SQL DATA ANALYSIS PORTFOLIO PROJECT-1

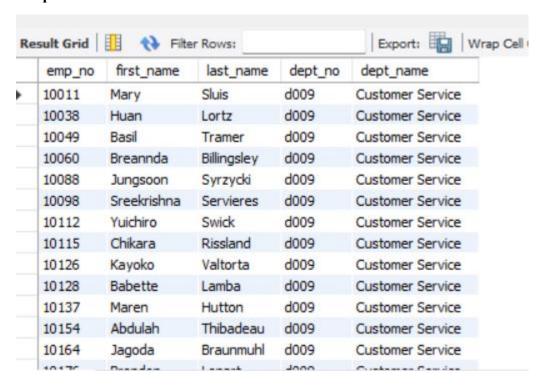
1. List of Employees by Department

Question: Write a query to list all employees along with their respective department names. Include employee number, first name, last name, department number, and department name.

Query:

```
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:



2. Current and Past Salaries of an Employee

Question: Write a query to retrieve all the salary records of a given employee (by employee number). Include employee number, salary, from date, and to date.

Query:

```
SELECT * FROM salaries
WHERE emp_no = '10044' order by salary desc
LIMIT 1;
```

Output:

Re	Result Grid				
	emp_no	salary	from_date	to_date	
•	10044	58345	2002-05-19	9999-01-01	

3. Employees with Specific Titles

Question: Write a query to find all employees who have held a specific title (e.g., 'Engineer'). Include employee number, first name, last name, and title.

Query:

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

Re	esult Grid	H 🙌 Filter	Rows:		Expo
	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	
	10020	mi. de	D	Carlesan	

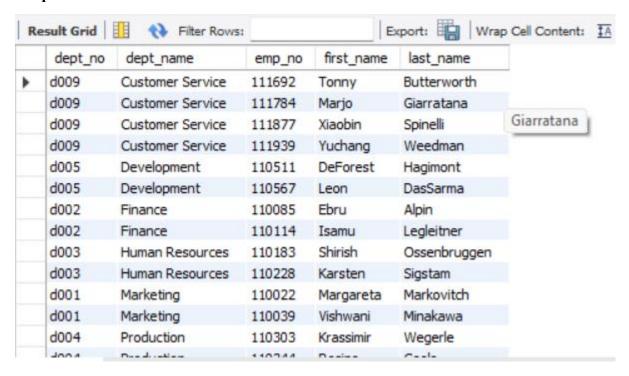
4. Departments with Their Managers

Question: Write a query to list all departments along with their current managers. Include department number, department name, manager's employee number, first name, and last name.

Query:

```
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:



5. Employee Count by Department

Question: Write a query to count the number of employees in each department. Include department number, department name, and employee count.

Query:

```
SELECT d.dept_no,dept_name,count(de.emp_no) as emp_count FROM departments as d
JOIN dept_emp as de
ON d.dept_no = de.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

Question: Write a query to find all employees born in a specific year (e.g., 1953). Include employee number, first name, last name, and birth date.

Query:

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

	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	Berztiss	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
	10100	Hironobu	Haraldson	1953-04-21
	10103	Akemi	Birch	1953-11-26
	10134	Diederik	Siprelle	1953-04-15

7. Employees Hired in the Last 5 Years

Question: Write a query to find all employees hired in the last 50 years. Include employee number, first name, last name, and hire date.

Query:

```
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
	10011	Mary	Sluis	1990-01-22
	10012	Patricio	Bridgland	1992-12-18
	10013	Eberhardt	Terkki	1985-10-20
	10014	Desert	Camin	1007 02 11

8. Average Salary by Department

Question: Write a query to calculate the average salary for each department. Include department number, department name, and average salary.

Query:

```
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;
```

	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

Question: Write a query to find the gender distribution (number of males and females) in each department. Include department number, department name, count of males, and count of females.

Query:

```
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;
```

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 Employees

Question: Write a query to find the employees who have served the longest in the company. Include employee number, first name, last name, and number of years served.

Query:

```
SELECT emp_no,first_name,last_name,
timestampdiff(YEAR,hire_date,CUrdate()) as year_served
FROM employees
ORDER By year_served desc
LIMIT 10
```

	emp_no	first_name	last_name	year_served
۲	10137	Maren	Hutton	40
	10253	Zsolt	Salinas	40
	10571	Fun	Varman	40
	10351	Tadahiko	Strehl	40
	10535	Shalesh	Stroustrup	40
	10195	Annemarie	Redmiles	40
	10550	Manton	Leuchs	40
	10009	Sumant	Peac	40
	10048	Florian	Syrotiuk	40
	10156	Sumali	Fargier	40