

# FUNCTIONS

Consider the Country table and Persons table that you created earlier (sorting and grouping)

DESC country;

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Field	Type	Null	Key	Default	Extra
▶	Id	int	NO	PRI	NULL	
	Country_name	varchar(50)	YES		NULL	
	Population	bigint	YES		NULL	
	Area	int	YES		NULL	

DESC persons;

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Field	Type	Null	Key	Default	Extra
▶	Id	int	NO	PRI	NULL	
	Fname	varchar(50)	YES		NULL	
	Lname	varchar(50)	YES		NULL	
	Population	bigint	YES		NULL	
	Rating	decimal(3,2)	YES		NULL	
	Country_Id	int	YES	MUL	NULL	
	Country_name	varchar(50)	YES		NULL	

select \* from country;

Result Grid

Filter Rows:

Edit:

Export/Import:

Wrap Cell Content:

	Id	Country_name	Population	Area
	1	USA	75000000	9833520
	2	India	50000000	3287263
	3	Canada	80000000	9984670
	4	UK	150000000	243610
	5	Australia	400000	7692024
	6	Germany	2000000	357022
	7	France	6900000	551695
	8	Brazil	6000000	8515767
	9	Russia	15500000	17098242
	10	Japan	8650000	377930
*	NULL	NULL	NULL	NULL

select \* from persons;



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

-- inserting DOB

UPDATE Persons

SET DOB = CASE

WHEN Id = 1 THEN '1990-01-01'

WHEN Id = 2 THEN '1985-06-15'

WHEN Id = 3 THEN '1983-08-18'

WHEN Id = 4 THEN '1988-06-05'

WHEN Id = 5 THEN '1980-04-16'

WHEN Id = 6 THEN '1988-01-19'

WHEN Id = 7 THEN '1999-07-29'

WHEN Id = 8 THEN '1985-08-25'

WHEN Id = 9 THEN '1982-11-16'

WHEN Id = 10 THEN '1983-02-27'

WHEN Id = 11 THEN '1988-12-25'

WHEN Id = 12 THEN '1990-01-13'

END

WHERE Id IN (1,2,3,4,5,6,7,8,9,10,11,12);

Result Grid								
		Filter Rows:		Edit:		Export/Import:		Wrap Cell Content:
	Id	Fname	Lname	Population	Rating	Country_Id	Country_name	DOB
▶	1	Jeeva	Joseph	75000000	4.50	1	USA	1990-01-01
	2	Arya	Shan	5000000	3.80	2	India	1985-06-15
	3	Emma	Emmi	8000000	4.90	3	Canada	1983-08-18
	4	Basim	Johny	150000000	4.20	4	UK	1988-06-05
	5	Aryan	John	400000	3.90	5	Australia	1980-04-16
	6	Maria	Grace	2000000	4.70	6	Germany	1988-01-19
	7	James	Wilson	6900000	2.10	7	France	1999-07-29
	8	Suzzy	Martin	6000000	4.00	8	Brazil	1985-08-25
	9	Robert	Williams	15500000	1.70	9	Russia	1982-11-16
	10	Jane	Taylor	8650000	4.60	10	Japan	1983-02-27
	11	Aishw...	NULL	75000000	4.50	1	USA	1988-12-25
	12	Daisy	NULL	15500000	1.70	9	Russia	1990-01-13

**-- -- user-defined function to calculate age using DOB.**

```
DELIMITER //

CREATE FUNCTION Calculate_Age (DOB DATE)

RETURNS INT

DETERMINISTIC

BEGIN

    RETURN TIMESTAMPDIFF(YEAR, DOB, CURDATE());

END //

DELIMITER ;
```

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

```
SELECT Id, Fname, Lname, DOB, CalculateAge(DOB) AS Age

FROM Persons;
```

Result Grid					
		Filter Rows:		Export:	Wrap Cell Content:
	Id	Fname	Lname	DOB	Age
▶	1	Jeeva	Joseph	1990-01-01	34
	2	Arya	Shan	1985-06-15	39
	3	Emma	Emmi	1983-08-18	41
	4	Basim	Johny	1988-06-05	36
	5	Aryan	John	1980-04-16	44
	6	Maria	Grace	1988-01-19	36
	7	James	Wilson	1999-07-29	25
	8	Suzzy	Martin	1985-08-25	39
	9	Robert	Williams	1982-11-16	41
	10	Jane	Taylor	1983-02-27	41
	11	Aishw...	NULL	1988-12-25	35
	12	Daisy	NULL	1990-01-13	34

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

```
SELECT Country_name, LENGTH(Country_name) AS Length_of_country_name  
FROM Country;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
Country_name	Length_of_country_name		
USA	3		
India	5		
Canada	6		
UK	2		
Australia	9		
Germany	7		
France	6		
Brazil	6		
Russia	6		
Japan	5		

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

```
SELECT Country_name, LEFT(Country_name, 3) AS First_Three_Characters  
FROM Country;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
Country_name	First_Three_Characters		
USA	USA		
India	Ind		
Canada	Can		
UK	UK		
Australia	Aus		
Germany	Ger		
France	Fra		
Brazil	Bra		
Russia	Rus		
Japan	Jap		

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

```
SELECT Country_name,  
       UPPER(Country_name) AS CountryName_Uppercase,  
       LOWER(Country_name) AS CountryName_Lowercase  
FROM Country;
```

Result Grid   Filter Rows: <input type="text"/>   Export:    Wrap Cell Content: 			
	Country_name	CountryName_Uppercase	CountryName_Lowercase
▶	USA	USA	usa
	India	INDIA	india
	Canada	CANADA	canada
	UK	UK	uk
	Australia	AUSTRALIA	australia
	Germany	GERMANY	germany
	France	FRANCE	france
	Brazil	BRAZIL	brazil
	Russia	RUSSIA	russia
	Japan	JAPAN	japan