

Assignment 5

Sorting and Grouping data

Insert 10 rows into both tables, as given below.

Create a table named Country with fields: Id, Country_name, Population, Area.

Create another table named Persons with fields: Id Fname, Lname, Population, Rating, Country_Id, Country_name.

Query and Results

```
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;

22 • create table persons (id int primary key,
23   first_name varchar(50),
24   last_name varchar(50),
25   population varchar(50),
26   rating int,
27   country_id int,
28   country_name varchar(50));
29 • desc persons;
30 • insert into persons(id, first_name, last_name, population,rating,country_id,country_name)
31  values(1, 'Lisha', 'Thomas', '90000000', 1, 1, 'India'),
32         (2, 'Chaang', 'Yaang', '90000000', 2, 2, 'China'),
33         (3, 'Thomas', 'Cook', '80000000', 3, 3, 'USA'),
34         (4, 'Diana', 'Xavier', '90000000', 1, 1, 'India'),
35         (5, 'Freddy', 'Dainz', '60000000', 5, 5, 'Canada'),
36         (6, 'Hari', 'Sharma', '90000000', 1, 1, 'India'),
37         (7, 'william', 'Blake', '40000000', 7, 7, 'Netherlands'),
38         (8, 'Right', 'Thomas', '30000000',8, 8, 'Sweden'),
39         (9, 'Cindrella', 'John', '20000000', 9, 9, 'Austria'),
40         (10, 'Irene', 'Dizooza', '10000000', 10, 10, 'Iceland');
41 • select*from persons;
```

1. Write an SQL query to print the first three characters of Country_name from the Country table.

Query and Result

```
43 #print the first three characters of Country_name from the Country table
44 • select substring(country_name,1,3) as FirstThreeCharacters from country;
45
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
FirstThreeCharacters				
▶	Ind			
	Chi			
	USA			
	UK			
	Can			
	Aus			
	Net			
	Swe			
	Aus			
	Swi			

2. Write an SQL query to concatenate first name and last name from Persons table.

Query and Result

```
46 #concatenate first name and last name from Persons table
47 • select concat(first_name, ' ', last_name) as FULLNAME from persons;
48
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
FULLNAME				
▶	Lisha Thomas			
	Chaang Yaang			
	Thomas Cook			
	Diana Xavier			
	Freddy Dainz			
	Hari Sharma			
	william Blake			
	Right Thomas			
	Cindrella John			
	Irene Dizooza			

3. Write an SQL query to count the number of unique country names from Persons table.

Query and Result

```
49 #count the number of unique country names from Persons table
50 • select count(distinct country_name) as DISTINCTCOUNTRIES from persons;
51
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
DISTINCTCOUNTRIES				
▶	8			

4. Write a query to print the maximum population from the Country table.

Query and Result

```
52 #print the maximum population from the Country table
53 • select max(population) as MAXIMUMPOPULATION from country;
54
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
MAXIMUMPOPULATION			
90000000			

5. Write a query to print the minimum population from Persons table.

Query and Result










```
55 #print the minimum population from Persons table
56 • select min(population) as MINIIMUMPOPULATION from persons;
57
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
MINIIMUMPOPULATION			
10000000			

6. Insert 2 new rows to the Persons table making the Lname NULL. Then write another query to count Lname from Persons table.

Query and Results

```
58 # Insert 2 new rows to the Persons table making the Lname NULL
59 • insert into persons(id, first_name, last_name, population, rating, country_id, country_name)
60 values(11, 'Janu', NULL, '90000000', 1, 1, 'India'),
61 (12, 'Hansu', NULL, '10000000', 10, 10, 'Iceland');
62 • select * from persons;
63 #count Lname from Persons table
64 • select count(last_name) as COUNTLASTNAME from persons;
```

Result Grid									Filter Rows: <input type="text"/>	Edit: 			Export/Import: 		Wrap Cell Content: 	
	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									
	11	Janu	NULL	90000000	1	1	India									
	12	Hansu	NULL	10000000	10	10	Iceland									
	NULL	NULL	NULL	NULL	NULL	NULL	NULL									

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
COUNTLASTNAME			
10			

7. Write a query to find the number of rows in the Persons table.

Query and Result

```
66      #number of rows in the Persons table
67 •    select count(id) as NoOfRows from persons;
68
```

Result Grid			Filter Rows: <input type="text"/>	Export:	Wrap Cell Content:
	NoOfRows				
▶	12				

8. Write an SQL query to show the population of the Country table for the first 3 rows. (Hint: Use LIMIT)

Query and Result

```
69      #population of the Country table for the first 3 rows
70 •    select country_name,population from country limit 3;
```

Result Grid			Filter Rows: <input type="text"/>	Export:	Wrap Cell Content:
	country_name	population			
▶	India	900000000			
	China	900000000			
	USA	800000000			

9. Write a query to print 3 random rows of countries. (Hint: Use rand() function and LIMIT)

Query and Result

```
--
72      #print 3 random rows of countries
73 •    select* from country order by rand() limit 3;
```

Result Grid			Filter Rows: <input type="text"/>	Edit:			Exp
	id	country_name	population	area_sqkm			
▶	6	Australia	50000000	50 lakhs			
	4	UK	70000000	2 lakhs			
	2	China	90000000	97 lakhs			
*	NULL	NULL	NULL	NULL			

10. List all persons ordered by their rating in descending order.



Query and Result




```



75 #List all persons ordered by their rating in descending order
76 • select*from persons order by rating desc;
--

```

Result Grid

  Filter Rows:

Edit:   

Export/Import:  

Wrap (

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

11. Find the total population for each country in the Persons table.

Query and Result

```

78 # total population for each country in the Persons table
79 • select sum(population) as TOTALPOPULATION from persons;
--

```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	TOTALPOPULATION
▶	700000000

12. Find countries in the Persons table with a total population greater than 50,000.

Query and Result

```

81 #countries in the Persons table with a total population greater than 50,000
82 • select distinct country_name from persons where population>50000;
--

```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	country_name
▶	India
	China
	USA
	Canada
	Netherlands
	Sweden
	Austria
	Iceland

13. List the total number of persons and average rating for each country, but only for countries with more than 2 persons, ordered by the average rating in ascending order.

Query and Result

```
84  /*total number of persons and average rating for each country,  
85  but only for countries with more than 2 persons, ordered by the average rating  
86  in ascending order*/  
87  •  select count(first_name) as totalpersons, avg(rating) as avgrating, country_name from  
88  persons group by country_name having count(country_name)>2  
89  order by avgrating asc;
```

Result Grid			
Filter Rows: <input type="text"/>			
Export: <input type="button" value=""/>			
Wrap Cell Content: <input type="button" value=""/>			
	totalpersons	avgrating	country_name
▶	4	1.0000	India