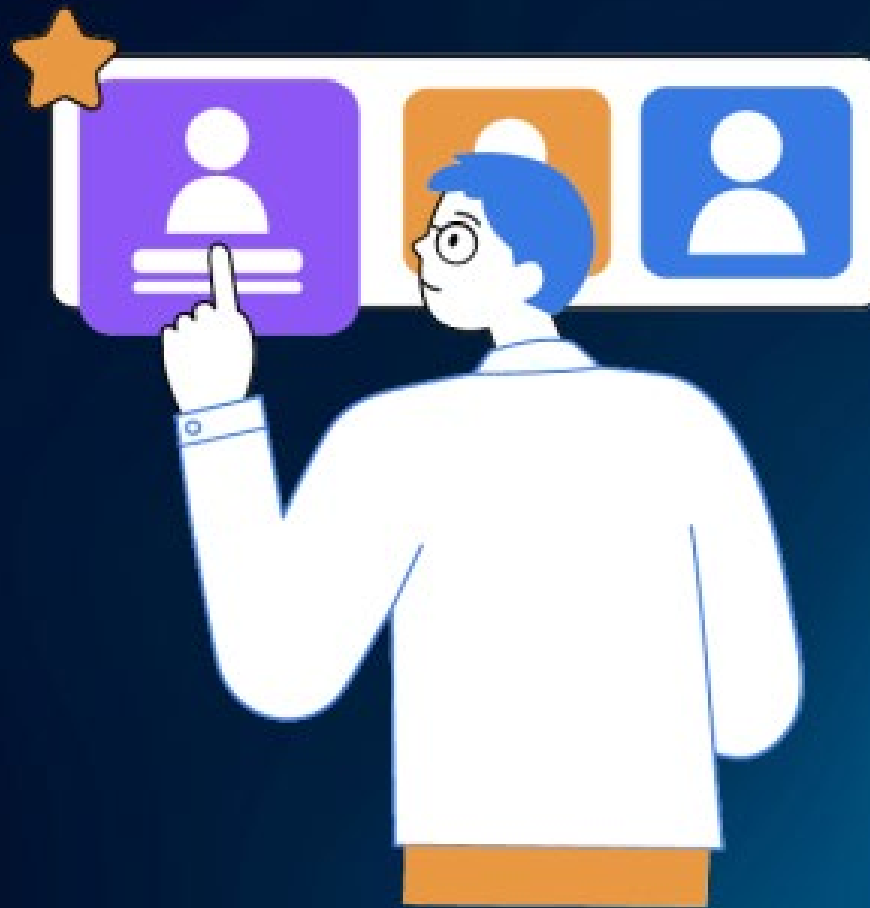


DATA IN MOTION

SQL CASE STUDY

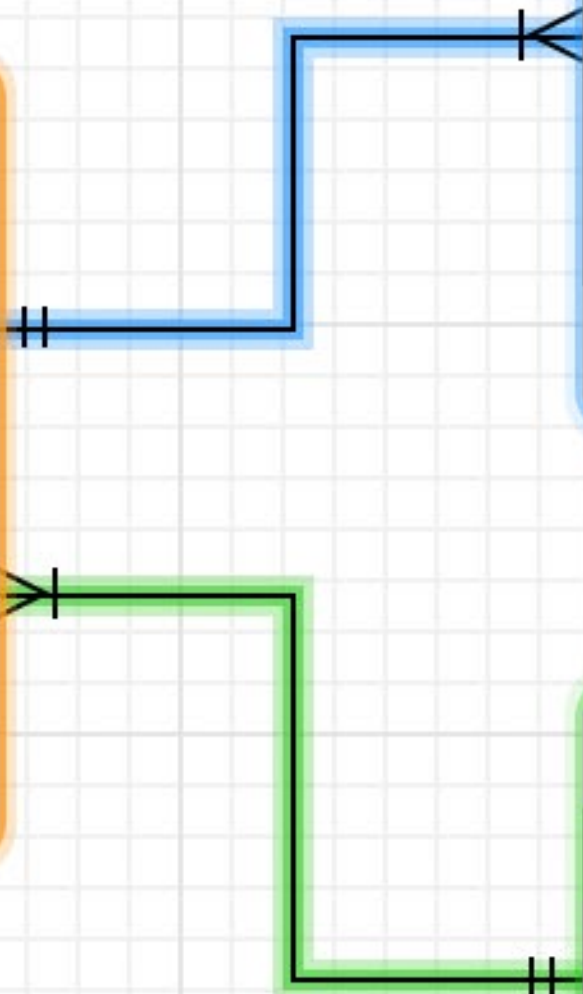
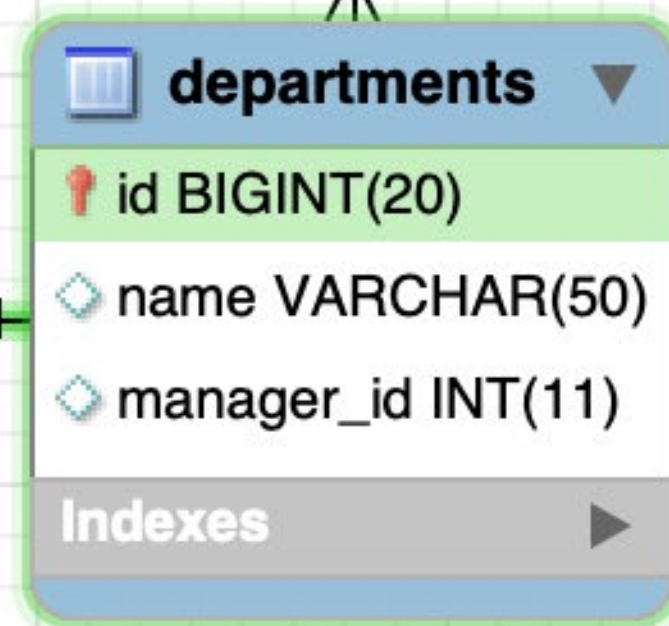
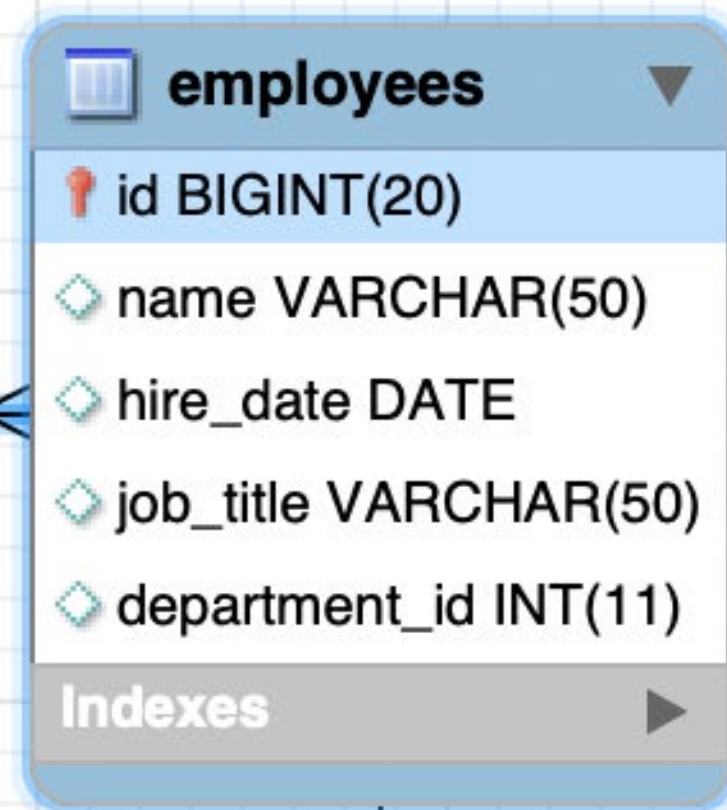
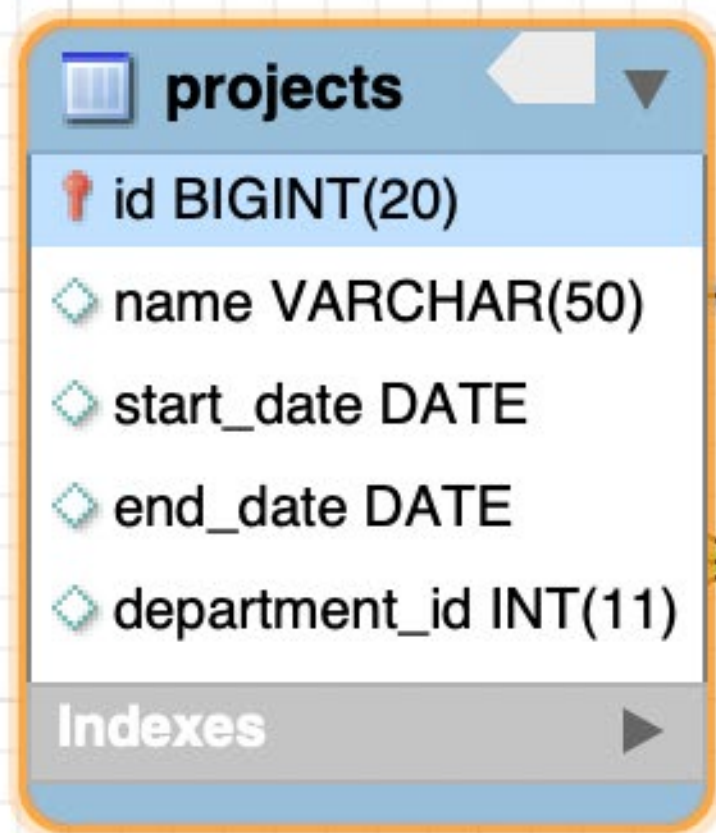
DATA IN MOTION HUMAN RESOURCES



DATA IN MOTION



By Muriel Rosario



46

```
-- 1: Find the longest ongoing project for each department.
```

```
SELECT
```

49

```
    p.id,
```

50

```
    d.name AS department,
```

51

```
    p.start_date AS project_start_day,
```

52

```
    p.end_date AS project_end_day,
```

53

```
    DATEDIFF(p.end_date, p.start_date) AS project_duration
```

54

```
FROM
```

55

```
    projects AS p
```

56

```
    LEFT JOIN
```

57

```
    departments AS d ON p.id = d.id;
```

100%

2:46

Result Grid



Filter Rows:



Search

Export:






id	department	project_start_day	project_end_day	project_duration
1	HR	2023-01-01	2023-06-30	180
2	IT	2023-02-01	2023-07-31	180
3	Sales	2023-03-01	2023-08-31	183

Result: the sales department has the most extended ongoing project.

```




58
59      -- 2: Find all employees who are not managers.
60 •    SELECT
61          name, job_title
62      FROM
63          employees
64      WHERE
65          job_title NOT LIKE '%Manager';
66

```

100%	↕	4:60	
Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 			
	name	job_title	
	Bob Miller	HR Associate	
	Charlie Brown	IT Associate	
	Dave Davis	Sales Associate	

Result: Bob Miller, Charlie Brown, and Dave Davis do not have manager job titles.


```
67  /* 3: Find all employees who have been hired after
68  the start of a project in their department */
69
70  •  SELECT
71      name, job_title, hire_date
72  FROM
73      employees
74  WHERE
75      hire_date > '2023-01-01';
76
```

100%	14:73	
Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 		
name	job_title	hire_date
Dave Davis	Sales Associate	2023-03-15

Result: Dave Davis was hired after all the projects started.

```
77  /* 4. Rank employees within each department based
78  on their hire date (earliest hire gets the highest rank)*/
79
80  •  SELECT name, hire_date, department_id,
81     RANK() OVER (PARTITION BY department_id ORDER BY hire_date) AS employee_rank
82     FROM employees
83  ;
```

100% 1:79

Result Grid Filter Rows: Search Export:

name	hire_date	department_id	employee_rank
John Doe	2018-06-20	1	1
Bob Miller	2021-04-30	1	2
Jane Smith	2019-07-15	2	1
Charlie Brown	2022-10-01	2	2
Alice Johnson	2020-01-10	3	1
Dave Davis	2023-03-15	3	2

Result: John Doe, Jane Smith, and Alice Johnson are the ones ranking in the first place based on their hired day in their departments.


```

85  /* 5. Find the duration between the hire date of each employee
86     and the hire date of the next employee hired in the same department.*/
87
88  •  SELECT
89         e1.id,
90         e1.name,
91         e1.hire_date,
92         e1.department_id,
93         MIN(e2.name) AS next_employee,
94         MIN(e2.hire_date) AS next_hire_date,
95         DATEDIFF(MIN(e2.hire_date), e1.hire_date) AS duration
96  FROM
97         employees AS e1
98         LEFT JOIN
99         employees AS e2 ON e1.department_id = e2.department_id
100        AND e1.hire_date < e2.hire_date
101  GROUP BY e1.id , e1.name , e1.hire_date , e1.department_id;
102

```

100%

13:90

Result Grid

Filter Rows:

Search

Export:

id	name	hire_date	department_id	next_employee	next_hire_date	duration
1	John Doe	2018-06-20	1	Bob Miller	2021-04-30	1045
2	Jane Smith	2019-07-15	2	Charlie Brown	2022-10-01	1174
3	Alice Johnson	2020-01-10	3	Dave Davis	2023-03-15	1160

Result:

- After John Doe, Bob Miller took 1,045 days to be hired in his department.
- After Jane Smith, Charlie Brown took 1,174 days to be hired in his department.
- After Alice Johnson, Dave Davis took 1,160 days to be hired in his department.

THANK YOU!



Muriel Rosario