Here's a sample DDL (Data Definition Language) for various PostgreSQL data types along with examples of how to insert data into a table with those data types.

**Sample DDL and Data Insertions**

1. **Creating a Table with Various Data Types**

sql

Copy code

CREATE TABLE sample\_data (

id SERIAL PRIMARY KEY,

name VARCHAR(100), -- String type

age INT, -- Integer type

height FLOAT, -- Floating point number

is\_active BOOLEAN, -- Boolean type

created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP, -- Date and time

balance NUMERIC(10, 2) -- Exact numeric type with precision

);

1. **Inserting Data into the Table**

sql

Copy code

INSERT INTO sample\_data (name, age, height, is\_active, balance) VALUES

('Alice', 30, 5.7, TRUE, 1500.50),

('Bob', 25, 6.1, FALSE, 2000.00),

('Charlie', 28, 5.9, TRUE, 2500.75),

('Diana', 35, 5.4, TRUE, 3000.00);

**Explanation of Data Types**

* **SERIAL**: A unique identifier automatically generated (auto-incrementing integer).
* **VARCHAR(n)**: A variable-length string with a maximum length of n.
* **INT**: Integer data type.
* **FLOAT**: A floating-point number.
* **BOOLEAN**: A true/false value.
* **TIMESTAMP**: Date and time, with optional time zone.
* **NUMERIC(p, s)**: An exact numeric type with precision p and scale s (the number of digits to the right of the decimal point).

**Additional Data Types and Insertions**

1. **Adding More Data Types**

sql

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CREATE TABLE additional\_data (

id SERIAL PRIMARY KEY,

email TEXT, -- Text type (unlimited length)

registration\_date DATE, -- Date type

binary\_data BYTEA, -- Binary data type

json\_data JSONB -- JSON data type (Binary JSON)

);

1. **Inserting Data into Additional Table**

sql

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INSERT INTO additional\_data (email, registration\_date, binary\_data, json\_data) VALUES

('alice@example.com', '2024-01-15', '\xDEADBEEF', '{"preferences": {"theme": "dark"}}'),

('bob@example.com', '2024-02-20', '\xBEEFCAFE', '{"preferences": {"theme": "light"}}');

**Explanation of Additional Data Types**

* **TEXT**: A variable-length string with unlimited length.
* **DATE**: A date without time.
* **BYTEA**: A binary data type for storing byte strings.
* **JSONB**: A binary JSON format, allowing for efficient storage and querying of JSON data.

This setup provides a good foundation for working with different data types in PostgreSQL!