

Information System - Lab work 3

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Database

- employees (emp_no, birth_date, first_name, last_name, gender)
- departments (dept_no, dept_name)
- dept_emp (emp_no, dept_no, from_date, to_date)
- dept_manager (dept_no, emp_no, from_date, to_date)
- titles (emp_no, title, from_date, to_date)
- salaries (emp_no, salary, from_date, to_date)

SQL Queries

1. All info of all employees.

```
SELECT * FROM employees;
```

2. All info of all departments.

```
SELECT * FROM departments;
```

3. Full names of all employees.

```
SELECT CONCAT(first_name , " " , last_name) AS full_name  
FROM employees;
```

4. Name of all departments

```
SELECT dept_name FROM departments;
```

5. Full names of employees working in "Sale" department.

```
SELECT CONCAT(first_name, "", last_name) AS full_name
FROM employees
JOIN dept_emp ON employees.emp_no = dept_emp.emp_no
JOIN departments ON dept_emp.dept_no = departments.dept_no
WHERE dept_name = 'Sales')
UNION
(SELECT CONCAT(first_name, "", last_name) AS full_name
FROM employees
JOIN dept_manager ON employees.emp_no = dept_manager.emp_no
JOIN departments ON dept_manager.dept_no = departments.dept_no
WHERE dept_name = 'Sales')
```

6. Full names of male employees working in "Finance" department.

```
SELECT CONCAT(first_name, "", last_name) as full_name
FROM employees
NATURAL JOIN departments
NATURAL JOIN dept_manager
WHERE dept_name ="Finance" AND gender="M"
UNION
SELECT CONCAT(first_name, "", last_name) as full_name
FROM employees
NATURAL JOIN departments
NATURAL JOIN dept_emp
WHERE dept_name ="Finance" and gender="M" ;
```

7. Salaries of female employees working in "Marketing" department.

```
SELECT CONCAT (first_name, "", last_name) AS full_name, salary
FROM salaries
NATURAL JOIN employees
NATURAL JOIN departments
WHERE gender="F" AND dept_name="Marketing";
```

8. Full names of employees who have the same last name as their manager.

```
SELECT R1.full_name
FROM SELECT CONCAT(first_name, "", last_name) AS full_name,
last_name, employees.emp_no AS empno
FROM employees
JOIN dept_emp
```

```

ON employees.emp_no = dept_emp.emp_no) AS R1
JOIN (SELECT last_name , employees.emp_no AS empno
FROM employees
JOIN dept_manager
ON employees.emp_no = dept_manager.emp_no) AS R2
ON R1.last_name = R2.last_name ;

```

9. Full names of managers who have been doing the job at least twice.

```

SELECT CONCAT(first_name , " " , last_name) AS full_name
FROM employees NATURAL JOIN dept_manager
GROUP BY emp_no
HAVING count(emp_no) > 1;

```

10. Full names of employees who was paid more than \$100000.

```

SELECT CONCAT(first_name , " " , last_name) AS full_name , salary
FROM employees NATURAL JOIN salaries
WHERE salary > 100000;

```

11. Names of all departments that have employees paid more than \$100000.

```

SELECT dept_name FROM dept_emp
NATURAL JOIN departments
NATURAL JOIN salaries
WHERE salary > 100000
UNION
SELECT dept_name FROM departments
NATURAL JOIN salaries
NATURAL JOIN dept_manager
WHERE salary > 100000;

```

Results

The figure below presents the results after implement 11 queries (results limited from 1 to 10 for illustrating purpose) above:

emp_no	birth_date	first_name	last_name	gender	hire_date	dept_no	dept_name
10001	1953-09-02	Georgi	Facello	M	1986-06-26	d009	Customer Service
10002	1964-06-02	Bezalel	Simmel	F	1985-11-21	d005	Development
10003	1959-12-03	Parto	Bamford	M	1986-08-28	d002	Finance and Accounting
10004	1954-05-01	Chirstian	Koblick	M	1986-12-01	d003	Human Resources
10005	1955-01-21	Kyoichi	Maliniak	M	1989-09-12	d001	Marketing
10006	1953-04-20	Anneke	Preusig	F	1989-06-02	d004	Production
10007	1957-05-23	Tzvetan	Zielinski	F	1989-02-10	d006	Quality Management
10008	1958-02-19	Saniya	Kalloufi	M	1994-09-15	d008	Research
10009	1952-04-19	Sumant	Peac	F	1985-02-18	d007	Sales
10010	1963-06-01	Duangkaew	Piveteau	F	1989-08-24		

Query 1				Query 2		
full_name	dept_name	full_name	full_name	salary		
Georgi Facello	Customer Service	KazuhiroCappelletti	BezalelSimmel	65828		
Bezalel Simmel	Development	BaderSwan	BezalelSimmel	65909		
Parto Bamford	Finance and Accounting	UriLenart	BezalelSimmel	67534		
Chirstian Koblick	Human Resources	YinghuaDredge	BezalelSimmel	69366		
Kyoichi Maliniak	Marketing	SanjivZschoche	BezalelSimmel	71963		
Anneke Preusig	Production	BreannaBillingsley	BezalelSimmel	72527		
Tzvetan Zielinski	Quality Management	TseHerber	AnnekePreusig	40000		
Saniya Kalloufi	Research	CharleneBrattka	AnnekePreusig	42085		
Sumant Peac	Sales	XinglinEugenio	AnnekePreusig	42629		
Duangkaew Piveteau		JungsoonSyrzycki	AnnekePreusig	45844		

Query 3		Query 4		Query 6		Query 7	
full_name	full_name	full_name	salary	dept_name			
Josyula Hofmeyr	PrzemyslawKaelbling	KweeSchusler	102425	Development			
Yuping Alpin	HaukeZhang	KweeSchusler	102674	Finance and Accounting			
Shirish Wegerle		KweeSchusler	103672	Marketing			
Yagil DasSarma		CharleneBrattka	100005	Sales			
Yinlin Alpin		CharleneBrattka	101829				
Janche Zhang		CharleneBrattka	101630				
Ottavia Giaratana		CharleneBrattka	105533				
Zita Minakawa		CharleneBrattka	106204				
Sukumar Wegerle		CharleneBrattka	108345				
Munenori Markovitch		CharleneBrattka	111623				

Query 5		Query 8		Query 9		Query 10		Query 11	
full_name	full_name	full_name	salary	dept_name					
Josyula Hofmeyr	PrzemyslawKaelbling	KweeSchusler	102425	Development					
Yuping Alpin	HaukeZhang	KweeSchusler	102674	Finance and Accounting					
Shirish Wegerle		KweeSchusler	103672	Marketing					
Yagil DasSarma		CharleneBrattka	100005	Sales					
Yinlin Alpin		CharleneBrattka	101829						
Janche Zhang		CharleneBrattka	101630						
Ottavia Giaratana		CharleneBrattka	105533						
Zita Minakawa		CharleneBrattka	106204						
Sukumar Wegerle		CharleneBrattka	108345						
Munenori Markovitch		CharleneBrattka	111623						

Query 11	
Empty set (0.00 sec)	

Figure 1: Query 11's result