

**NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR**

**Cachar, Assam**

**B.Tech. V<sup>th</sup> Sem**

**Subject Code:** CS-312

**Subject Name:** Database Management System

**Submitted By:**

Name : Subhojit Ghimire

Sch. Id. : 1912160

Branch : CSE – B

CONNECTION: 1912160\_CS312

CREATE SCHEMA `assignment6`;

### 1. ta\_table

Result Grid			Filter Rows:	
	TA_id	Name		
*	NULL	NULL		

```
CREATE TABLE `assignment6`.`ta_table` (
  `TA_id` INT NOT NULL,
  `Name` VARCHAR(20) NOT NULL,
  PRIMARY KEY (`TA_id`)
);
```

### 2. question\_table

Result Grid			Filter Rows:	
	Question_id	TA_id		
*	NULL	NULL		

```
CREATE TABLE `assignment6`.`question_table` (
  `Question_id` INT NOT NULL,
  `TA_id` INT NOT NULL,
  PRIMARY KEY (`Question_id`)
);
```

## TEST CASE 1

### 1. ta\_table

Result Grid		Filter Rows:
TA_id	Name	
5077	Rose	
21283	Angela	
62743	Frank	
88255	Patrick	
96196	Lisa	
NULL	NULL	

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('5077', 'Rose');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('21283', 'Angela');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('62743', 'Frank');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('88255', 'Patrick');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('96196', 'Lisa');
```

### 2. question\_table

Result Grid		Filter Rows:
Question_id	TA_id	
1220	21283	
12859	62743	
18483	88255	
26053	88255	
29477	5077	
33625	96196	
34599	88255	
40587	88255	
42665	62743	
48561	62743	
52382	5077	
54680	88255	
58077	62743	
58302	21283	
61654	5077	
61881	5077	
69514	21283	
70094	21283	
74467	21283	
76766	24283	
NULL	NULL	

```
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('61654', '5077');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('58302', '21283');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('40587', '88255');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('29477', '5077');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('1220', '21283');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('69514', '21283');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('48561', '62743');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('58077', '62743');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('18483', '88255');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('76766', '24283');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('52382', '5077');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('74467', '21283');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('33625', '96196');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('26053', '88255');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('42665', '62743');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('12859', '62743');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('70094', '21283');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('34599', '88255');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('54680', '88255');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('61881', '5077');
```

## TEST CASE 2

### 1. ta\_table

Result Grid		
Filter Rows:		
	TA_id	Name
▶	12299	Rose
	34856	Angela
	79345	Frank
	80491	Patrick
	81041	Lisa
✱	NULL	NULL

```
DELETE FROM `assignment6`.`ta_table` WHERE (`TA_id` > '0');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('12299', 'Rose');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('34856', 'Angela');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('79345', 'Frank');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('80491', 'Patrick');
```

```
INSERT INTO `assignment6`.`ta_table` (`TA_id`, `Name`) VALUES ('81041', 'Lisa');
```

### 2. question\_table

Result Grid		
Filter Rows:		
	Question_id	TA_id
	4653	12299
	15334	12299
	17234	12299
	21394	12299
	21989	12299
	22720	12299
	23157	34856
	28225	34856
	36261	34856
	36905	34856
	40510	34856
	54102	34856
	61136	80491
	63117	79345
	63963	81041
	69065	80491
	70070	79345
	79820	80491
▶	80308	79345
✱	NULL	NULL

```

DELETE FROM `assignment6`.`question_table` WHERE (`Question_id` > '0');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('63963', '81041');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('63117', '79345');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('28225', '34856');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('21989', '12299');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('4653', '12299');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('70070', '79345');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('36905', '34856');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('61136', '80491');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('17234', '12299');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('80308', '79345');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('40510', '34856');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('79820', '80491');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('22720', '12299');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('21394', '12299');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('36261', '34856');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('15334', '12299');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('23157', '34856');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('54102', '34856');
INSERT INTO `assignment6`.`question_table` (`Question_id`, `TA_id`) VALUES ('69065', '80491');

```

1. Write a query to print the Question\_id, name, and the total number of questions created by each Teaching assistant(TA). Arrange results by the total number of questions in descending order. If more than one TA's created the same number of questions, then sort the result by TA\_id. If more than one TA's created the same number of questions and the count is less than the maximum number of questions created, then exclude those TA's from the result.

```

➔ SELECT q.TA_id, t.name, COUNT(q.Question_id) AS cnt
FROM ta_table AS t
JOIN question_table AS q ON t.TA_id = q.TA_id
GROUP BY q.TA_id, t.name
HAVING cnt = (
    SELECT COUNT(q1.Question_id)
    FROM question_table AS q1
    GROUP BY q1.TA_id
    ORDER BY COUNT(*) DESC LIMIT 1
)
OR cnt NOT IN (
    SELECT COUNT(q2.Question_id) FROM question_table AS q2
    GROUP BY q2.TA_id
    HAVING q2.TA_id <> q.TA_id
)
ORDER BY cnt DESC, q.TA_id;

```

#### RESULT: TEST CASE 1

Result Grid			
Filter Rows:			
	TA_id	name	cnt
▶	21283	Angela	5
	88255	Patrick	5

#### RESULT: TEST CASE 2

Result Grid			
Filter Rows:			
	TA_id	name	cnt
▶	12299	Rose	6
	34856	Angela	6
	81041	Lisa	1

## TEST CASE 1 OUTPUT

question\_table x

Limit to 1000 rows

```

1 • SELECT q.TA_id, t.name, COUNT(q.Question_id) AS cnt
2   FROM ta_table AS t
3   JOIN question_table AS q ON t.TA_id = q.TA_id
4   GROUP BY q.TA_id, t.name
5   HAVING cnt = (
6       SELECT COUNT(q1.Question_id)
7       FROM question_table AS q1
8       GROUP BY q1.TA_id
9       ORDER BY COUNT(*) DESC LIMIT 1
10  )
11  OR cnt NOT IN (
12      SELECT COUNT(q2.Question_id) FROM question_table AS q2
13      GROUP BY q2.TA_id
14      HAVING q2.TA_id <> q.TA_id
15  )
16  ORDER BY cnt DESC, q.TA_id;

```

Result Grid

Filter Rows:

Export: Wrap Cell Content:

	TA_id	name	cnt
▶	21283	Angela	5
	88255	Patrick	5



## TEST CASE 2 OUTPUT

question\_table x

Limit to 1000 rows

```

1  SELECT q.TA_id, t.name, COUNT(q.Question_id) AS cnt
2  FROM ta_table AS t
3  JOIN question_table AS q ON t.TA_id = q.TA_id
4  GROUP BY q.TA_id, t.name
5  HAVING cnt = (
6      SELECT COUNT(q1.Question_id)
7      FROM question_table AS q1
8      GROUP BY q1.TA_id
9      ORDER BY COUNT(*) DESC LIMIT 1
10 )
11 OR cnt NOT IN (
12     SELECT COUNT(q2.Question_id) FROM question_table AS q2
13     GROUP BY q2.TA_id
14     HAVING q2.TA_id <> q.TA_id
15 )
16 ORDER BY cnt DESC, q.TA_id;

```

Result Grid

Filter Rows:

Export: Wrap Cell Content:

	TA_id	name	cnt
▶	12299	Rose	6
	34856	Angela	6
	81041	Lisa	1