```sql
CREATE SCHEMA IF NOT EXISTS assignment4;


CREATE TABLE IF NOT EXISTS assignment4.employees(
   id SERIAL PRIMARY KEY,
   first_name VARCHAR(50),
   last_name VARCHAR(50),
   sex CHAR(1),
   doj DATE,
   current_date_ DATE,
   designation VARCHAR(50),
   age INTEGER,
   salary NUMERIC(10, 2),
   unit VARCHAR(50),
   leaves_used INT,
   leaves_remaining INT,
   ratings INT,
   past_exp INT
);

-- Copy csv files to tables
COPY assignment4.employees
(first_name, last_name, sex, doj, current_date_, designation, age, salary,
unit, leaves_used, leaves_remaining, ratings, past_exp)
FROM '/Salary Prediction of Data Professions.csv'
DELIMITER ','
CSV HEADER;
```

	id	first_name	last_name	sex	doj	current_date_	designation	age	salary	unit	leaves_used	leaves_remaining	ratings	past_exp
1	1	TOMASA	ARMEN	F	2014-05-18	2016-01-07	Analyst	21	100,282.5	Finance	24	6	2	0
2	2	ANNIE	[NULL]	F	[NULL]	2016-01-07	Associate	[NULL]	89,207	Web	[NULL]	13	[NULL]	7
3	3	OLIVE	ANCY	F	2014-07-28	2016-01-07	Analyst	21	40,955	Finance	23	7	3	0
4	4	CHERRY	AQUILAR	F	2013-04-03	2016-01-07	Analyst	22	45,550	IT	22	8	3	0
5	5	LEON	ABOULAHOUD	M	2014-11-20	2016-01-07	Analyst	[NULL]	43,161	Operations	27	3	[NULL]	3
6	6	VICTORIA	[NULL]	F	2013-02-19	2016-01-07	Analyst	22	48,736	Marketing	20	10	4	0
7	7	ELLIOT	AGULAR	M	2013-09-02	2016-01-07	Analyst	22	40,339	Marketing	19	11	5	0
8	8	JACQUES	AKMAL	M	2013-12-05	2016-01-07	Analyst	[NULL]	40,058	Marketing	29	1	2	2
9	9	KATHY	ALSOP	F	2014-06-29	2016-01-07	Senior Analyst	28	63,478	Operations	20	10	3	1
10	10	LILIAN	APELA	F	2014-11-11	2016-01-07	Analyst	22	43,110	Finance	15	15	3	0
11	11	BELLE	ARDS	F	2014-03-10	2016-01-07	Analyst	24	41,590	Marketing	22	8	4	1
12	12	VIRGIL	ACKIES	M	2010-02-01	2016-01-07	Senior Manager	36	160,613	Finance	[NULL]	11	2	9
13	13	WELDON	AIVAO	M	2013-08-01	2016-01-07	Analyst	24	44,828	Finance	15	15	5	1

```sql
 - Calculate the average salary by department for all
Analysts.
WITH analyst as(
  SELECT id AS analyst_id, unit, salary AS analyst_salary
  FROM assignment4.employees
  WHERE designation LIKE '%Analyst'
)SELECT unit, ROUND(avg(analyst_salary), 2)
FROM analyst a
GROUP BY unit;
```

	unit	round
1	Operations	47,305.42
2	Finance	47,720.28
3	Web	47,424.55
4	Management	47,396.19
5	IT	46,797.5
6	Marketing	47,440.14

```sql
-- List all employees who have used more than 10 leaves.
WITH employees as(
  SELECT id AS analyst_id, concat(first_name,' ', last_name) AS emp_name
,leaves_used
  FROM assignment4.employees
)SELECT emp_name, leaves_used
FROM employees
WHERE leaves_used > 10;
```

	emp_name	leaves_used
1	OLIVE ANCY	23
2	CHERRY AQUILAR	22
3	LEON ABOULAHOUD	27
4	VICTORIA	20
5	ELLIOT AGULAR	19
6	JACQUES AKMAL	29
7	KATHY ALSOP	20
8	LILIAN APELA	15
9	BELLE ARDS	22
10	WELDON AIVAO	15
11	BOYD AFTON	23
12	BART AGUILLERA	30
13	CORINNE ANDRZEJCZYK	16

```sql
-- Create a view to show the details of all Senior Analysts.
CREATE VIEW assignment4.senior_analyst AS
SELECT * FROM assignment4.employees
WHERE designation = 'Senior Analyst';

SELECT * FROM assignment4.senior_analyst;
```

	id	first_name	last_name	sex	doj	current_date_	designation	age	salary	unit	leaves_used	leaves_remaining	ratings	past_exp
1	9	KATHY	ALSOP	F	2014-06-29	2016-01-07	Senior Analyst	28	63,478	Operations	20	10	3	1
2	29	SEYMOUR	ALBEN	M	2014-12-21	2016-01-07	Senior Analyst	25	57,488	Operations	25	5	3	0
3	33	FOSTER	ALDERMAN	M	2014-05-22	2016-01-07	Senior Analyst	26	68,295	Operations	28	2	5	3
4	54	CARI	ARENALES	F	2014-04-10	2016-01-07	Senior Analyst	28	66,338	Web	24	6	3	5
5	58	PAULINE	ALTSHULER	F	2014-12-13	2016-01-07	Senior Analyst	28	61,647	Finance	28	2	4	3
6	69	RILEY	AIKINS	M	2013-06-16	2016-01-07	Senior Analyst	25	60,712	Finance	26	4	4	0
7	73	MARYJANE	ARES	F	2012-08-24	2016-01-07	Senior Analyst	25	65,212	Management	29	1	5	1
8	76	MARY	ALMESTICA	F	2013-10-12	2016-01-07	Senior Analyst	27	53,339	Finance	26	4	2	1
9	83	WILMER	AKIONA	M	2014-05-30	2016-01-07	Senior Analyst	25	50,739	IT	25	5	3	0
10	91	ELOISA	ARGIE	F	2013-08-07	2016-01-07	Senior Analyst	28	52,690	Marketing	30	0	5	3
11	93	KATELYN	APPENZELLER	F	2014-11-02	2016-01-07	Senior Analyst	28	56,314	Finance	16	14	5	3
12	103	ELIZA	ANSBACHER	F	2013-09-30	2016-01-07	Senior Analyst	25	50,813	Marketing	26	4	2	0
13	105	CARI	ARENALES	F	2014-04-10	2016-01-07	Senior Analyst	28	66,338	Web	24	6	3	5

```sql
-- Create a materialized view to store the count of employees by
department.
CREATE MATERIALIZED VIEW assignment4.employees_count AS
SELECT unit, COUNT(id) AS employees_count
FROM assignment4.employees
GROUP BY unit;

SELECT * FROM assignment4.employees_count;
```

	unit	employees_count
1	Operations	438
2	Finance	446
3	Web	431
4	Management	425
5	IT	461
6	Marketing	438

```sql
SELECT id, first_name, last_name, salary FROM assignment4.employees
ORDER BY id
LIMIT 5;
```

	id	first_name	last_name	salary
1	1	TOMASA	ARMEN	100,282.5
2	2	ANNIE	[NULL]	89,207
3	3	OLIVE	ANCY	40,955
4	4	CHERRY	AQUILAR	45,550
5	5	LEON	ABOULAHOUD	43,161

```sql
-- Create a procedure to update an employee's salary by their
first name and last name.
CREATE OR REPLACE PROCEDURE update_salary(
  firstName varchar,
  lastName varchar,
  updatePercentage decimal
)
LANGUAGE plpgsql
AS $$
BEGIN
  UPDATE assignment4.employees
  SET salary = salary + salary * updatePercentage
  WHERE first_name = firstName
  AND last_name = lastName;
  COMMIT;
END;$$;

CALL update_salary('OLIVE', 'ANCY' , 0.5);

SELECT id, first_name, last_name, salary FROM assignment4.employees
ORDER BY id
```

```
LIMIT 5;
```

	id	first_name	last_name	salary
1	1	TOMASA	ARMEN	100,282.5
2	2	ANNIE	[NULL]	89,207
3	3	OLIVE	ANCY	61,432.5
4	4	CHERRY	AQUILAR	45,550
5	5	LEON	ABOULAHOUD	43,161

```
-- Create a procedure to calculate the total number of leaves
used across all departments.
CREATE OR REPLACE PROCEDURE used_leaves(
  INOUT _total_leaves int DEFAULT 0
)
LANGUAGE plpgsql
AS $$
BEGIN
  SELECT sum(leaves_used)
  FROM assignment4.employees
  INTO _total_leaves;
END;$$;

CALL used_leaves();
```

	_total_leaves
1	59,314