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Assignment week 6

## Part 1 — Setup Database

The screenshot shows the Object Explorer interface in PostgreSQL 17. The left pane displays a tree view of database objects. At the top level, there is a connection icon followed by 'PostgreSQL 17'. Below it, under 'Databases (7)', are 'BankingDB' and 'Northwind'. Under 'Northwind', there are several categories: 'Casts', 'Catalogs', 'Event Triggers', 'Extensions', 'Foreign Data Wrappers', 'Languages', 'Publications', and 'Schemas (1)'. The 'public' schema is expanded, showing sub-items like 'Aggregates', 'Collations', 'Domains', 'FTS Configurations', 'FTS Dictionaries', 'FTS Parsers', 'FTS Templates', 'Foreign Tables', 'Functions', 'Materialized Views', 'Operators', 'Procedures', and 'Sequences'. Finally, the 'Tables (14)' category is expanded, listing the tables: 'categories', 'customer\_customer\_demo', 'customer\_demographics', 'customers', 'employee\_territories', 'employees', 'order\_details', 'orders', 'products', 'region', 'shippers', 'suppliers', and 'territories'. The 'Tables (14)' item has a blue background, indicating it is selected.

## Part 2 — SQL Practice Questions

### Question 1 — Simple SQL (Single Table)

Show all products that cost more than \$20

**Expected skills:** SELECT, WHERE

```

10 | -- Question 1: Show all products that cost more than $20
11 |
12 |
13 v SELECT product_id, product_name AS products_price_more_than_20, unit_price
14   FROM products
15  WHERE unit_price > 20;
16

```

Data Output Messages Notifications

product_id [PK] smallint	products_price_more_than_20 character varying (40)	unit_price real
1	Chef Anton's Cajun Seasoning	22
2	Chef Anton's Gumbo Mix	21.35
3	Grandma's Boysenberry Spread	25
4	Uncle Bob's Organic Dried Pears	30
5	Northwoods Cranberry Sauce	40
6	Mishi Kobe Niku	97
7	Ikura	31
8	Queso Cabrales	21
9	Queso Manchego La Pastora	38
10	Tofu	23.25
11	Alice Mutton	39
12	Carnarvon Tigers	62.5
13	Sir Rodney's Marmalade	81
14	Gustaf's Knäckebrot	21
15	Gumbär Gummibärchen	31.23
16	Schoggib Schokolade	43.9

Total rows: 37 Query complete 00:00:00.056

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→ There are 37 products costing more than \$20

## Question 2 — JOIN Two Tables

Display the Order ID, Customer Company Name, and Order Date

You must join:

- orders
- customers

**Expected skills:** INNER JOIN, foreign keys

```

15 -- Question 2
16 -- Display the Order ID, Customer Company Name, and Order Date
17 -- This query joins the orders and customers tables using the customer_id foreign key
18
19 v SELECT
20   o.order_id,
21   c.company_name,
22   o.order_date
23  FROM orders o
24 INNER JOIN customers c
25    ON o.customer_id = c.customer_id;

```

Data Output Messages Notifications

order_id smallint	company_name character varying (40)	order_date date
1	Vins et alcools Chevalier	1996-07-04
2	Toms Spezialitäten	1996-07-05
3	Hanari Carnes	1996-07-08
4	Victuailles en stock	1996-07-08
5	Suprèmes délices	1996-07-09
6	Hanari Carnes	1996-07-10
7	Chop-suey Chinese	1996-07-11
8	Richter Supermarkt	1996-07-12
9	Wellington Importadora	1996-07-15
10	HILARION-Abastos	1996-07-16
11	Ernst Handel	1996-07-17
12	Centro comercial Moctezuma	1996-07-18
13	Ottliebes Käseladen	1996-07-19
14	Que Delícia	1996-07-19
15	Rattlesnake Canyon Grocery	1996-07-22
16	Ernst Handel	1996-07-23

Total rows: 830 Query complete 00:00:00.075

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## Question 3 — Connect to Power BI

Import the **orders** table into Power BI and create a simple visualization.

