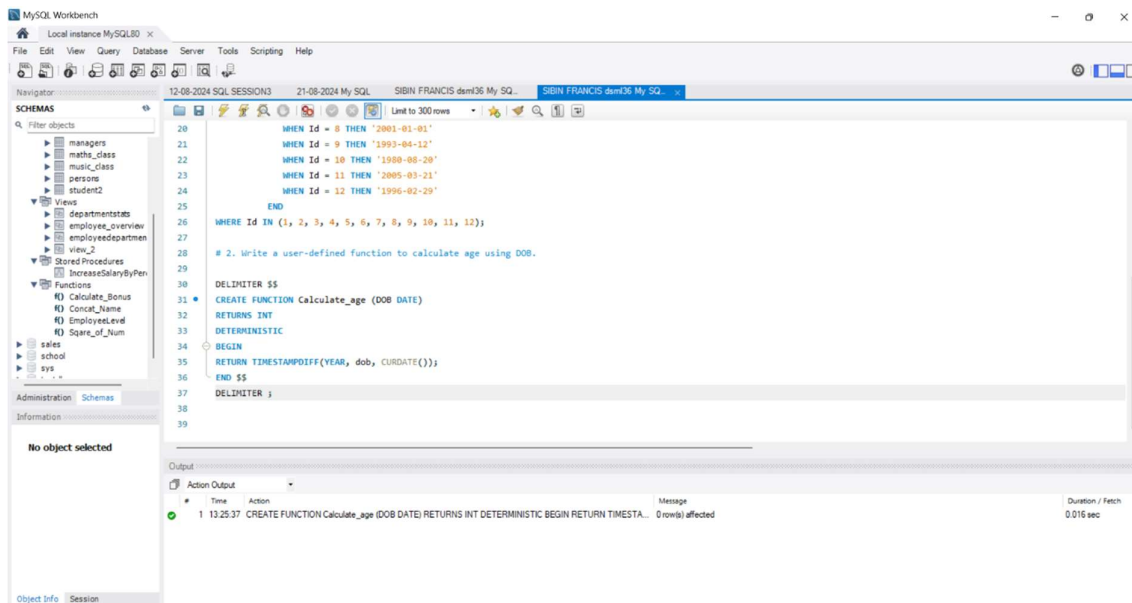
```
1 # USING COUNTRY TABLE AND PERSON TABLE
2
3 SELECT * FROM Country;
4 SELECT * FROM Persons;
5
6 # 1. Add a new column called DOB in Persons table with data type as Date.
7
8 ALTER TABLE Persons
9 ADD DOB DATE;
10
11 UPDATE Persons
12 SET DOB = CASE
13     WHEN Id = 1 THEN '1990-05-15'
14     WHEN Id = 2 THEN '1985-12-22'
15     WHEN Id = 3 THEN '2000-03-10'
16     WHEN Id = 4 THEN '1992-07-25'
17     WHEN Id = 5 THEN '1988-11-30'
18     WHEN Id = 6 THEN '1975-06-18'
19     WHEN Id = 7 THEN '1999-09-14'
20     WHEN Id = 8 THEN '2001-01-01'
21     WHEN Id = 9 THEN '1993-04-12'
22     WHEN Id = 10 THEN '1989-08-20'
23     WHEN Id = 11 THEN '2005-03-21'
24     WHEN Id = 12 THEN '1996-02-29'
25 END
26 WHERE Id IN (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12);
27
28
29
```



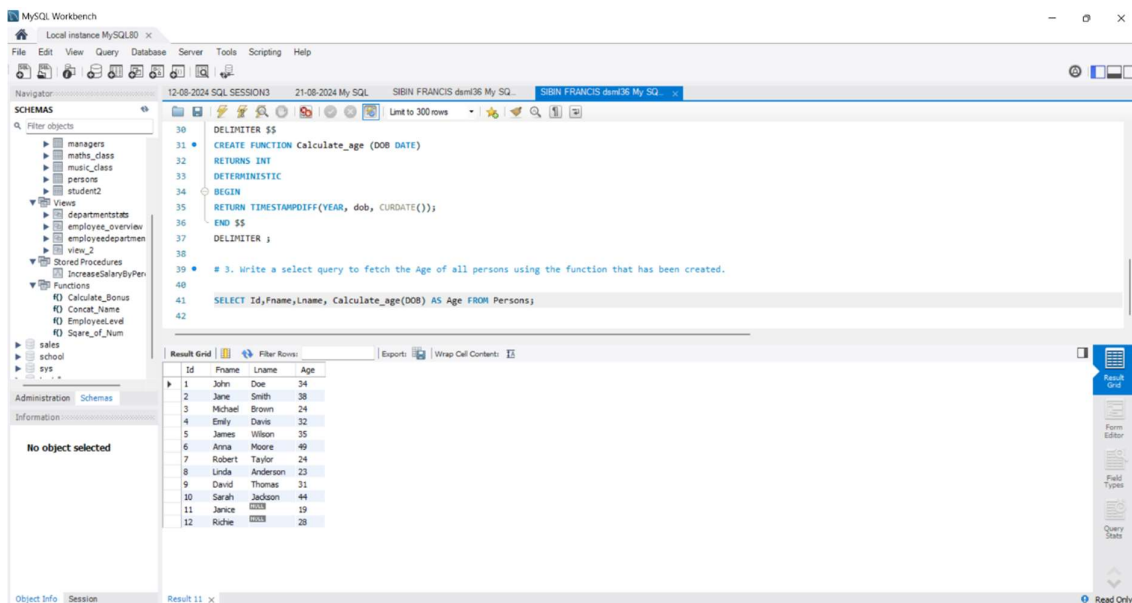
The screenshot shows the MySQL Workbench interface with the 'Result Grid' tab selected. The table displays the results of the SQL queries, showing the 'Persons' table with the new 'DOB' column. The table has 12 rows and 7 columns: Id, First Name, Last Name, Population, Rating, Country Id, and Country Name. The 'DOB' column is highlighted in blue.

Id	First Name	Last Name	Population	Rating	Country Id	Country Name	DOB
1	John	Doe	2000000	4.5	1	USA	1990-05-15
2	Jane	Smith	2000000	4.8	2	India	1985-12-22
3	Michael	Brown	1500000	4.2	3	Canada	2000-03-10
4	Emily	Davis	2500000	3.9	4	Australia	1992-07-25
5	James	Wilson	1800000	4	5	UK	1988-11-30
6	Anna	Moore	1200000	4.6	6	Germany	1975-06-18
7	Robert	Taylor	1700000	3.7	7	France	1999-09-14
8	Linda	Anderson	1400000	4.9	8	Japan	2001-01-01
9	David	Thomas	2100000	3.8	9	Brazil	1993-04-12
10	Sarah	Jackson	1600000	4.3	10	South Africa	1989-08-20
11	Jenice	Miller	1300000	4.6	11	UK	2005-03-21
12	Richie	Green	2200000	4.9	12	Turkey	1996-02-29

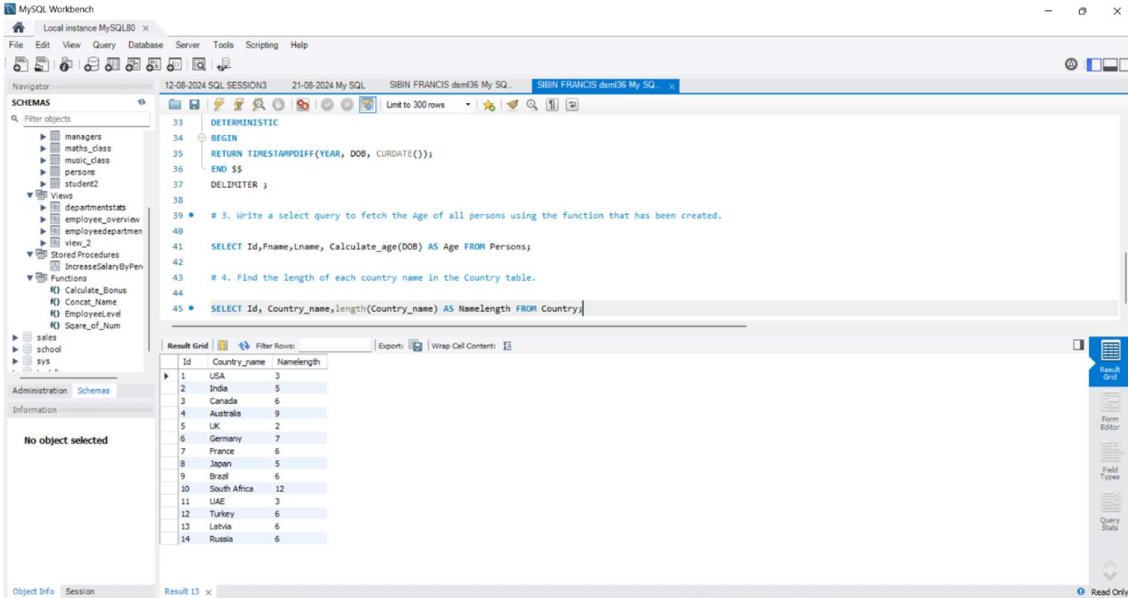
➤ USER-DEFINED FUNCTION TO CALCULATE AGE USING DOB.



➤ QUERY TO FETCH THE AGE OF ALL PERSONS USING THE FUNCTION THAT HAS BEEN CREATED.



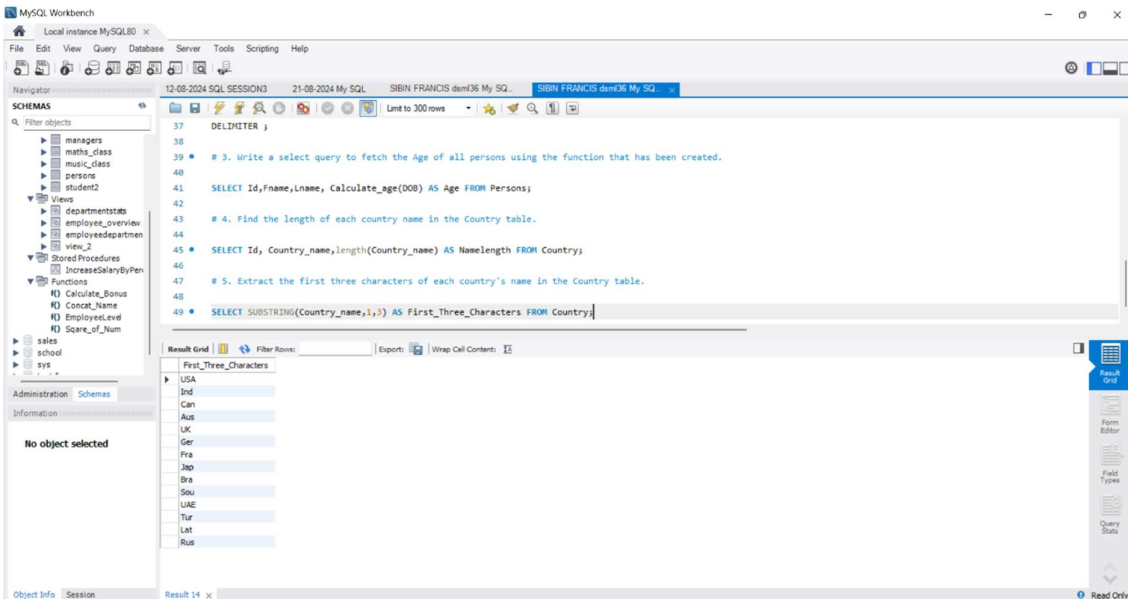
➤ LENGTH OF EACH COUNTRY NAME IN THE COUNTRY TABLE.



The screenshot shows the MySQL Workbench interface. The SQL editor contains a query to calculate the length of country names. The result grid displays the following data:

Id	Country_name	namelength
1	USA	3
2	India	5
3	Canada	6
4	Australia	9
5	UK	2
6	Germany	7
7	France	6
8	Japan	5
9	Brazil	6
10	South Africa	12
11	UAE	3
12	Turkey	6
13	Latvia	6
14	Russia	6

➤ EXTRACTED THE FIRST THREE CHARACTERS OF EACH COUNTRY'S NAME IN THE COUNTRY TABLE.



The screenshot shows the MySQL Workbench interface. The SQL editor contains a query to extract the first three characters of country names. The result grid displays the following data:

First_Three_Characters
USA
Ind
Can
Aus
UK
Ger
Fra
Jpn
Bra
Sou
UAE
Tur
Lat
Rus

➤ CONVERT ALL COUNTRY NAMES TO UPPERCASE AND LOWERCASE IN THE **COUNTRY** TABLE.

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with various databases and tables. The main editor window contains a SQL query to update the 'Country' table. The query is as follows:

```
50
51 -- SELECT ID, Country_name, LEFT(Country_name, 3) AS First_Three_Characters FROM Country;
52
53 # 6. Convert all country names to uppercase and lowercase in the Country table.
54
55 SELECT Id, Country_name,
56       ucasc(Country_name) AS Uppercasename,
57       lcasc(Country_name) AS Lowercasename
58 FROM Country;
59
60 -- SELECT ID, Country_name, UPPER(Country_name) AS Uppercasename, LOWER(Country_name) AS Lowercasename FROM Country;
61
62
```

The 'Result Grid' at the bottom displays the results of the query, showing a list of countries with their IDs, original names, uppercase versions, and lowercase versions.

Id	Country_name	Uppercasename	Lowercasename
1	USA	USA	usa
2	India	INDIA	india
3	Canada	CANADA	canada
4	Australia	AUSTRALIA	australia
5	UK	UK	uk
6	Germany	GERMANY	germany
7	France	FRANCE	france
8	Japan	JAPAN	japan
9	Brazil	BRAZIL	brazil
10	South Africa	SOUTH AFRICA	south africa
11	UAE	UAE	uae
12	Turkey	TURKEY	turkey
13	Latvia	LATVIA	latvia
14	Russia	RUSSIA	russia