

1. List of employees by Department

Write a query to list all employees along with their respective department name - include employee number, first name, last name and department no

```
SELECT e.emp_no, e.first_name, e.last_name, d.dept_no, d.dept_name
FROM employees AS e
    join dept_emp AS de
    ON e.emp_no = de.emp_no
    join departments AS d
    on de.dept_no = d.dept_no;
```

Output

	emp_no	first_name	last_name	dept_no	dept_name
▶	10011	Mary	Sluis	d009	Customer Service
	10038	Huan	Lortz	d009	Customer Service
	10049	Basil	Tramer	d009	Customer Service
	10060	Breannnda	Billingsley	d009	Customer Service
	10088	Jungsoon	Syrzycki	d009	Customer Service
	10098	Sreekrishna	Servieres	d009	Customer Service
	10112	Yuichiro	Swick	d009	Customer Service
	10115	Chikara	Rissland	d009	Customer Service
	10126	Kayoko	Valtorta	d009	Customer Service
	10128	Babette	Lamba	d009	Customer Service
	10137	Maren	Hutton	d009	Customer Service
	10154	Abdulah	Thibadeau	d009	Customer Service
	10164	Jagoda	Braunmuhl	d009	Customer Service

2. Current and Past salaries of an employee

Write a query to retrieve all the salary records of a given employee (by employee number) including employee number, salary, from date

```
SELECT * from salaries  
WHERE emp_no = '10044' order by salary desc  
Limit 1;
```

Output

	emp_no	salary	from_date	to_date
►	10044	58345	2002-05-19	9999-01-01

3. Employee with specific titles-

Write a query to find all employees who have held a specific title— ('Engineer') include employee number, first name and last name

```
SELECT e.emp_no, first_name, last_name, t.title FROM employees as e
join titles as t
on e.emp_no = t.emp_no
where t.title = 'Engineer';
```

Output

	emp_no	first_name	last_name	title
▶	10004	Chirstian	Koblick	Engineer
	10009	Sumant	Peac	Engineer
	10010	Duangkaew	Piveteau	Engineer
	10012	Patricio	Bridgland	Engineer
	10014	Berni	Genin	Engineer
	10018	Kazuhide	Peha	Engineer
	10020	Mayuko	Warwick	Engineer
	10022	Shahaf	Famili	Engineer
	10023	Bojan	Montemayor	Engineer
	10026	Yongqiao	Berztiss	Engineer
	10027	Divier	Reistad	Engineer
	10028	Domenick	Tempesti	Engineer
	10029	Otmar	Herbst	Engineer

4. Departments with their Managers-

Write a query to list all departments along with their current manager, including department no. name, employee no. first name and last name

```
SELECT d.dept_no, d.dept_name, e.emp_no, e.first_name, e.last_name FROM departments as d
join dept_manager as dm
ON d.dept_no = dm.dept_no
join employees as e
on e.emp_no = dm.emp_no
```

Output

	dept_no	dept_name	emp_no	first_name	last_name
▶	d001	Marketing	110022	Margareta	Markovitch
	d001	Marketing	110039	Vishwani	Minakawa
	d002	Finance	110085	Ebru	Alpin
	d002	Finance	110114	Isamu	Legleitner
	d003	Human Resources	110183	Shirish	Ossenbruggen
	d003	Human Resources	110228	Karsten	Sigstam
	d004	Production	110303	Krassimir	Wegerle
	d004	Production	110344	Rosine	Cools
	d004	Production	110386	Shem	Kieras
	d004	Production	110420	Oscar	Ghazalie
	d005	Development	110511	DeForest	Hagimont
	d005	Development	110567	Leon	DasSarma
	d006	Quality Managem...	110725	Peternela	Onuegbe

Result 30 x

5. Employee Count by Department -

Write a query to count the no. of employees in each department.
include-department number, department name, employee count

```
SELECT d.dept_no, dept_name, count(de.emp_no) as emp_count FROM departments as d  
join dept_emp as de  
ON de.dept_no = d.dept_no  
GROUP BY dept_no, dept_name;
```

Output

	dept_no	dept_name	emp_count
▶	d009	Customer Service	23580
	d005	Development	85707
	d002	Finance	17346
	d003	Human Resources	17786
	d001	Marketing	20211
	d004	Production	73485
	d006	Quality Management	20117
	d008	Research	21126
	d007	Sales	52245

6. Employees Birthdates in a given year

Write a query to find all employees born in a specific year (e.g.1953- include year, employee no. first name, last name

```
SELECT emp_no, first_name, last_name, birth_date FROM employees  
WHERE year(birth_date) = 1953;
```

Output

	emp_no	first_name	last_name	birth_date
►	10001	Georgi	Facello	1953-09-02
	10006	Anneke	Preusig	1953-04-20
	10011	Mary	Sluis	1953-11-07
	10019	Lillian	Haddadi	1953-01-23
	10023	Bojan	Montemayor	1953-09-29
	10026	Yongqiao	Bertziss	1953-04-03
	10035	Alain	Chappelet	1953-02-08
	10051	Hidefumi	Caine	1953-07-28
	10059	Alejandro	McAlpine	1953-09-19
	10067	Claudi	Stavenow	1953-01-07

7. Employees hired in the last five years-

Write a query to find all employees hired in the last 50 years.- include employee no. first name, last name, first date

```
SELECT emp_no, first_name, last_name, hire_date FROM employees  
WHERE hire_date >= date_sub(curdate(), INTERVAL 50 YEAR)
```

Output

	emp_no	first_name	last_name	hire_date
►	10001	Georgi	Facello	1986-06-26
	10002	Bezalel	Simmel	1985-11-21
	10003	Parto	Bamford	1986-08-28
	10004	Chirstian	Koblick	1986-12-01
	10005	Kyoichi	Maliniak	1989-09-12
	10006	Anneke	Preusig	1989-06-02
	10007	Tzvetan	Zielinski	1989-02-10
	10008	Saniya	Kalloufi	1994-09-15
	10009	Sumant	Peac	1985-02-18
	10010	Duangkaew	Piveteau	1989-08-24

7. Average salary by department -

Write a query to calculate the average salary for each department. Include department employee no. first name, last name, first date

```
SELECT d.dept_no, d.dept_name, avg(s.salary) as avg_salary from departments as d
join dept_emp as de
on de.dept_no = d.dept_no
JOIN salaries as s
on de.emp_no = s.emp_no
GROUP BY d.dept_no, d.dept_name
```

Output

	dept_no	dept_name	avg_salary
▶	d001	Marketing	71913.2000
	d002	Finance	70489.3649
	d003	Human Resources	55574.8794
	d004	Production	59605.4825
	d005	Development	59478.9012
	d006	Quality Management	57251.2719
	d007	Sales	80667.6058
	d008	Research	59665.1817
	d009	Customer Service	58770.3665

9. Gender distribution in each department -

Write a query to find gender distribution (no. of males and females) in each department -- include department no. department name, male and female count

```
SELECT d.dept_no, d.dept_name,  
SUM(CASE when e.gender = 'M' then 1 else 0 END) as male_count,  
SUM(CASE when e.gender = 'F' then 1 else 0 END ) as female_count  
FROM departments as d  
join dept_emp as de  
on de.dept_no = d.dept_no  
join employees as e  
on de.emp_no = e.emp_no  
Group by d.dept_no, d.dept_name
```

Output

	dept_no	dept_name	male_count	female_count
▶	d009	Customer Service	14132	9448
	d005	Development	51449	34258
	d002	Finance	10331	7015
	d003	Human Resources	10711	7075
	d001	Marketing	12174	8037
	d004	Production	43936	29549
	d006	Quality Management	12039	8078
	d008	Research	12687	8439
	d007	Sales	31391	20854

10. Longest serving employee- Question: Write a query to find the employees who have served the longest in the company - include employee no., first name and last name

```
SELECT emp_no, first_name, last_name,  
timestampdiff(YEAR,hire_date, Curdate()) as year_served  
FROM employees  
ORDER BY year_served
```

Output

	emp_no	first_name	last_name	year_served
►	10080	Premal	Baek	39
	10002	Bezalel	Simmel	39
	10076	Erez	Ritzmann	39
	10070	Reuven	Garigiano	39
	10061	Tse	Herber	39
	10029	Otmar	Herbst	39
	10064	Udi	Jansch	39
	10013	Eberhardt	Terkki	39
	10009	Sumant	Peac	39
	10048	Florian	Syrotiuk	39