

**Information System Management Lab
BCOM 307**

Assignment #17

Submitted by:

Name: YASH JAIN
Enrollment No: 03914788818
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Submitted to:

Praveen Kumar Singh
Assistant Professor, MAIMS



Department of Commerce
Maharaja Agrasen Institute of Management Studies
Affiliated to Guru Gobind Singh Indraprastha University, Delhi
Sector -22, Rohini, Delhi -110086, India; www.maims.ac.in



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Certified Institution Sector 22, Rohini, Delhi -110086, India;

www.maims.ac.in

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Assignment No. 17

Unit No:

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Instructions for Students:

1. **All Questions are Compulsory.**
2. The student should attach proper cover page for each assignment clearly mentioning the Assignment No.
3. Each assignment should be prepared by the student individually with proper explanation and screenshots.
4. A4 size ruled sheets should be used for the assignment.
5. Assignment pages should be serially numbered at the bottom of page.

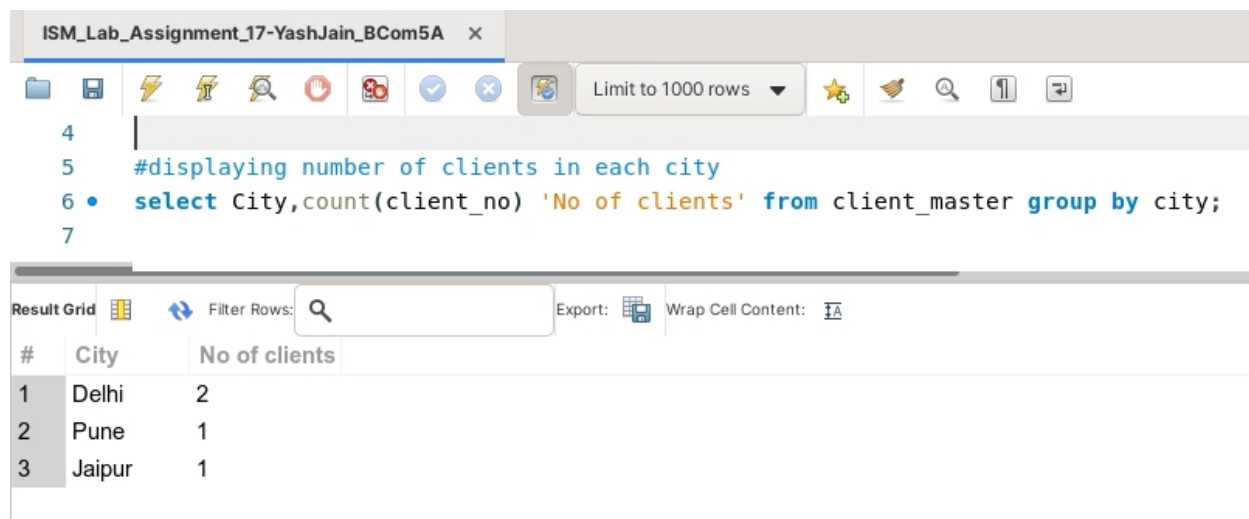
During online education mode, upload scanned copy of the complete assignment including cover page latest by due date.

Question No.	Question	CO No.
1	Display the number of clients in each city.	CO1, CO2, CO3, CO4
2	Display the number of clients in each designation.	
3	Display cities where no of clients is greater than or equal to 2.	
4	Display the number of clients for each designation where the count is more than equal to 2.	
5	Display the cities where bal due is more than 5000 and no of clients is more than 2.	

ASSIGNMENT 17 - GROUP BY and HAVING Clause**Task 1 : Display the number of clients in each city.**

This task can be completed using the **GROUP BY** clause. The GROUP BY clause is used to filter the data in a table, according to one of the columns. It is used for categorical data. You have to write the column name with GROUP BY, on which the aggregate function hasn't been applied. The syntax for this is -

```
SELECT column1, agg_function(column2) from <tablename> where  
<condition> GROUP BY column1,column2;
```



The screenshot shows a database IDE window titled "ISM_Lab_Assignment_17-YashJain_BCom5A". The SQL editor contains the following query:

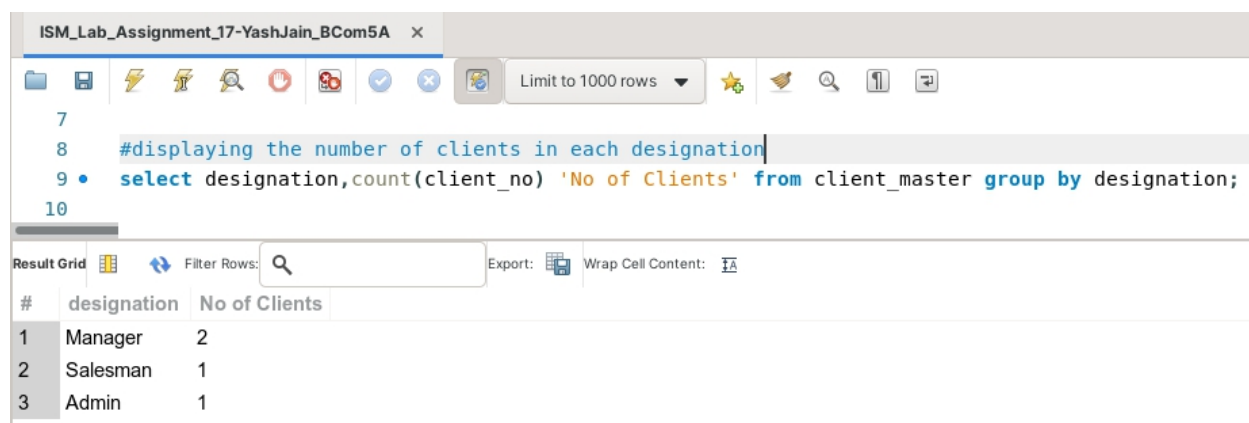
```
4  
5 #displaying number of clients in each city  
6 • select City,count(client_no) 'No of clients' from client_master group by city;  
7
```

Below the editor is the "Result Grid" showing the output of the query:

#	City	No of clients
1	Delhi	2
2	Pune	1
3	Jaipur	1

Task 2: Display the number of clients in each designation.

This task can be completed using the **GROUP BY** clause.



The screenshot shows the same database IDE window. The SQL editor contains the following query:

```
7  
8 #displaying the number of clients in each designation  
9 • select designation,count(client_no) 'No of Clients' from client_master group by designation;  
10
```

Below the editor is the "Result Grid" showing the output of the query:

#	designation	No of Clients
1	Manager	2
2	Salesman	1
3	Admin	1

Task 3: Display cities where no of clients is greater than or equal to 2.

This task can be completed using the **GROUP BY** clause, along with the **HAVING** clause. The HAVING clause is used after the GROUP BY clause which is used to display records satisfying a particular condition in the group that we have virtually created using the GROUP BY clause.

So, the HAVING Clause filters the Virtual Group. The syntax for this is -

```
SELECT column1, agg_function(column2) from <tablename> where  
<condition> GROUP BY column1,column2 HAVING <condition>;
```

The screenshot shows a database query editor with the following SQL query:

```
10  
11 #displaying the cities with no of clients greater than equal to 2  
12 • select City,count(client_no) 'No of Clients' from client_master group by city having count(client_no)>=2;  
13  
14
```

The result grid shows the following data:

#	City	No of Clients
1	Delhi	2

Task 4: Display the number of clients for each designation where the count is more than equal to 2.

This task can be completed using the **GROUP BY** clause, along with the **HAVING** clause.

The screenshot shows a database query editor with the following SQL query:

```
13  
14 #displaying the designations with no of clients greater than equal to 2  
15 • select designation,count(client_no) 'No of Clients' from client_master group by designation  
16 having count(Client_No)>=2;  
17
```

The result grid shows the following data:

#	designation	No of Clients
1	Manager	2

Task 5: Display the cities where bal due is more than 5000 and no of clients is more than 2.

This task can be completed using the **GROUP BY** clause, along with the **HAVING** clause, and the **WHERE** clause.

The screenshot shows a database query editor with the following SQL query:

```
17  
18 #displaying cities where bal due is greater than 5000 and no of clients is greater than equal to 2000  
19 • select city,count(client_no) from client_master where bal due>=5000 group by city having count(Client_No)>=2;  
20  
21
```

The result grid shows the following data:

#	city	count(client_no)
1	Delhi	2