

Q14	Department and employees > DbRank	6 min 10 sec	10/ 10	✓
Q15	Departments and in/complete projects > DbRank	1 hour 54 min 28 sec	10/ 10	✓
Q16	Employees and in/complete tasks > DbRank	1 hour 40 min 11 sec	10/ 10	✓

### QUESTION 1



Correct Answer

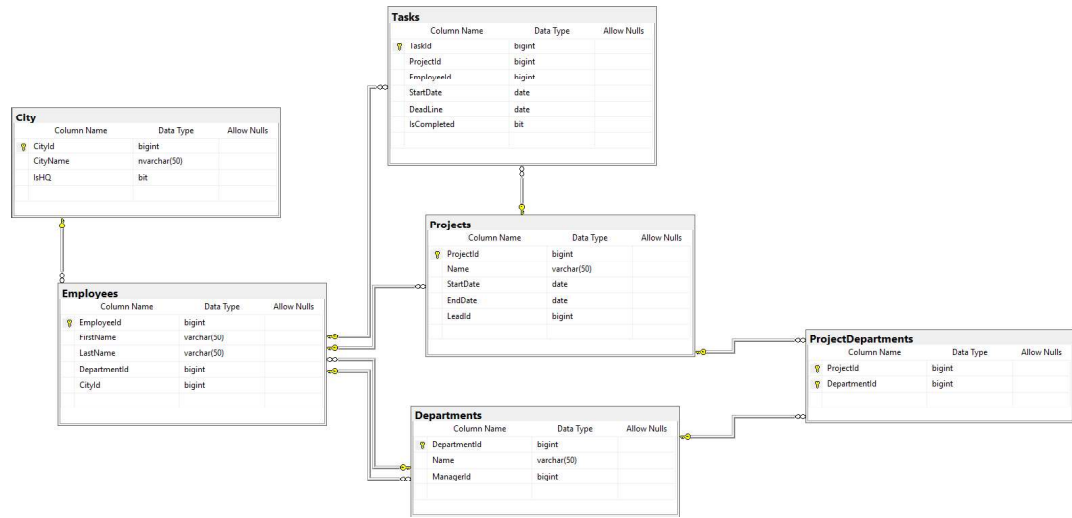
Score 10

### Incomplete Projects > DbRank SQL

#### QUESTION DESCRIPTION

List projects which are not completed (EndDate is not set)

**Output:** ProjectName, StartDate.



#### CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select name, startdate
8  from projects
9  where enddate is null
10

```

Time taken: **0.03 sec**

No Comments

### QUESTION 2



Correct Answer

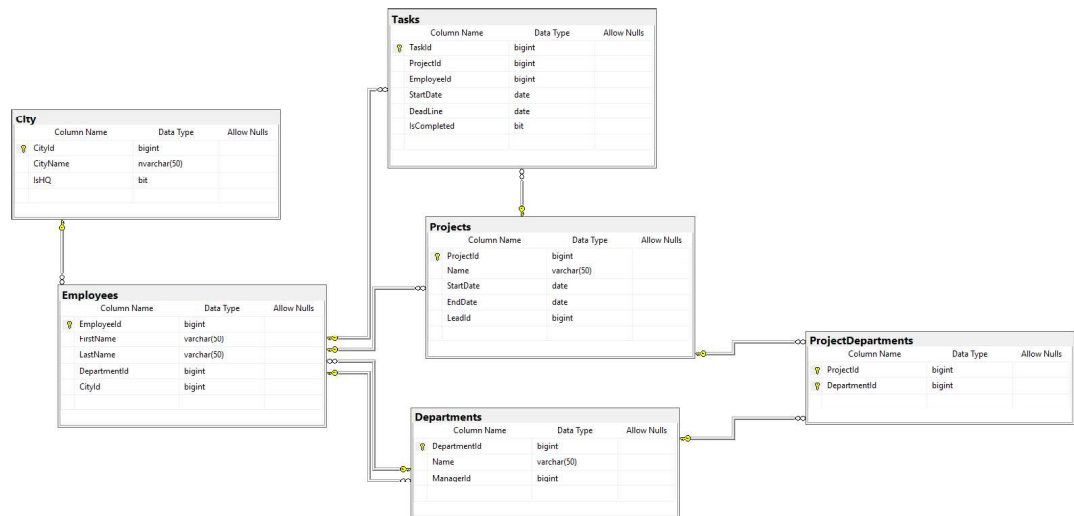
Score 10

### Completed Projects > DbRank SQL

#### QUESTION DESCRIPTION

List all projects which have been completed.

Output: Project Name, EndDate



### CANDIDATE ANSWER

Language used: **MS SQL**

```
1
2 /*
3 Enter your query below.
4 Please append a semicolon ";" at the end of the query
5 */
6
7 select name, enddate
8 from projects
9 where datediff( year, getdate() , enddate ) < 0
10
```

Time taken: **0.02 sec**

No Comments

#### QUESTION 3



Correct Answer

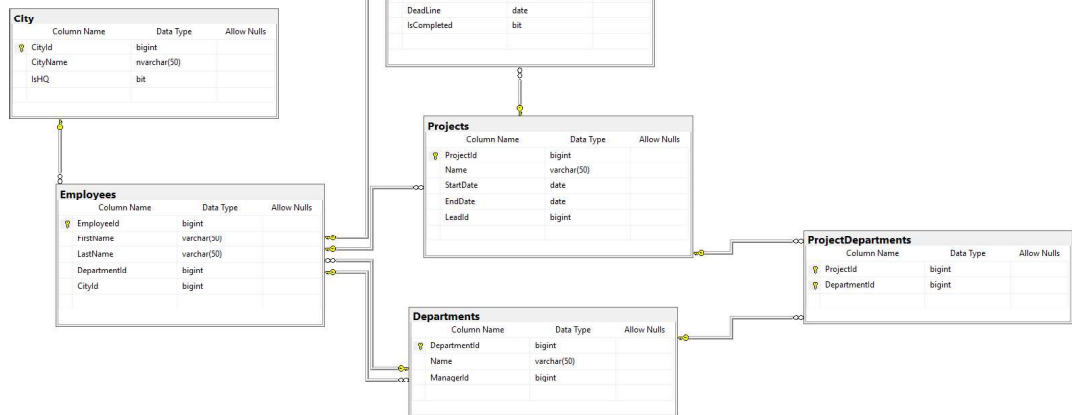
Score 10

### Department with no managers > DbRank SQL

#### QUESTION DESCRIPTION

List all departments which do not have assigned any manager.

**Output:** Department Id, Department Name



## CANDIDATE ANSWER

Language used: **MS SQL**

```
1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select departmentid, name
8  from departments
9  where managerid is null
10
```

Time taken: **0.03 sec**

No Comments

### QUESTION 4



Correct Answer

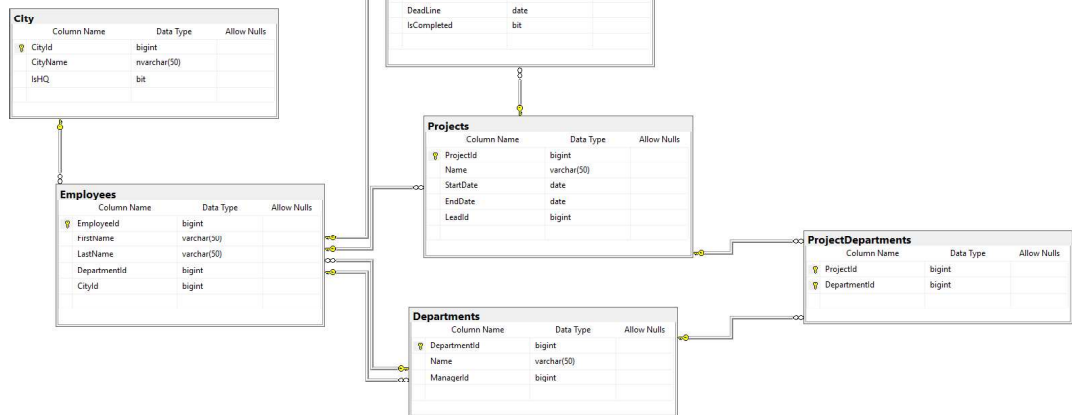
Score 10

## Completed Tasks > DbRank SQL

### QUESTION DESCRIPTION

List the number of tasks that are completed and the deadline has not passed.

**Output:** NumberOfTasks



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select count(*) as NumberOfTasks
8  from tasks
9  where (iscompleted = 1) and (datediff(year, deadline, getdate()) < 0);
  
```

Time taken: **0.03 sec**

No Comments

### QUESTION 5



Correct Answer

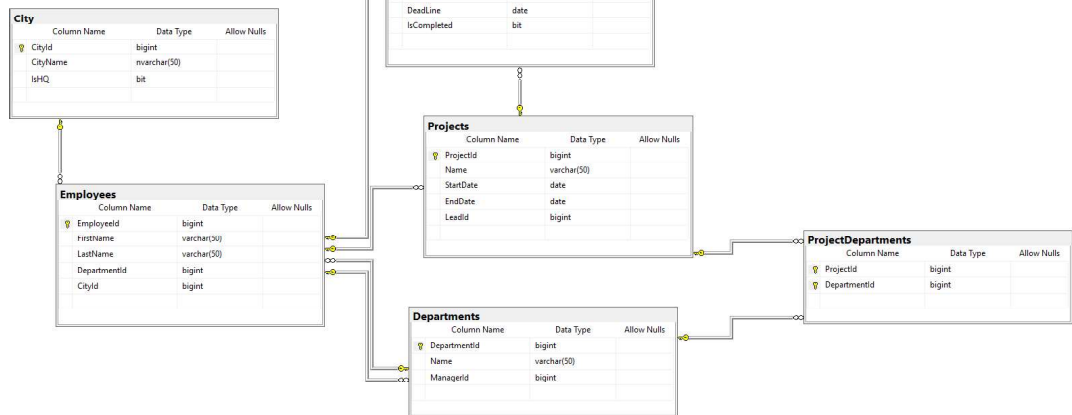
Score 10

## Incomplete Tasks > DbRank SQL

### QUESTION DESCRIPTION

List the number of tasks that are incomplete and the deadline has passed.

**Output:** NumberOfTasks



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select count(*) as NumberOfTasks
8  from tasks
9  where iscompleted = 0 and datediff(year, deadline, getdate()) > 0

```

Time taken: **0.03 sec**

No Comments

### QUESTION 6



Correct Answer

Score 10

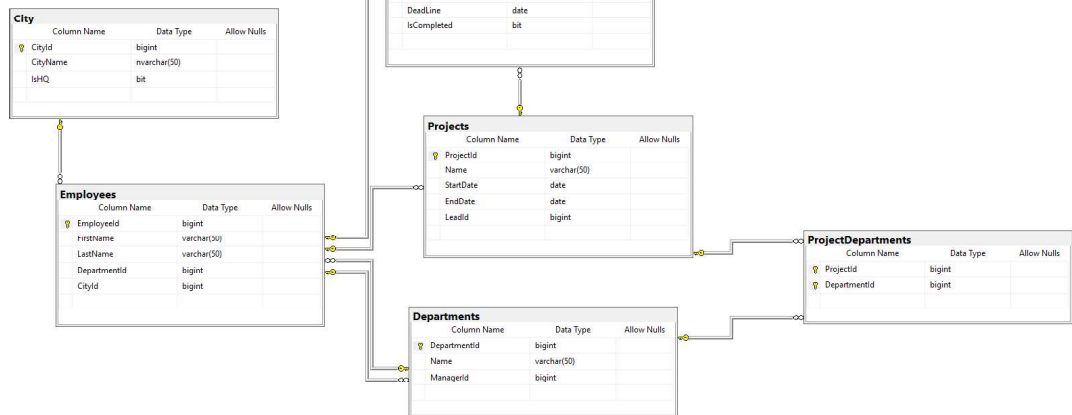
## Tasks Started in 2022 > DbRank

SQL

### QUESTION DESCRIPTION

List all tasks which are started in the year 2022.

**Output:** Task Id, Start Date, Deadline



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select taskid, startdate, deadline
8  from tasks
9  where year(startdate) = 2022
  
```

Time taken: **0.03 sec**

No Comments

### QUESTION 7



Correct Answer

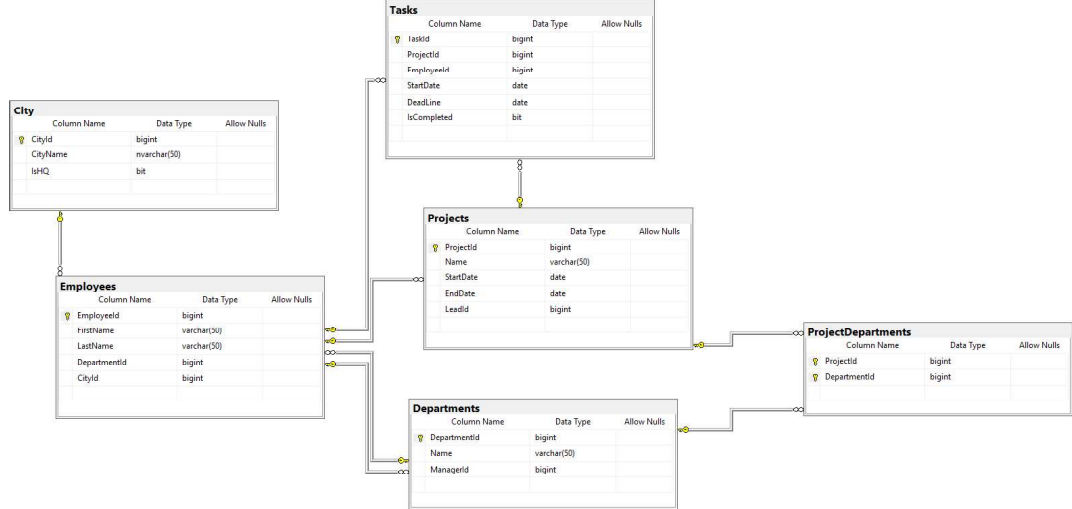
Score 10

Completed in 2022 > DbRank SQL

#### QUESTION DESCRIPTION

List projects which are completed in the year 2022

**Output:** Project Name, Start Date, End Date



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select name, startdate, enddate
8  from projects
9  where year(enddate) = 2022
10

```

Time taken: **0.03 sec**

No Comments

### QUESTION 8



Correct Answer

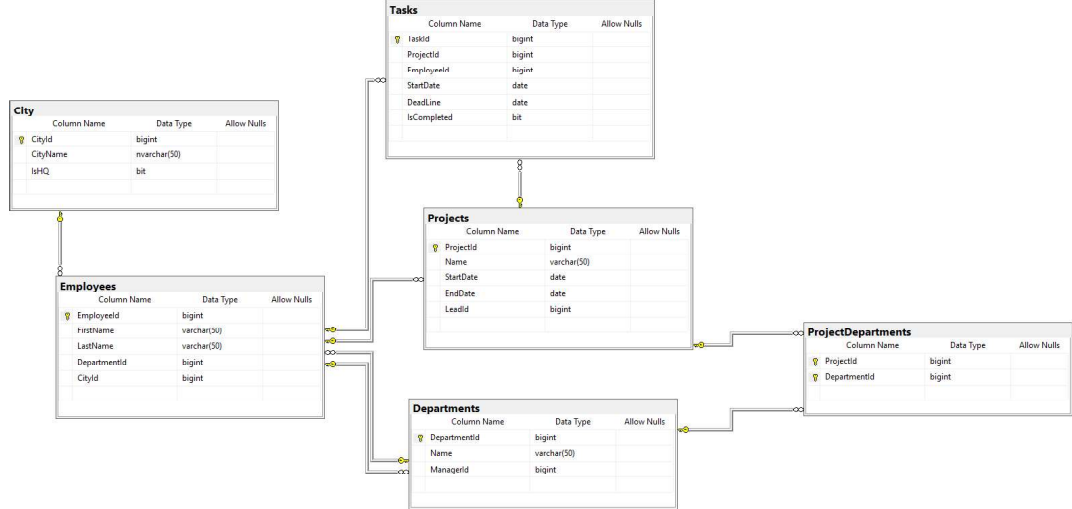
Score 10

## Number of tasks for projects > DbRank SQL

### QUESTION DESCRIPTION

List the number of tasks assigned for each project. The output should be in decreasing order for the number of tasks i.e. the project with the highest number of tasks should be listed first. Your query should also list those projects as well for which there are no tasks assigned.

**Output:** Project Name, Number of tasks



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select name, count(tasks.projectid) as NumberOfTasks
8  from projects
9  left outer join tasks on projects.projectid = tasks.projectid
10 group by projects.name
11 order by count(tasks.projectid) desc
12
13

```

Time taken: **0.04 sec**

No Comments

### QUESTION 9



Correct Answer

Score 10

## Number of employees for departments > DbRank

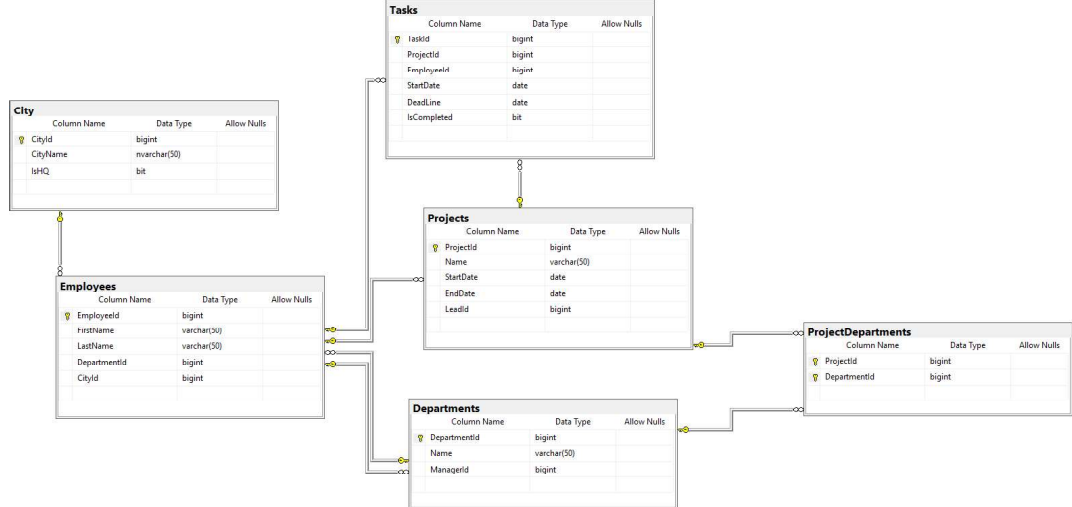
SQL

### QUESTION DESCRIPTION

List the number of employees for each department. The output should be in decreasing order for the number of employees i.e. the department with the highest number of employees should be listed first. Your query should list departments for which there are no employees assigned.

**Output:** Department Name, Number of employees





## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select name, count(employees.employeeid) as [Number of employees]
8  from departments
9  left outer join employees on departments.departmentid =
10 employees.departmentid
11 group by departments.name
12 order by count(employees.employeeid) desc

```

Time taken: **0.05 sec**

No Comments

### QUESTION 10



Correct Answer

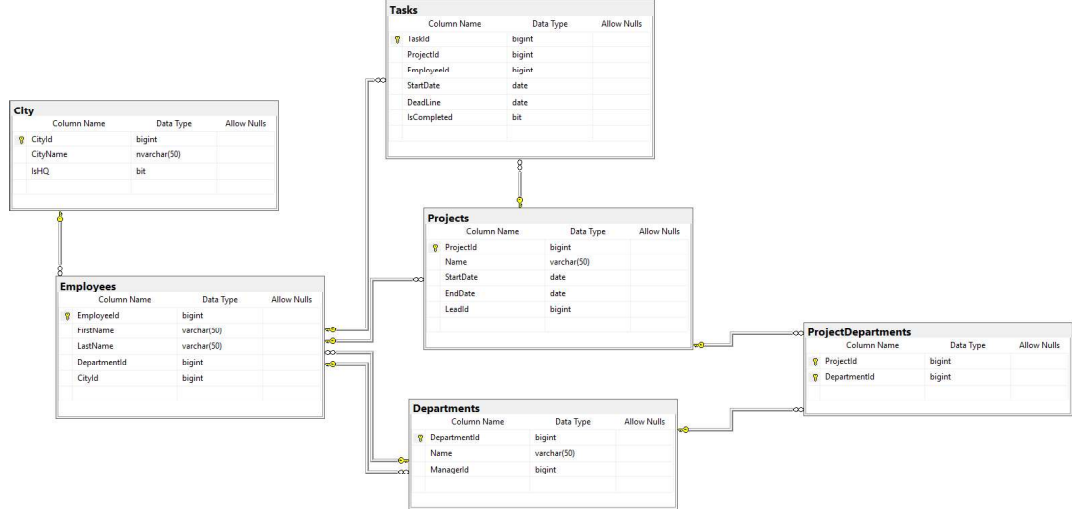
Score 10

Number of employees for cities > DbRank SQL

#### QUESTION DESCRIPTION

List the number of employees for each city. The output should be in decreasing order for the number of employees i.e. the city with the highest number of employees should be listed first.

**Output:** City Name, Number of Employees



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select cityname, count(employees.employeeid) as [Number of employees]
8  from city
9  left outer join employees on city.cityid = employees.cityid
10 group by city.cityname
11 order by count(employees.employeeid) desc
12

```

Time taken: **0.04 sec**

No Comments

### QUESTION 11



Correct Answer

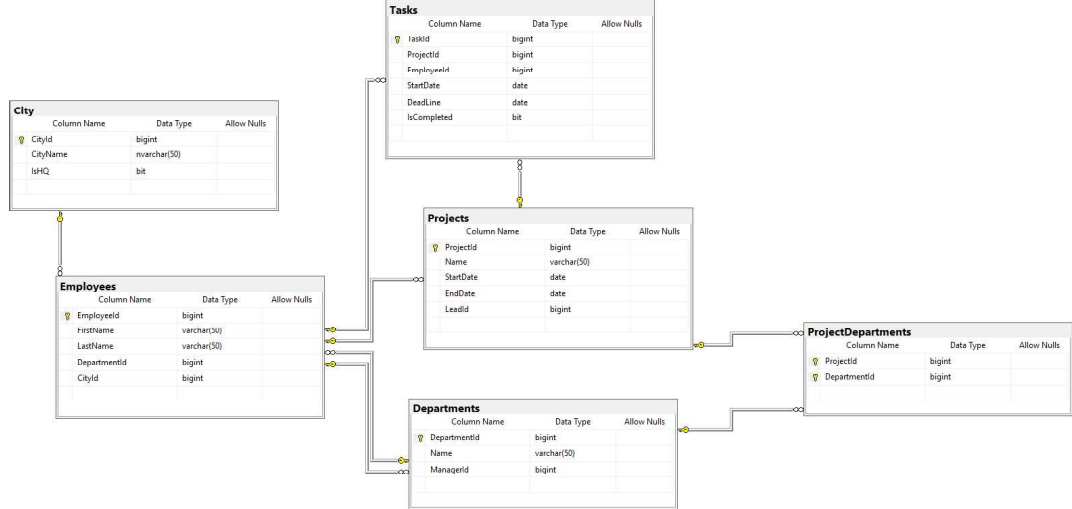
Score 10

Number of unique employees for each project > DbRank SQL

#### QUESTION DESCRIPTION

List the number of unique employees for each project who has assigned at least four tasks on the project.

**Output:** Project Id, Project Name, Number of employees



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select projects.projectid, projects.name, count(distinct
8  employees.employeeid)
9  from tasks
10 inner join employees on tasks.employeeid = employees.employeeid
11 inner join projects on tasks.projectid = projects.projectid
12 group by projects.projectid, projects.name
13 having count(tasks.projectid) >= 4
14

```

Time taken: **0.04 sec**

No Comments

### QUESTION 12



Correct Answer

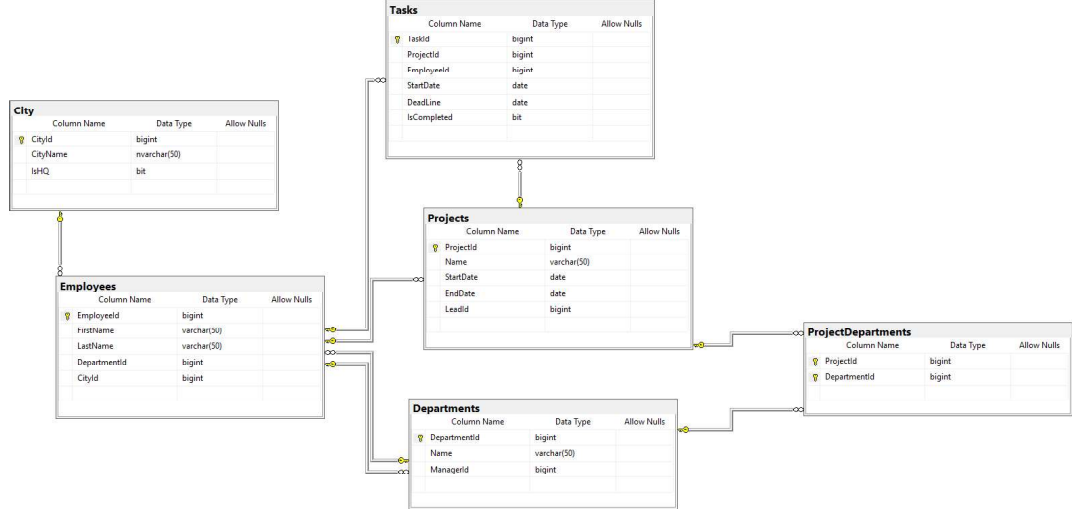
Score 10

Number of employees reporting > DbRank **SQL**

#### QUESTION DESCRIPTION

List all managers and the number of employees reporting to them. These are employees working in departments managed by each manager (excluding themselves). Only list those managers who manage more than one employee.

**Output:** Employee Id, First Name, Last Name, Number of Employees reporting to manager



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select d1.managerid as employeeid, e2.firstname, e2.lastname,
8  count(e1.employeeid) as NumberOfEmployees
9  from departments d1
10 inner join employees e1 on d1.departmentid = e1.departmentid
11 inner join employees e2 on d1.managerid = e2.employeeid
12 where e1.employeeid != d1.managerid
13 group by d1.managerid, e2.firstname, e2.lastname
14 having count(e1.employeeid) > 1
15

```

Time taken: **0.04 sec**

No Comments

### QUESTION 13



Correct Answer

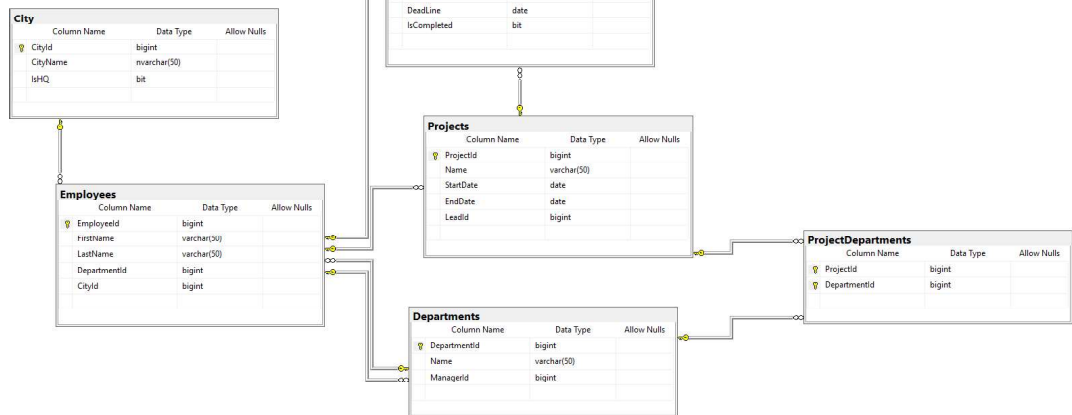
Score 10

## Project and Leads > DbRank SQL

### QUESTION DESCRIPTION

List all projects whose leads belong to the headquarter. Do not list projects for which no lead is assigned.

**Output:** Project Name, Lead's First Name, Lead's Last Name



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1  /*
2  Enter your query below.
3  Please append a semicolon ";" at the end of the query
4  */
5
6  select projects.name, employees.firstname, employees.lastname
7  from employees
8  inner join city on city.cityid = employees.cityid
9  inner join projects on projects.leadid = employees.employeeid
10 where ishq = 1
11
12
13

```

Time taken: **0.04 sec**

No Comments

### QUESTION 14



Correct Answer

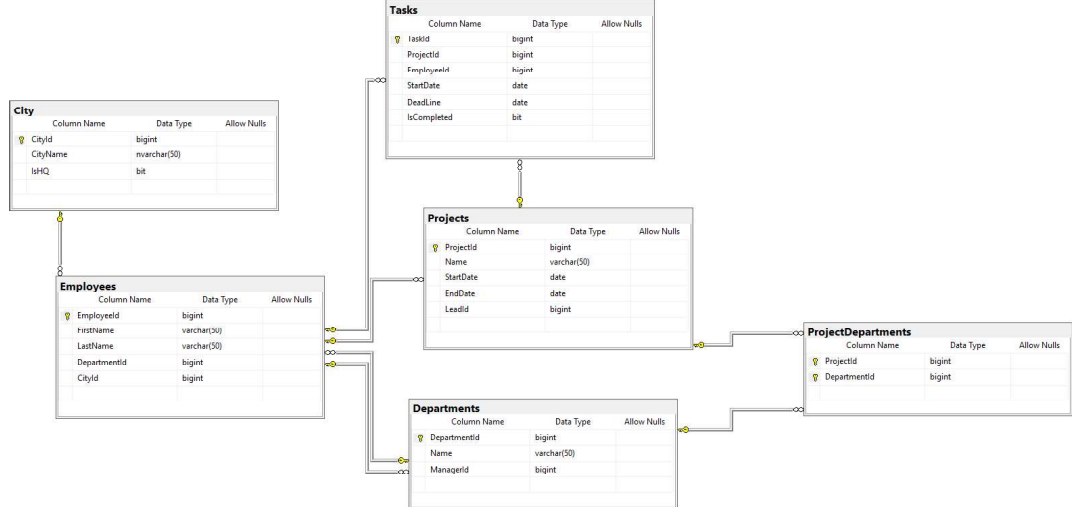
Score 10

## Department and employees > DbRank SQL

### QUESTION DESCRIPTION

List all employees with the names of their departments working at headquarter. Do not list any employee who has not been assigned a department.

**Output:** First Name, Last Name, Department Name



CANDIDATE ANSWER

Language used: MS SQL

```
1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select firstname, lastname, dl.name
8  from employees el
9  inner join city c1 on el.cityid = c1.cityid
10 inner join departments d1 on d1.departmentid = el.departmentid
11 where ishq = 1
12
```

Time taken: 0.05 sec

No Comments

QUESTION 15



Correct Answer

Score 10

Departments and in/complete projects > DbRank SQL

QUESTION DESCRIPTION

List all departments with the number of completed and incomplete projects.

**Output:** Department Name, Number of completed projects, Number of incomplete projects

City	Column Name	Data Type	Allow Nulls
	CityId	bigint	
	CityName	nvarchar(50)	
	IsHQ	bit	

Employees	Column Name	Data Type	Allow Nulls
	EmployeeId	bigint	
	FirstName	varchar(50)	
	LastName	varchar(50)	
	DepartmentId	bigint	
	CityId	bigint	

Tasks	Column Name	Data Type	Allow Nulls
	TaskId	bigint	
	ProjectId	bigint	
	EmployeeId	bigint	
	StartDate	date	
	Deadline	date	
	IsCompleted	bit	

Projects	Column Name	Data Type	Allow Nulls
	ProjectId	bigint	
	Name	varchar(50)	
	StartDate	date	
	EndDate	date	
	LeadId	bigint	

Departments	Column Name	Data Type	Allow Nulls
	DepartmentId	bigint	
	Name	varchar(50)	
	ManagerId	bigint	

ProjectDepartments	Column Name	Data Type	Allow Nulls
	ProjectId	bigint	
	DepartmentId	bigint	

## CANDIDATE ANSWER

Language used: **MS SQL**

```

1
2  /*
3  Enter your query below.
4  Please append a semicolon ";" at the end of the query
5  */
6
7  select d1.name,
8  (select count(*)
9  from projects p1
10 where Enddate is not NULL AND p1.projectid in
11      (select pj1.projectid
12       from projectdepartments pj1
13       where pj1.departmentid=d1.departmentid)),
14  (select count(*)
15  from projects p1
16  where Enddate is NULL and p1.projectid in
17      (select pj1.projectid
18       from projectdepartments pj1
19       where pj1.departmentid=d1.departmentid))
20 from departments d1

```

Time taken: **0.05 sec**

No Comments

### QUESTION 16



Correct Answer

Score 10

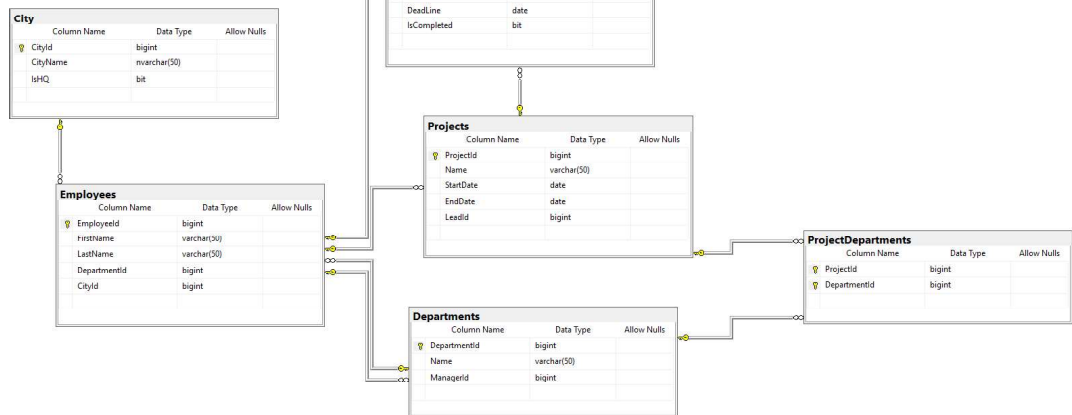
## Employees and in/complete tasks > DbRank

SQL

### QUESTION DESCRIPTION

List all employees with the number of their completed and incomplete tasks. Only show those employees who have at least one completed or incomplete task.

**Output:** Employee's First Name, Employee's Last Name, Number of completed tasks, Number of incomplete tasks



## CANDIDATE ANSWER

Language used: **MS SQL**

```

1  /*
2  Enter your query below.
3  Please append a semicolon ";" at the end of the query
4  */
5  select firstname, lastname,
6  sum(case when t1.iscompleted = 1 then 1 else 0 end) as [number of completed
7  tasks],
8  sum(case when t1.iscompleted = 0 then 1 else 0 end) as [number of incomplete
9  tasks]
10 from employees e1
11 left outer join tasks t1 on e1.employeeid = t1.employeeid
12 group by e1.employeeid, firstname, lastname
13 having
14 sum(case when t1.iscompleted = 1 then 1 else 0 end) > 0
15 or
16 sum(case when t1.iscompleted = 0 then 1 else 0 end) > 0
17

```

Time taken: **0.04 sec**

No Comments