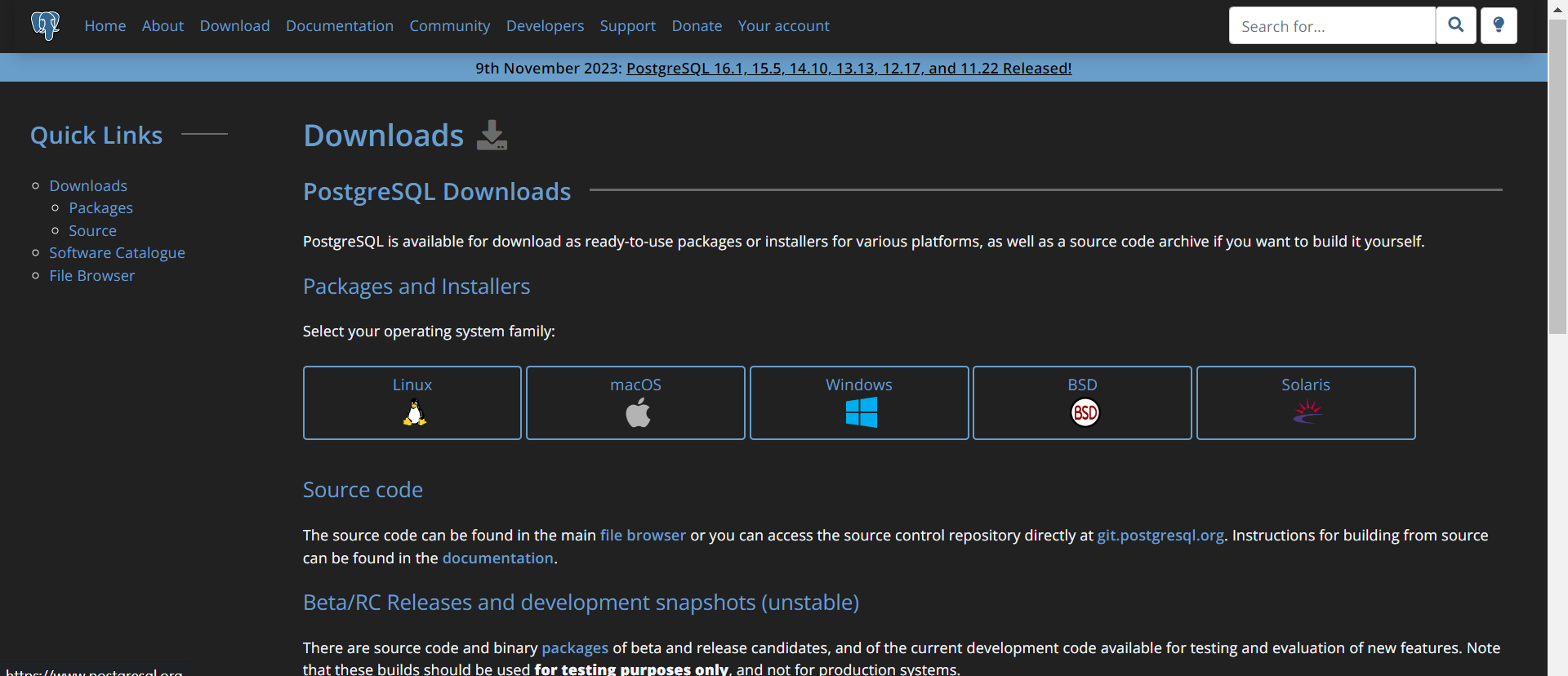
Download **postgres** using the link <https://www.postgresql.org/download/>

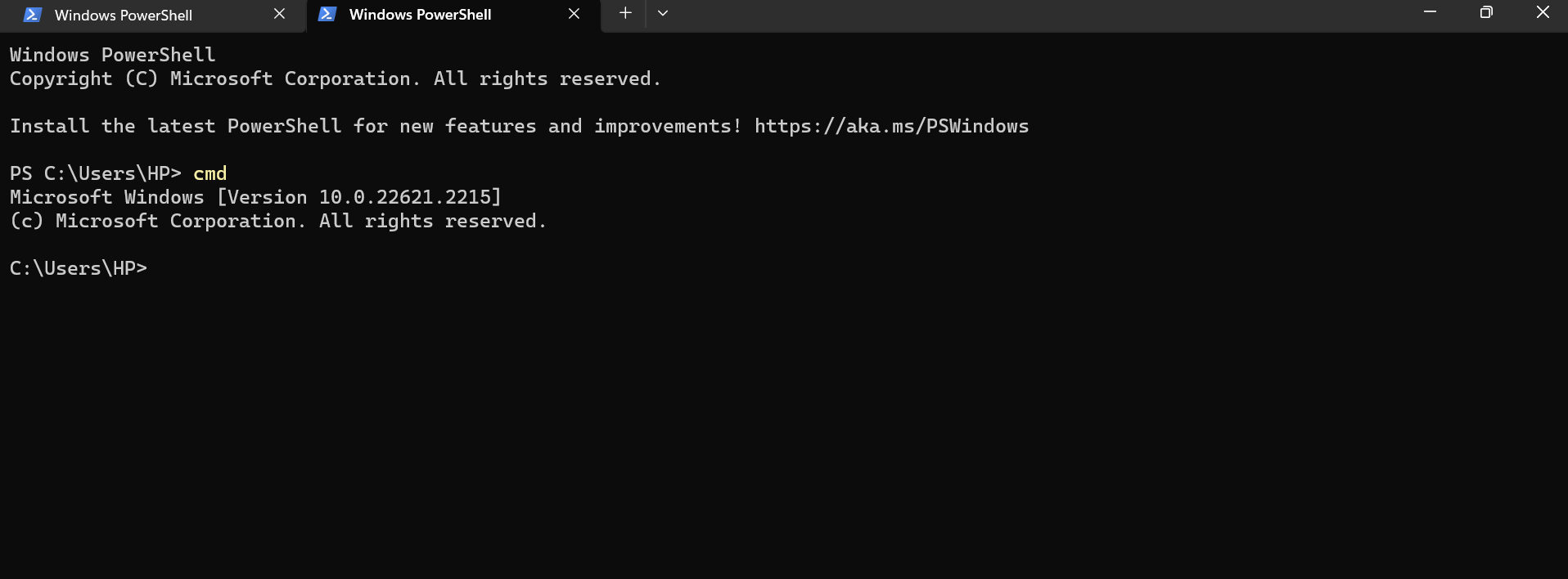
C:\ERD-Install-and-Configuring-A-Database-Server-PostgreSQL-and-MySQL\Images

Ensure to add the directory of the **postgres** from your file explorer if you are using windows to your system path, so you could run **postgres** commands and **SQL** commands from your command line or terminal.

After your installation, configure postgres to work, by creating your **username** and **password** during the installation process.

Main Steps:

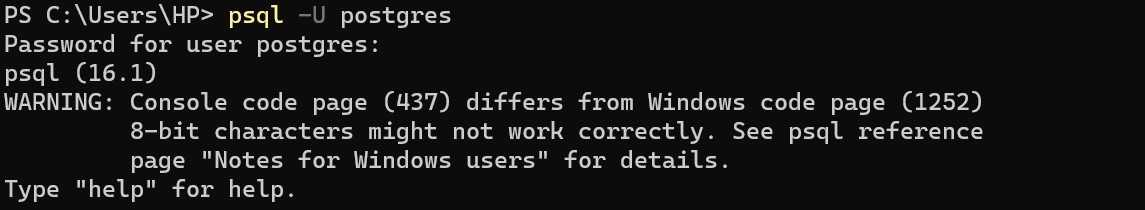
1. Open your **terminal** or **command line** if you are using **windows.**

****

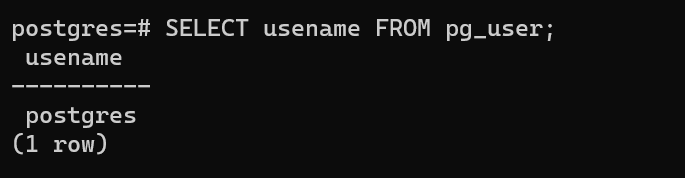
1. Check which **username** is current logged in postgres, but first use the command below to loggin postgres.

**psql -U postgres**

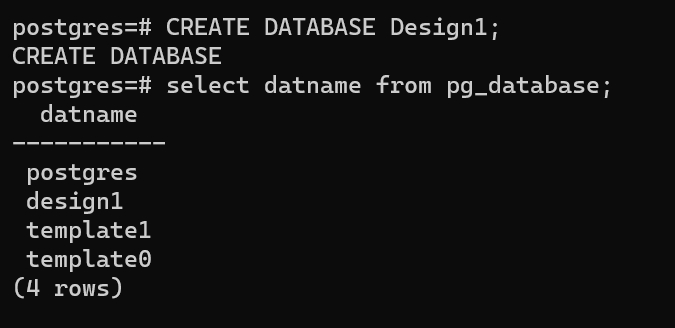
Insert your password the one you created during the installation.

****

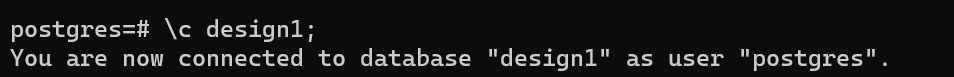
Find out the user logged in using this command “ **SELECT usename FROM pg\_user;**”



1. Create a database using the command “ **CREATE DATABASE Design1;**” and on next shell line “ **SELECT datname FROM pg\_database;**” follow the picture below.

****

1. To check in to the database you just created use “ **\c design1**” follow the picture below.

****

1. To create the tables using the SQL schema follow the scripts below.

**To create the Customers Table.**

**-- Create Customers table**

CREATE TABLE Customers (

customer\_id SERIAL PRIMARY KEY,

customer\_sname VARCHAR(50),

first\_name VARCHAR(50),

email VARCHAR(100),

phone\_number VARCHAR(20),

address VARCHAR(255),

registration\_date DATE

);

**-- Create Product table**

CREATE TABLE Product (

product\_id SERIAL PRIMARY KEY,

product\_name VARCHAR(100),

description TEXT,

price NUMERIC,

manufacturer VARCHAR(50),

production\_date DATE,

expiration\_date DATE

);

**-- Create Transactions table**

CREATE TABLE Transactions (

transaction\_id SERIAL PRIMARY KEY,

customer\_id INT REFERENCES Customers(customer\_id),

transaction\_date DATE

);

**To create the ProductTransactions Table.**

**-- Create ProductTransactions table**

CREATE TABLE ProductTransactions (

product\_transaction\_id SERIAL PRIMARY KEY,

customer\_id INT REFERENCES Customers(customer\_id),

product\_id INT REFERENCES Product(product\_id),

quantity INT,

total\_price NUMERIC,

transaction\_id INT REFERENCES Transactions(transaction\_id),

transaction\_date DATE

);

**To create the Warehouse Table.**

**-- Create Warehouse table**

CREATE TABLE Warehouse (

warehouse\_id SERIAL PRIMARY KEY,

product\_id INT REFERENCES Product(product\_id),

quantity INT,

received\_date DATE,

expiration\_date DATE,

transaction\_id INT,

CONSTRAINT fk\_product\_id

FOREIGN KEY (product\_id)

REFERENCES Product(product\_id),

CONSTRAINT fk\_transaction\_id

FOREIGN KEY (transaction\_id)

REFERENCES Transactions(transaction\_id)

);

-- Add Index on product\_id and transaction\_id for optimization

CREATE INDEX idx\_warehouse\_product\_transaction

ON Warehouse (product\_id, transaction\_id);

**To create the store Table.**

**-- Create Store table**

CREATE TABLE Store (

store\_id SERIAL PRIMARY KEY,

customer\_id INT REFERENCES Customers(customer\_id),

product\_id INT REFERENCES Product(product\_id),

transaction\_id INT REFERENCES Transactions(transaction\_id),

warehouse\_id INT REFERENCES Warehouse(warehouse\_id),

quantity INT,

total\_price NUMERIC,

sale\_date DATE

);

-- Add Index on product\_id, transaction\_id, and warehouse\_id for optimization

CREATE INDEX idx\_store\_product\_transaction\_warehouse

ON Store (product\_id, transaction\_id, warehouse\_id);

**INSERTING DATA IN TABLES.**

1. Inserting data into ***Customer*** Tables.

INSERT INTO Customers (customer\_sname, first\_name, email, phone\_number, address, registration\_date)

VALUES

('Smith', 'John', 'john.smith@email.com', '123-456-7890', '123 Main St, Cityville', '2023-01-01'),

('Johnson', 'Jane', 'jane.johnson@email.com', '987-654-3210', '456 Oak St, Townsville', '2023-02-15');

-- Add more rows as needed

1. Inserting Data into ***Product*** Table

INSERT INTO Product (product\_name, description, price, manufacturer, production\_date, expiration\_date)

VALUES

('Widget A', 'A high-quality widget', 19.99, 'ABC Inc.', '2023-01-10', '2023-12-31'),

('Gadget B', 'An advanced gadget', 49.99, 'XYZ Corp.', '2023-02-05', '2024-02-28');

-- Add more rows as needed

3. Inserting Data into ***Transaction*** Table.

INSERT INTO Transactions (customer\_id, transaction\_date)

VALUES

(1, '2023-03-01'),

(2, '2023-03-15');

-- Add more rows as needed

4. Inserting Data into ***ProductTransactions*** Table.

INSERT INTO ProductTransactions (customer\_id, product\_id, quantity, total\_price, transaction\_id, transaction\_date)

VALUES

(1, 1, 2, 39.98, 1, '2023-03-01'),

(2, 2, 1, 49.99, 2, '2023-03-15');

-- Add more rows as needed

**5.** Insert Data into ***Warehouse*** Table

INSERT INTO Warehouse (product\_id, quantity, received\_date, expiration\_date, transaction\_id)

VALUES

(1, 5, '2023-01-05', '2023-12-31', 1),

(2, 10, '2023-02-10', '2024-02-28', 2);

-- Add more rows as needed

6. Insert Data into ***Store*** Table

INSERT INTO Store (customer\_id, product\_id, transaction\_id, warehouse\_id, quantity, total\_price, sale\_date)

VALUES

(1, 1, 1, 1, 2, 39.98, '2023-03-01'),

(2, 2, 2, 2, 1, 49.99, '2023-03-15');

-- Add more rows as needed

**To list the Databasees in the postgres running server:**

1. Copy and paste this in the terminal “ **SELECT datname FROM pg\_database;** “

**To list the table in a Database:**

1. Make sure you are in the signed into the database using **“ \c |databasename| ”**
2. To list the tables I a database, copy paste the sql script below.

SELECT table\_name

FROM information\_schema.tables

WHERE table\_schema = 'public'

AND table\_type = 'BASE TABLE';

1. To list the content of any table in the database;

**“ SELECT \* FROM |name of table|”**