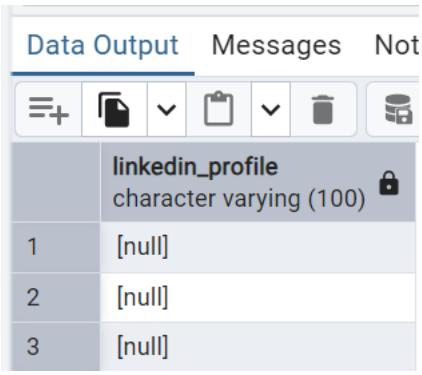
Assignment 2

Day2

1) Alter Table:

- Add a new column linkedin_profile to employees table to store LinkedIn URLs as varchar.

```
3  Alter table employee
4  ADD COLUMN linkedin_profile varchar(100);
```

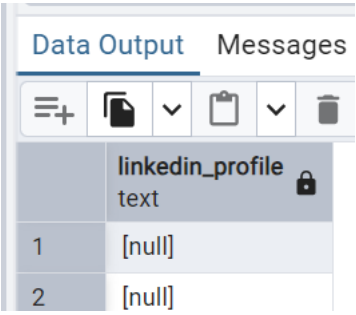


Data Output | Messages | Not

	linkedin_profile character varying (100)
1	[null]
2	[null]
3	[null]

- Change the linkedin_profile column data type from VARCHAR to TEXT.

```
ALTER TABLE employee
ALTER COLUMN linkedin_profile
SET DATA TYPE text;
```

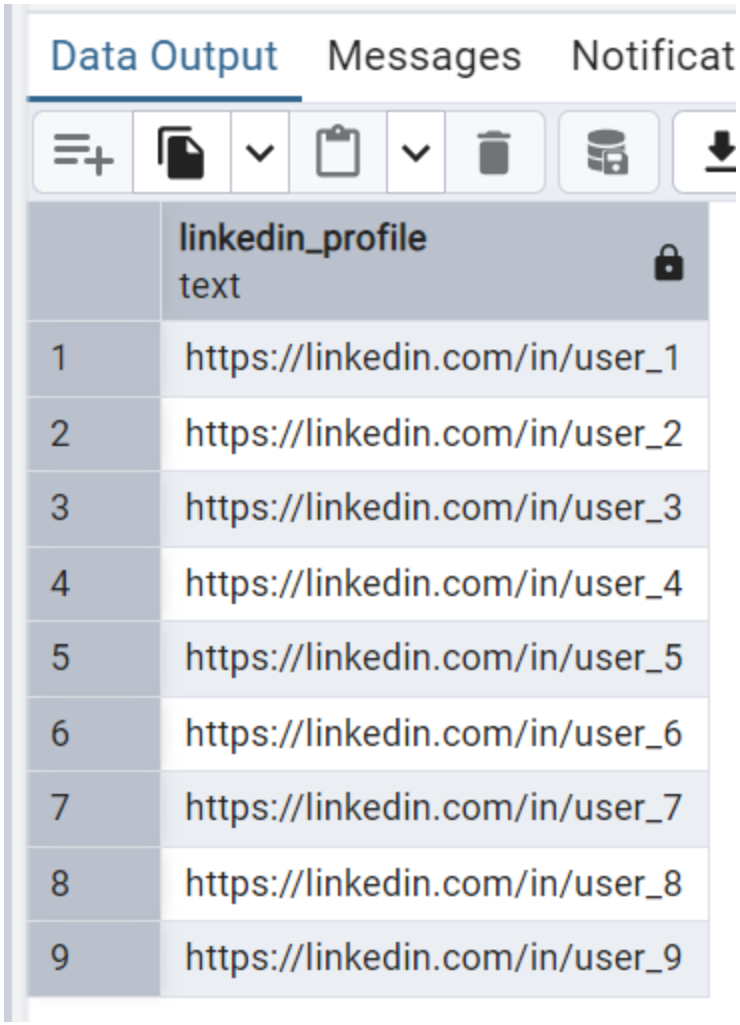


Data Output | Messages

	linkedin_profile text
1	[null]
2	[null]

- Add unique, not null constraint to linkedin_profile

```
13  --> updating the column with default value first
14  UPDATE employee
15  SET linkedin_profile = CONCAT('https://linkedin.com/in/user_', employeeid);
16  --> adding not null constraint to the updated column
17  ALTER TABLE employee
18  ALTER COLUMN linkedin_profile SET NOT NULL;
19  --> adding unique constraint
20  ALTER TABLE employee
21  ADD CONSTRAINT unique_linkedin_profile UNIQUE (linkedin_profile);
```



	linkedin_profile text
1	https://linkedin.com/in/user_1
2	https://linkedin.com/in/user_2
3	https://linkedin.com/in/user_3
4	https://linkedin.com/in/user_4
5	https://linkedin.com/in/user_5
6	https://linkedin.com/in/user_6
7	https://linkedin.com/in/user_7
8	https://linkedin.com/in/user_8
9	https://linkedin.com/in/user_9

- Drop column linkedin_profile

```
ALTER TABLE employee
DROP COLUMN linkedin_profile;
```

Data Output | Messages | Notifications

```
ERROR:  column "linkedin_profile" does not exist
```

2) Querying (Select)

- Retrieve the first name, last name, and title of all employees

```
SELECT
split_part(employeename, ' ', 1) AS first_name,
substring(employeename FROM position(' ' IN employeename) + 1) AS last_name,
title
FROM employee;
```

Data Output | Messages | Notifications

	first_name text	last_name text	title character varying (50)
1	Nancy	Davolio	Sales Representative
2	Andrew	Fuller	Vice President Sales
3	Janet	Leverling	Sales Representative
4	Margaret	Peacock	Sales Representative
5	Steven	Buchanan	Sales Manager
6	Michael	Suyama	Sales Representative
7	Robert	King	Sales Representative
8	Laura	Callahan	Sales Manager
9	Anne	Dodsworth	Sales Representative

- Find all unique unit prices of products

```
36  SELECT DISTINCT unitprice
37  FROM product;
```

Data Output | Messages | Notifications

	unitprice double precision
1	12.75
2	23.155
3	27.500000000000004
4	7.45
5	9.5
6	7
7	12.5
8	34
9	32.8
10	18.4
11	122.70

Total rows: 64 | Query complete 00:00:00.102

- List all customers sorted by company name in ascending order

```
40  SELECT * FROM customers
41  ORDER BY companyname ASC;
```

Data Output | Messages | Notifications

Showing rows: 1 to 91

	customerid [PK] character (5)	companyname character varying (100)	contactname character varying (100)	contacttitle character varying (100)	city character varying (100)	country character varying (100)
1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Berlin	Germany
2	ANATR	Ana Trujillo Emparedados y helad…	Ana Trujillo	Owner	Mexico City	Mexico
3	ANTON	Antonio Moreno Taquería	Antonio Moreno	Owner	Mexico City	Mexico
4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	London	UK
5	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	London	UK
6	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Luleĺ	Sweden
7	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Mannheim	Germany
8	BLONP	Blondesddsl pčre et fils	Frédérique Citeaux	Marketing Manager	Strasbourg	France
9	BOLID	Bólido Comidas preparadas	Martín Sommer	Owner	Madrid	Spain
10	BONAP	Bon app'	Laurence Lebihan	Owner	Marseille	France

Total rows: 91 | Query complete 00:00:00.080

- Display product name and unit price, but rename the unit_price column as price_in_usd

```
44  SELECT productname, unitprice, unitprice AS price_in_usd
45  FROM product;
```

Data Output | Messages | Notifications

	productname character varying (50)	unitprice double precision	price_in_usd double precision
1	Chai	18	18
2	Chang	19	19
3	Uncle Bob's Organic Dried Pears	30	30
4	Mishi Kobe Niku	97	97
5	Ikura	31	31
6	Queso Cabrales	21	21
7	Queso Manchego La Pastora	38	38
8	Konbu	6	6
9	Tofu	23.25	23.25
10	Pavlova	17.45	17.45

Total rows: 77 | Query complete 00:00:00.080

3) Filtering

- Get all customers from Germany.

```
49  SELECT * FROM customers
50  WHERE country = 'Germany';
```

Data Output | Messages | Notifications

Showing rows: 1

	customerid [PK] character (5)	companyname character varying (100)	contactname character varying (100)	contacttitle character varying (100)	city character varying (100)	country character varying (100)
1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Berlin	Germany
2	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Mannheim	Germany
3	DRACD	Drachenblut Delikatessen	Sven Ottlieb	Order Administrator	Aachen	Germany
4	FRANK	Frankenversand	Peter Franken	Marketing Manager	München	Germany
5	KOENE	Königlich Essen	Philip Cramer	Sales Associate	Brandenburg	Germany
6	LEHMS	Lehmanns Marktstand	Renate Messner	Sales Representative	Frankfurt a.M.	Germany
7	MORGK	Morgenstern Gesundkost	Alexander Feuer	Marketing Assistant	Leipzig	Germany
8	OTTIK	Ottilies Käseladen	Henriette Pfalzheim	Owner	Köln	Germany
9	QUICK	QUICK-Stop	Horst Kloss	Accounting Manager	Cunewalde	Germany
10	TOMSP	Toms Spezialitäten	Karin Josephs	Marketing Manager	Münster	Germany

Total rows: 11 | Query complete 00:00:00.083

- Find all customers from France or Spain

```
--Find all customers from France or Spain
SELECT * FROM customers
WHERE country IN ('France', 'Spain');
```

Output | Messages | Notifications

Showing rows: 1 to 16

customerid [PK] character (5)	companyname character varying (100)	contactname character varying (100)	contacttitle character varying (100)	city character varying (100)	country character varying (100)
BLONP	Blondesddsl pčre et fils	Frédérique Citeaux	Marketing Manager	Strasbourg	France
BOLID	Bólido Comidas preparadas	Martín Sommer	Owner	Madrid	Spain
BONAP	Bon app'	Laurence Lebihan	Owner	Marseille	France
DUMON	Du monde entier	Janine Labrune	Owner	Nantes	France
FISSA	FISSA Fabrica Inter. Salchichas S.A.	Diego Roel	Accounting Manager	Madrid	Spain
FOLIG	Folies gourmandes	Martine Rancé	Assistant Sales Agent	Lille	France
FRANR	France restauration	Carine Schmitt	Marketing Manager	Nantes	France
GALED	Galería del gastrónomo	Eduardo Saavedra	Marketing Manager	Barcelona	Spain
GODOS	Godos Cocina Típica	José Pedro Freyre	Sales Manager	Sevilla	Spain
LACOR	La corne d'abondance	Daniel Tonini	Sales Representative	Versailles	France

l rows: 16 | Query complete 00:00:00.080

- Retrieve all orders placed in 1997 (based on order_date), and either have freight greater than 50 or the shipped date available (i.e., non-NULL) (Hint: EXTRACT(YEAR FROM order_date))

```
63  SELECT * FROM orders
64  WHERE EXTRACT(YEAR FROM order_date) = 1997
65  AND (freight > 50 OR shippeddate IS NOT NULL);
66
```

Data Output | Messages | Notifications

	orderid [PK] integer	customerid character varying (10)	employeeid integer	order_date date	requiredate date	shippeddate date	shippersid integer	freight double precision

4) Filtering

- Retrieve the product_id, product_name, and unit_price of products where the unit_price is greater than 15.

```
69  SELECT productid, productname, unitprice FROM product
70  WHERE unitprice > 15;
```

Data Output | Messages | Notifications

	productid [PK] integer	productname character varying (50)	unitprice double precision
1	1	Chai	18
2	2	Chang	19
3	4	Chef Anton's Cajun Seasoning	22
4	5	Chef Anton's Gumbo Mix	21.35
5	6	Grandma's Boysenberry Spread	25
6	7	Uncle Bob's Organic Dried Pears	30
7	8	Northwoods Cranberry Sauce	40
8	9	Mishi Kobe Niku	97
9	10	Ikura	31
10	11	Queso Cabrales	21

Total rows: 51 | Query complete 00:00:00.080

- List all employees who are located in the USA and have the title "Sales Representative".

```
73  SELECT * From employee
74  WHERE country = 'USA' AND title = 'Sales Representative';
```

Data Output | Messages | Notifications

	employeeid [PK] integer	employeename character varying (50)	title character varying (50)	city character varying (25)	country character varying (10)	reportsto integer
1	1	Nancy Davolio	Sales Representative	New York	USA	8
2	3	Janet Leverling	Sales Representative	New York	USA	8
3	4	Margaret Peacock	Sales Representative	New York	USA	8

- Retrieve all products that are not discontinued and priced greater than 30.

```
77  SELECT* FROM product
78  WHERE discontinued = 1 AND unitprice > 30;
```

Data Output | Messages | Notifications

	productid [PK] integer	productname character varying (50)	quantityperunit text	unitprice double precision	discontinued double precision	categoryid integer
1	9	Mishi Kobe Niku	18 - 500 g pkgs.	97	1	6
2	17	Alice Mutton	20 - 1 kg tins	39	1	6
3	28	Rössle Sauerkraut	25 - 825 g cans	45.6	1	7
4	29	Thüringer Rostbratwurst	50 bags x 30 sausgs.	123.79	1	6
5	53	Perth Pasties	48 pieces	32.8	1	6

5) LIMIT/FETCH

- Retrieve the first 10 orders from the orders table

```
82  SELECT * FROM orders
83  LIMIT 10;
```

Data Output | Messages | Notifications

	orderid [PK] integer	customerid character varying (10)	employeeid integer	order_date date	requiredate date	shippeddate date	shippersid integer	freight double precision
1	10248	VINET	5	2013-07-04	2013-08-01	2013-07-16	3	32.38
2	10249	TOMSP	6	2013-07-05	2013-08-16	2013-07-10	1	11.61
3	10250	HANAR	4	2013-07-08	2013-08-05	2013-07-12	2	65.83
4	10251	VICTE	3	2013-07-08	2013-08-05	2013-07-15	1	41.34
5	10252	SUPRD	4	2013-07-09	2013-08-06	2013-07-11	2	51.3
6	10253	HANAR	3	2013-07-10	2013-07-24	2013-07-16	2	58.17
7	10254	CHOPS	5	2013-07-11	2013-08-08	2013-07-23	2	22.98
8	10255	RICSU	9	2013-07-12	2013-08-09	2013-07-15	3	148.33
9	10256	WELLI	3	2013-07-15	2013-08-12	2013-07-17	2	13.97
10	10257	HILAA	4	2013-07-16	2013-08-13	2013-07-22	3	81.91

Total rows: 10 | Query complete 00:00:00.090

- Retrieve orders starting from the 11th order, fetching 10 rows (i.e., fetch rows 11-20).

```
86  SELECT * FROM orders
87  ORDER BY orderid
88  OFFSET 10 ROWS
89  LIMIT 10;
```

Data Output | Messages | Notifications

	orderid [PK] integer	customerid character varying (10)	employeeid integer	order_date date	requiredate date	shippeddate date	shippersid integer	freight double precision
1	10258	ERNSH	1	2013-07-17	2013-08-14	2013-07-23	1	140.51
2	10259	CENTC	4	2013-07-18	2013-08-15	2013-07-25	3	3.25
3	10260	OTTIK	4	2013-07-19	2013-08-16	2013-07-29	1	55.09
4	10261	QUEDE	4	2013-07-19	2013-08-16	2013-07-30	2	3.05
5	10262	RATTC	8	2013-07-22	2013-08-19	2013-07-25	3	48.29
6	10263	ERNSH	9	2013-07-23	2013-08-20	2013-07-31	3	146.06
7	10264	FOLKO	6	2013-07-24	2013-08-21	2013-08-23	3	3.67
8	10265	BLONP	2	2013-07-25	2013-08-22	2013-08-12	1	55.28
9	10266	WARTH	3	2013-07-26	2013-09-06	2013-07-31	3	25.73
10	10267	FRANK	4	2013-07-29	2013-08-26	2013-08-06	1	208.58

Total rows: 10 | Query complete 00:00:00.084

6) Filtering (IN, BETWEEN)

- List all customers who are either Sales Representative, Owner

```
93 SELECT * FROM customers
94 WHERE contacttitle IN ('Sales Representative', 'Owner');
```

Data Output | Messages | Notifications

Showing rows: 1 to 34

	customerid [PK] character (5)	companyname character varying (100)	contactname character varying (100)	contacttitle character varying (100)	city character varying (100)	country character varying (100)
1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Berlin	Germany
2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Mexico City	Mexico
3	ANTON	Antonio Moreno Taquería	Antonio Moreno	Owner	Mexico City	Mexico
4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	London	UK
5	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Mannheim	Germany
6	BOLID	Bólido Comidas preparadas	Martín Sommer	Owner	Madrid	Spain
7	BONAP	Bon app'	Laurence Lebihan	Owner	Marseille	France
8	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	London	UK
9	CHOPS	Chop-suey Chinese	Yang Wang	Owner	Bern	Switzerland
10	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	London	UK

Total rows: 34 | Query complete 00:00:00.092

- Retrieve orders placed between January 1, 2013, and December 31, 2013.

```
97 SELECT *FROM orders
98 WHERE order_date BETWEEN '1/1/2013' and '12/31/2013';
```

Data Output | Messages | Notifications

Show

	orderid [PK] integer	customerid character varying (10)	employeeid integer	order_date date	requiredate date	shippeddate date	shippersid integer	freight double precision
1	10248	VINET	5	2013-07-04	2013-08-01	2013-07-16	3	32.38
2	10249	TOMSP	6	2013-07-05	2013-08-16	2013-07-10	1	11.61
3	10250	HANAR	4	2013-07-08	2013-08-05	2013-07-12	2	65.83
4	10251	VICTE	3	2013-07-08	2013-08-05	2013-07-15	1	41.34
5	10252	SUPRD	4	2013-07-09	2013-08-06	2013-07-11	2	51.3
6	10253	HANAR	3	2013-07-10	2013-07-24	2013-07-16	2	58.17
7	10254	CHOPS	5	2013-07-11	2013-08-08	2013-07-23	2	22.98
8	10255	RICSU	9	2013-07-12	2013-08-09	2013-07-15	3	148.33
9	10256	WELLI	3	2013-07-15	2013-08-12	2013-07-17	2	13.97
10	10257	HILAA	4	2013-07-16	2013-08-13	2013-07-22	3	81.91

Total rows: 152 | Query complete 00:00:00.100

7) Filtering

- List all products whose category_id is not 1, 2, or 3.

```
102 SELECT * FROM product
103 WHERE categoryid NOT IN ('1','2','3');
```

Data Output | Messages | Notifications

	productid [PK] integer	productname character varying (50)	quantityperunit text	unitprice double precision	discontinued double precision	categoryid integer
1	7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	30	0	7
2	9	Mishi Kobe Niku	18 - 500 g pkgs.	97	1	6
3	10	Ikura	12 - 200 ml jars	31	0	8
4	11	Queso Cabrales	1 kg pkg.	21	0	4
5	12	Queso Manchego La Pastora	10 - 500 g pkgs.	38	0	4
6	13	Konbu	2 kg box	6	0	8
7	14	Tofu	40 - 100 g pkgs.	23.25	0	7
8	17	Alice Mutton	20 - 1 kg tins	39	1	6
9	18	Carnarvon Tigers	16 kg pkg.	62.5	0	8
10	22	Gustaf's Knackebröd	24 - 500 g pkgs.	21	0	5

Total rows: 40 | Query complete 00:00:00.106

- Find customers whose company name starts with "A".

```
106 SELECT * FROM customers
107 WHERE contactname LIKE'A%';
```

Data Output | Messages | Notifications

Showing rows: 1 to 10

	customerid [PK] character (5)	companyname character varying (100)	contactname character varying (100)	contacttitle character varying (100)	city character varying (100)	country character varying (100)
1	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Mexico City	Mexico
2	ANTON	Antonio Moreno Taquería	Antonio Moreno	Owner	Mexico City	Mexico
3	EASTC	Eastern Connection	Ann Devon	Sales Agent	London	UK
4	FAMIA	Familia Arquibaldo	Aria Cruz	Marketing Assistant	Sao Paulo	Brazil
5	GOURL	Gourmet Lanchonetes	André Fonseca	Sales Associate	Campinas	Brazil
6	LAMAI	La maison d'Asie	Annette Roulet	Sales Manager	Toulouse	France
7	MORGK	Morgenstern Gesundkost	Alexander Feuer	Marketing Assistant	Leipzig	Germany
8	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Madrid	Spain
9	SPLIR	Split Rail Beer & Ale	Art Braunschweiger	Sales Manager	Lander	USA
10	TRADH	Tradição Hipermercados	Anabela Domingues	Sales Representative	Sao Paulo	Brazil

Total rows: 10 | Query complete 00:00:00.085

8) INSERT into orders table:

Task: Add a new order to the orders table with the following details:

Order ID: 11078

Customer ID: ALFKI

Employee ID: 5

Order Date: 2025-04-23

Required Date: 2025-04-30

Shipped Date: 2025-04-25

shipperID:2

Freight: 45.50

```
119 INSERT INTO orders(orderid,customerid,employeeid,order_date,requiredate,shippeddate,shippersid,freight)
120 VALUES (11078,'ALFKI',5,'2025-04-23','2025-04-30','2025-04-25',2,45.50);
121  SELECT* FROM orders where orderid = 11078;
```

Data Output | Messages | Notifications

Showing ro

	orderid [PK] integer	customerid character varying (10)	employeeid integer	order_date date	requiredate date	shippeddate date	shippersid integer	freight double precision
1	11078	ALFKI	5	2025-04-23	2025-04-30	2025-04-25	2	45.5

9) Increase(Update) the unit price of all products in category_id =2 by 10%.(HINT: unit_price =unit_price * 1.10)

```
125 UPDATE product
126 SET unitprice = unitprice* 1.10
127 WHERE categoryid = 2;
128 SELECT unitprice FROM product WHERE categoryid  = 2;
```

Data Output | Messages | Notifications

	unitprice double precision
1	11
2	24.200000000000003
3	23.485000000000003
4	27.500000000000004
5	44
6	17.05
7	21.395
8	31.35
9	48.29
10	23.155

Total rows: 12 | Query complete 00:00:00.061

10) Sample Northwind database:

Download

I. Download northwind.sql from below link into your local. Sign in to Git first
https://github.com/pthom/northwind_psql

II. Manually Create the database using pgAdmin:

A. Right-click on "Databases" → Create → Database

B. Give name as ‘northwind’ (all small letters)

C. Click ‘Save’

Import database:

I. Open pgAdmin and connect to your server

II. Select the database ‘northwind’

III. Right Click-> Query tool.

IV. Click the folder icon to open your northwind.sql file

V. Press F5 or click the Execute button.

VI. You will see total 14 tables loaded

VII. Databases → your database → Schemas → public → Tables