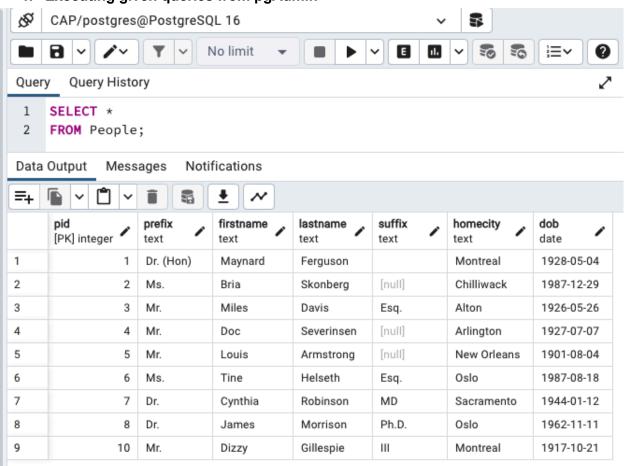
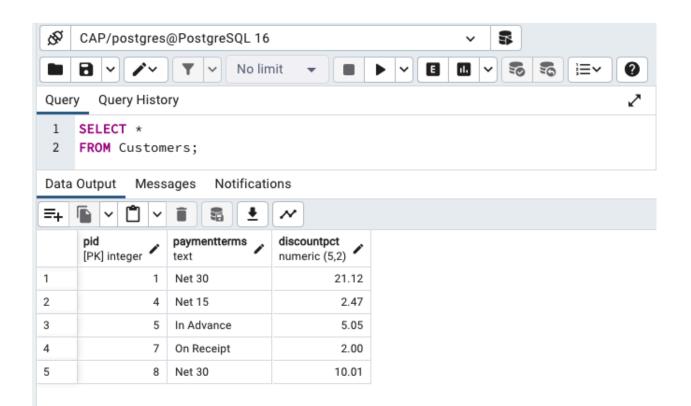
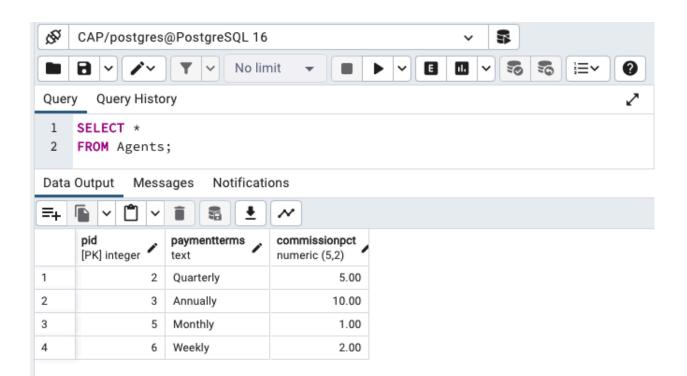
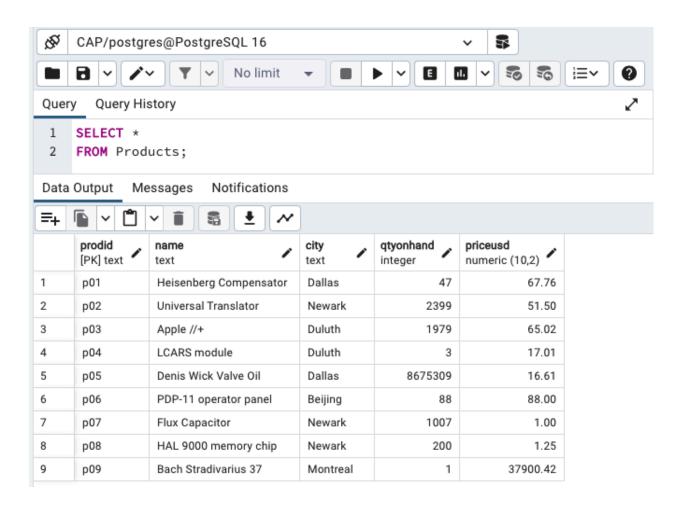
Lab 2: Executed Queries Ethan Ondreicka Jan 25, 2024 Professor Labouseur

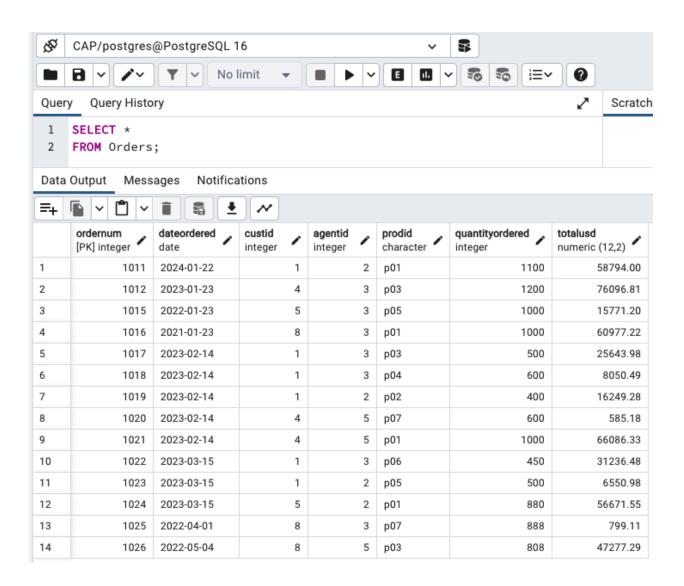
## 1. Executing given queries from pgAdmin











## 2. Explain distinctions among the terms primary key, candidate key and superkey

- A Superkey is a set of one or more columns that can uniquely identify a row in a table.
- A Candidate key is like a Superkey except that it has the property of being minimal, meaning no subset of the key can uniquely identify a row in a table
- A Primary key is a candidate key that is used to identify each row in a table. Only one candidate key is selected as the PK and cannot be null

## 3. Short Essay on Data Types

Data types are crucial in the organization and management of information within databases. All the different data types ensure accurate representation, as well as ease of data retrieval. To demonstrate the different data types, I am going to use the Pokemon TCG and create a table with fields.

Pokemon TCG		
Fields	Data Type	Nullable?
CardID	INT	Not Null
CardName	TEXT	Not Null
Rarity	TEXT	Not Null
Туре	TEXT	Not Null
HP	INT	Not Null
AttackName	TEXT	Nullable
EvolutionStage	TEXT	Nullable
Illustrator	TEXT	Nullable
ReleaseDate	DATE	Not Null

In conclusion, my Pokemon TCG table demonstrates the use of various data types used to represent and organize information accurately. Choosing the correct data type is crucial for making an effective database with strong data integrity and seamless data retrieval.

## 4. Explain the relational rules with examples and reasons why they are important

- The "first normal form" rule says that a relation must contain only atomic values, and cannot repeat and fields. An example for this would be a table containing a column called "Products", where each product is stored in one comma-separated list. The first normal form rule is important in avoiding redundancy and makes it easier to update data without causing problems.
- The "access by content only" rule says that we can only query data by what's there, never by where it is. An example of this would be querying customers by a CustID number instead of the order in which they were added to your database. This rule is important to retrieving data from your database and lets it become much more scalable.

- The "all rows must be unique" rule says that since elements have no intrinsic order, the only way to ensure the ability to get at every row in the table is for every row to be unique. For example, in a table of employees, each employee may have a unique employee id in-case two employees share the same name. This rule is important because it ensures that any updates to a specific row doesn't affect others.