SQL
DATA ANALYSIS
PROJECT

1.List of employees by department

Question :- - write a query to list all the employees 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 employees , 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	employees	dept_no	dept_name
10011	Mary	Sluis	d009	Customer Service
10038	Huan	Lortz	d009	Customer Service
10049	Basil	Tramer	d009	Customer Service
10060	Breannda	Billingsley	d009	Customer Service
10088	Jungsoon	Syrzycki	d009	Customer Service

Result 1 ×

Output

2.Current and past salaries of employees

Question :- - write a query to retrieve all salary record of given employees (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

	emp_no	salary	from_date	to_date
▶	10044	58345	2002-05-19	9999-01-01
*	NULL	NULL	NULL	NULL

3. Employees with specific titles

Question :- - write a query to find all   employee who held specific title .include employee number , first name , last name

Query

```sql
select   e.emp_no ,e.first_name , e.last_name ,title   from employees as e
Join titles as t
on e.emp_no = t.emp_no
where 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

4. Department with their manager

Question :- - write a query to list all department along with their manager .include department number ,department name manager employee number first name , last name

Query

```sql
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
d009	Customer Service	111692	Tonny	Butterworth
d009	Customer Service	111784	Marjo	Giarratana
d009	Customer Service	111877	Xiaobin	Spinelli
d009	Customer Service	111939	Yuchang	Weedman
d005	Development	110511	DeForest	Hagimont
d005	Development	110567	Leon	DasSarma

5. Employee count by department

Question :- - write a query to count number of employee 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

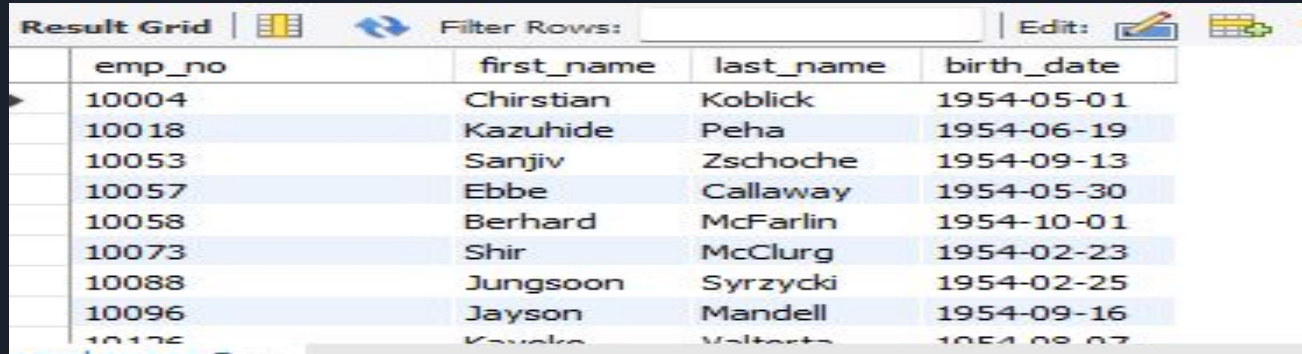| dept_no	dept_name	emp_count
d001	Marketing	20211
d002	Finance	17346
d003	Human Resources	17786
d004	Production	73485
d005	Development	85707
d006	Quality Management	20117
d007	Sales	52245
d008	Research	21126

6. Employee's birthdate in a given year

Question :- - write a query to find all employees born in specific year. Include employee number ,first name , last name and birthdate

Query

```
select emp_no ,first_name , last_name,birth_date from employees
where year(birth_date)   = 1954
```

Output

emp_no	first_name	last_name	birth_date
10004	Chirstian	Koblick	1954-05-01
10018	Kazuhide	Peha	1954-06-19
10053	Sanjiv	Zschoche	1954-09-13
10057	Ebbe	Callaway	1954-05-30
10058	Berhard	McFarlin	1954-10-01
10073	Shir	McClurg	1954-02-23
10088	Jungsoon	Syrzycki	1954-02-25
10096	Jayson	Mandell	1954-09-16
10176	Kauoko	Valterta	1954-08-07

7. Employee hired in last 50 year

Question :- - write a query to find all employees hired in last 50 year. 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 5 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

mployees 10 ✕

8. Average salary by department

Question :- - write a query to calculate average salary of 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
```

Output

dept_no	dept_name	avg_salary
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 by each department

Question :- - write a query to find gender distribution in each department
Include department number ,department name and count of male and female

Query

```sql
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

Result Grid | Filter Rows: | Export: | Wrap Ce

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

10. Longest serving employees

Question :- - write a query to find employee who have served longest in company Include employee number ,first name , last name and number of year they 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
```

Output

emp_no	first_name	last_name	year_served
10137	Maren	Hutton	39
10245	Ramalingam	Gente	39
10156	Sumali	Fargier	39
10076	Erez	Ritzmann	39
10233	Lein	Vendrig	39
10116	Dayanand	Czap	39
10195	Annemarie	Redmiles	39
10009	Sumant	Peac	39

Result 6 ×