

# Apa itu PostgreSQL?

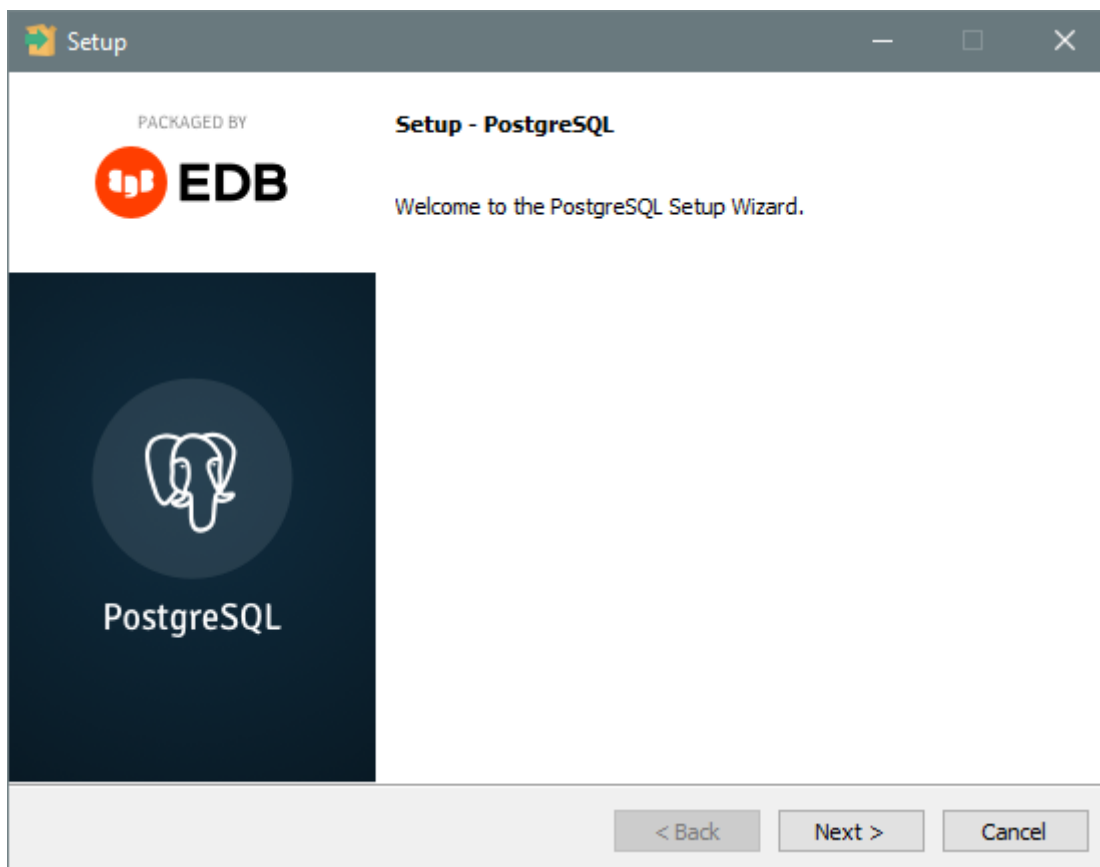
PostgreSQL adalah sistem manajemen basis data (DBMS) relasional yang bersifat open-source dan dapat diandalkan. DBMS ini dikembangkan berdasarkan model relasional, yang berarti data disimpan dalam bentuk tabel dengan baris dan kolom. PostgreSQL mendukung bahasa SQL (Structured Query Language) yang populer untuk mengakses dan memanipulasi data dalam database.

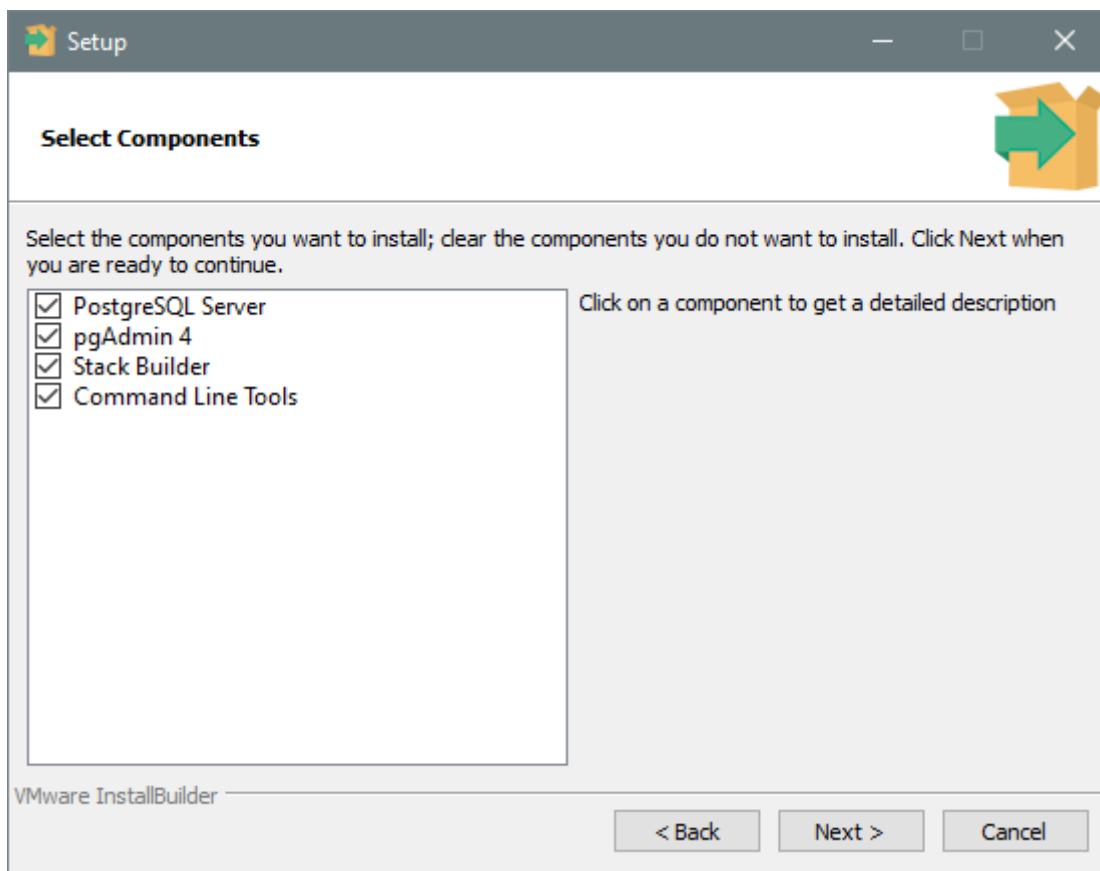
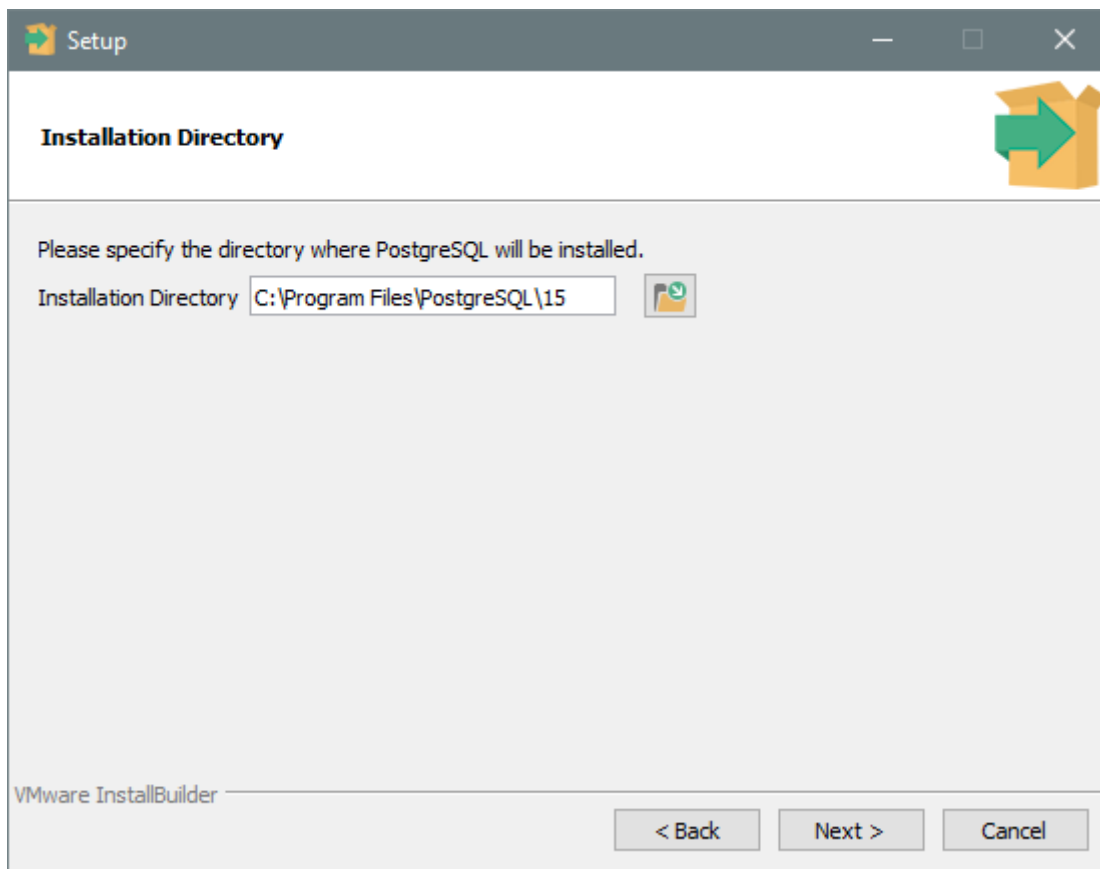
## Download

PostgreSQL dapat diunduh di alamat :

<https://www.enterprisedb.com/downloads/postgres-postgresql-downloads>

## Instalasi Postgre v.15






Setup

**Data Directory**

Please select a directory under which to store your data.

Data Directory  

VMware InstallBuilder

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Next >

Cancel

Setup

**Password**

Please provide a password for the database superuser (postgres).

Password

Retype password

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Next >

Cancel

Setup

Port

Please select the port number the server should listen on.

Port

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Next >

Cancel

Setup

Advanced Options

Select the locale to be used by the new database cluster.

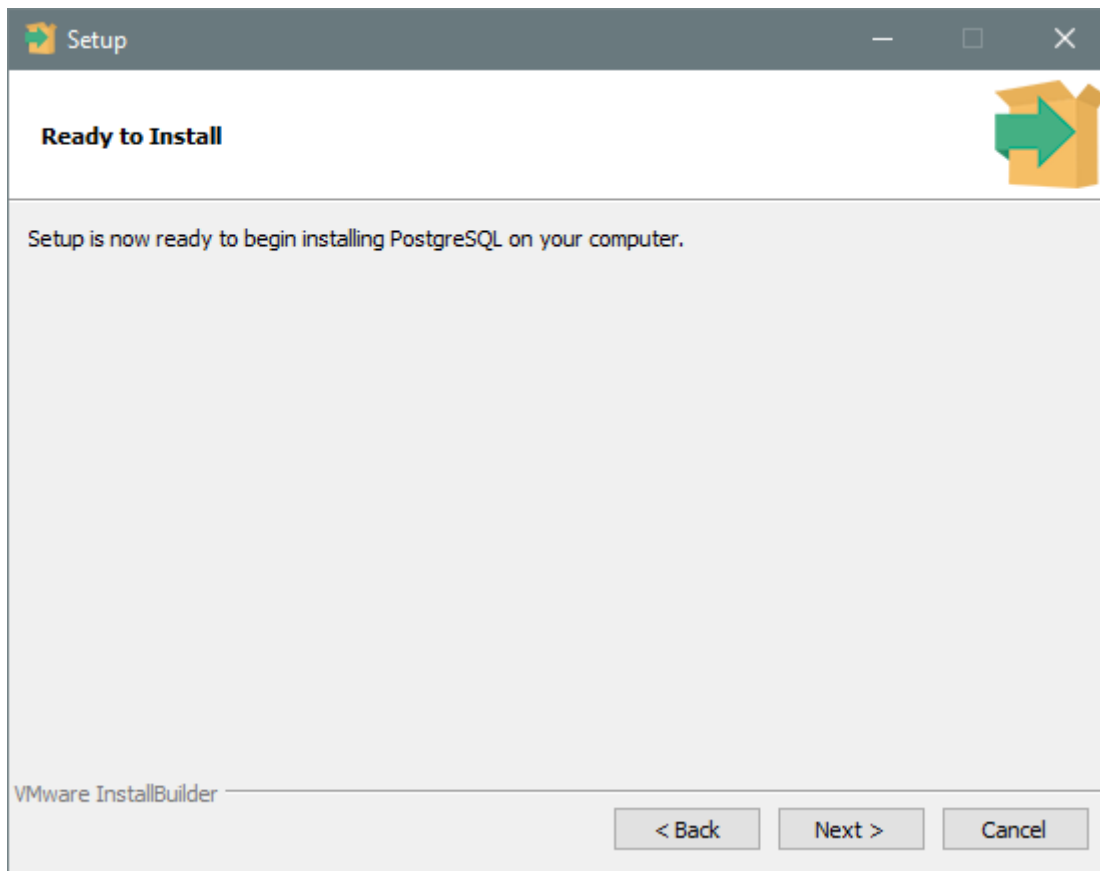
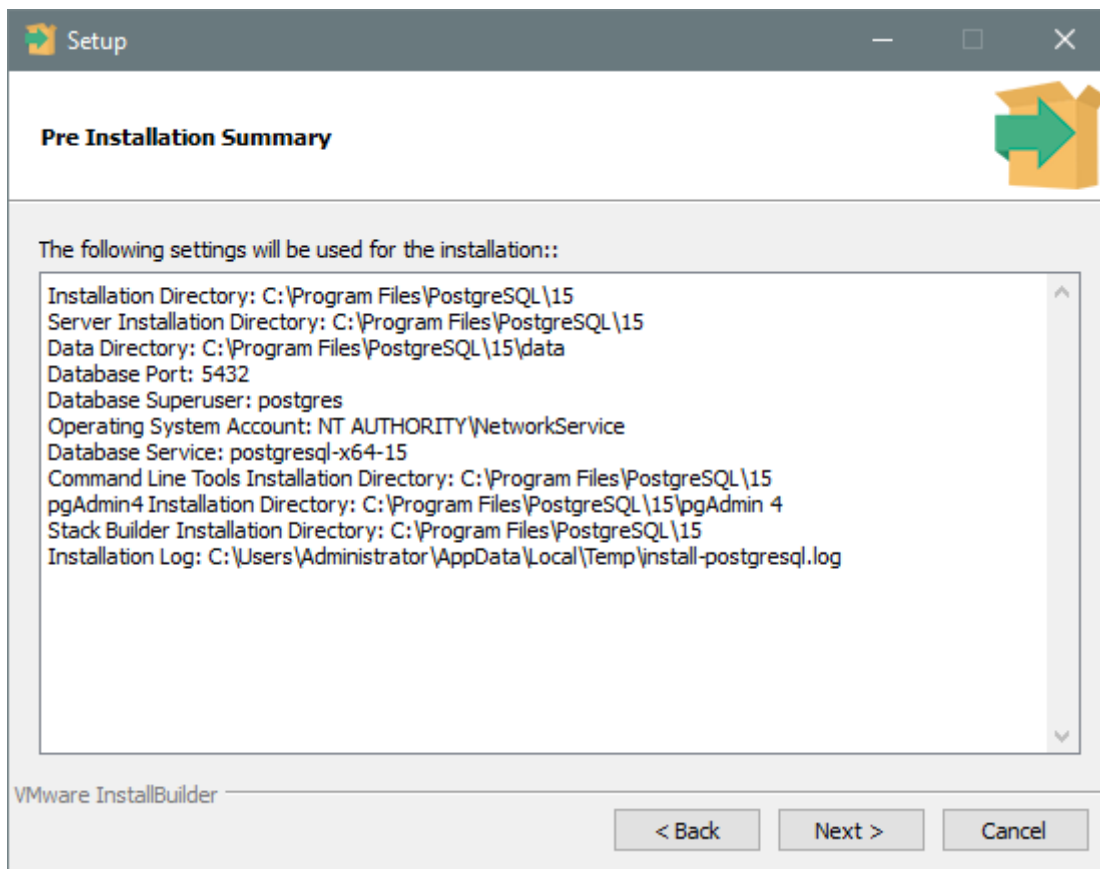
Locale

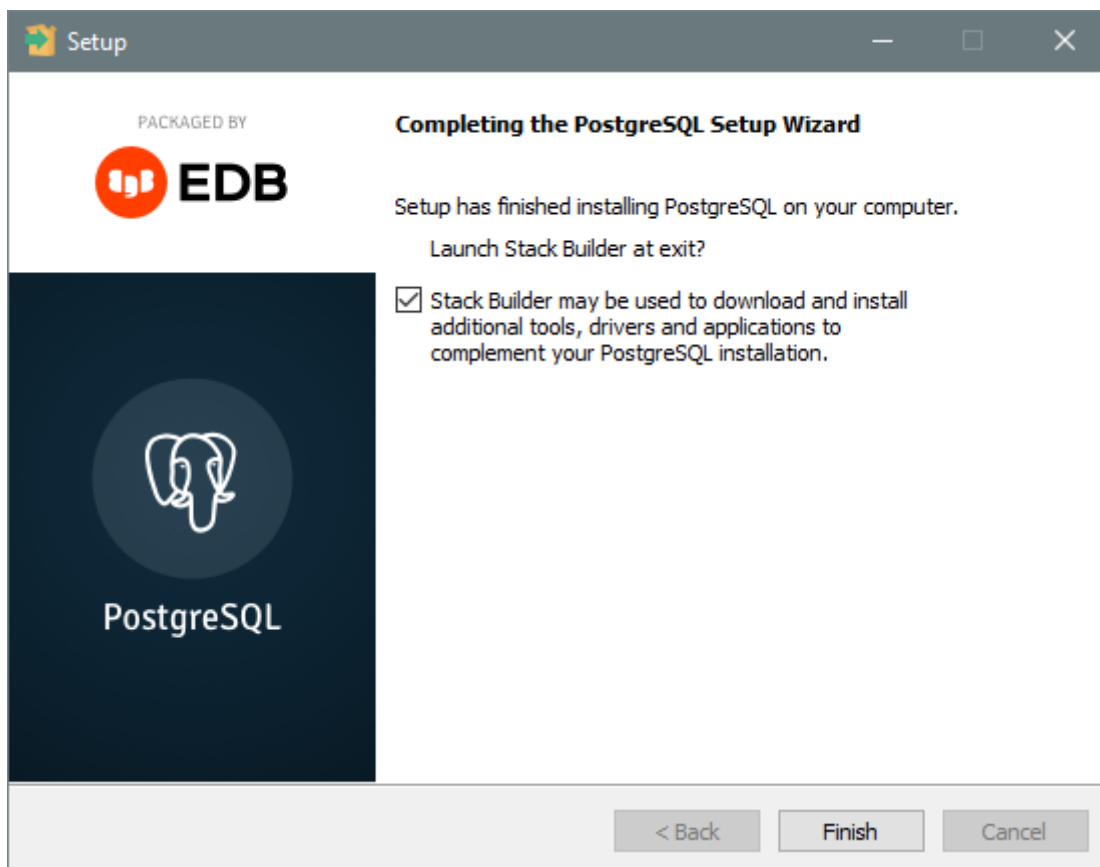
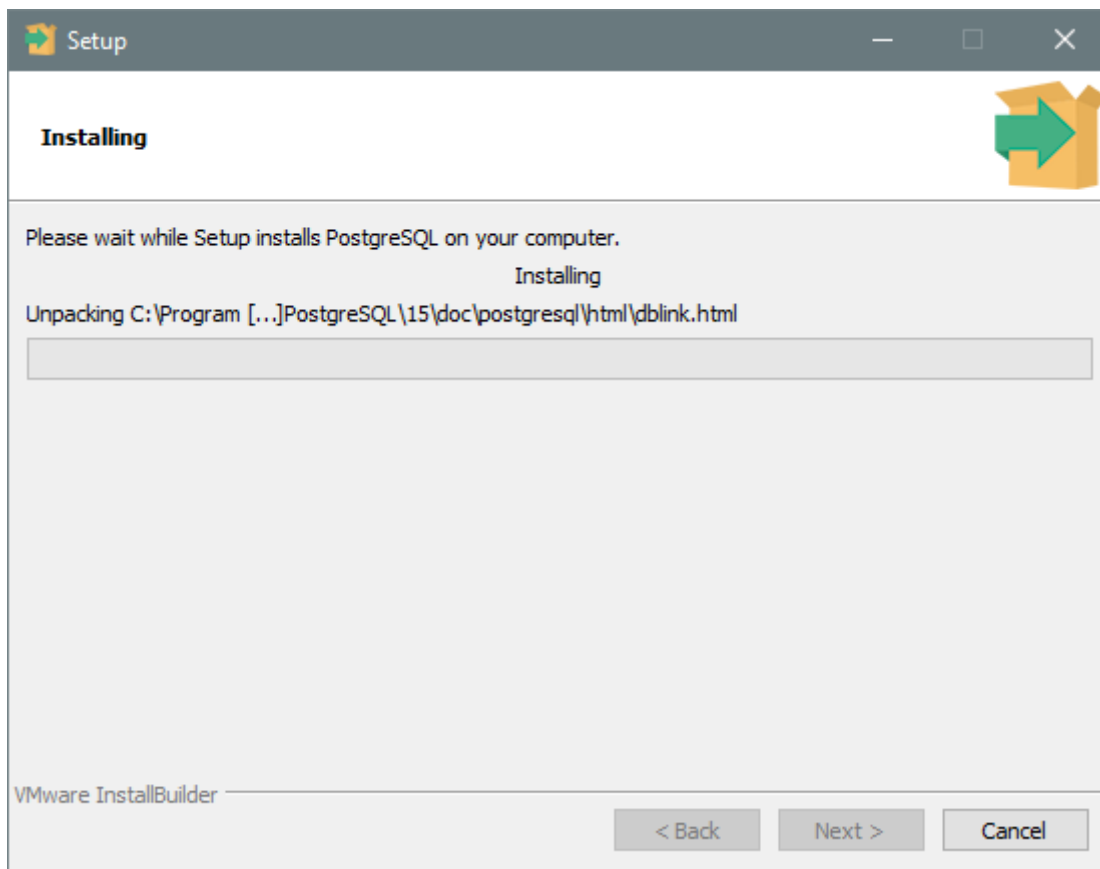
VMware InstallBuilder

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Next >

Cancel

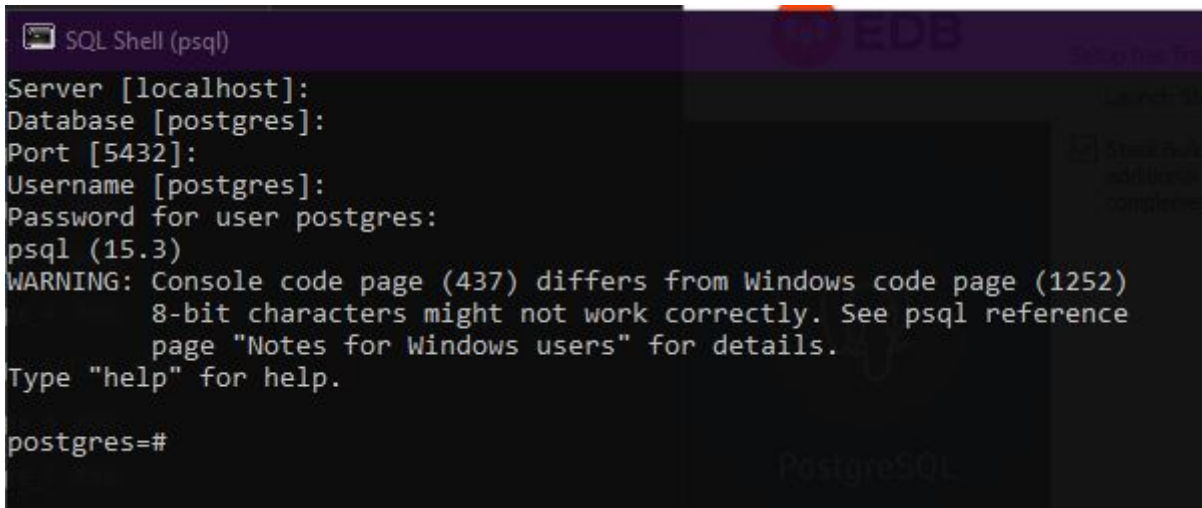




Catatan: Tidak perlu memberikan ceklis pada pilihan Stack Builder, lalu klik tombol Finish.

## Memulai PostgreSQL

Windows Start > All Program > PostgreSQL 15 > SQL Shell (psql)



```
SQL Shell (psql)
Server [localhost]:
Database [postgres]:
Port [5432]:
Username [postgres]:
Password for user postgres:
psql (15.3)
WARNING: Console code page (437) differs from Windows code page (1252)
         8-bit characters might not work correctly. See psql reference
         page "Notes for Windows users" for details.
Type "help" for help.

postgres=#
```

Catatan: Gunakan password yang ditetapkan ketika instalasi.

## Membuat Database Baru

```
CREATE DATABASE akademik;
```

## Menampilkan semua database yang ada

```
\l
```

ket: huruf L kecil

## Mengaktifkan Database

```
\c akademik;
```

## Membuat User Baru

Create a special user:

```
CREATE USER freddy WITH SUPERUSER PASSWORD '123';
```

Create an ordinary:

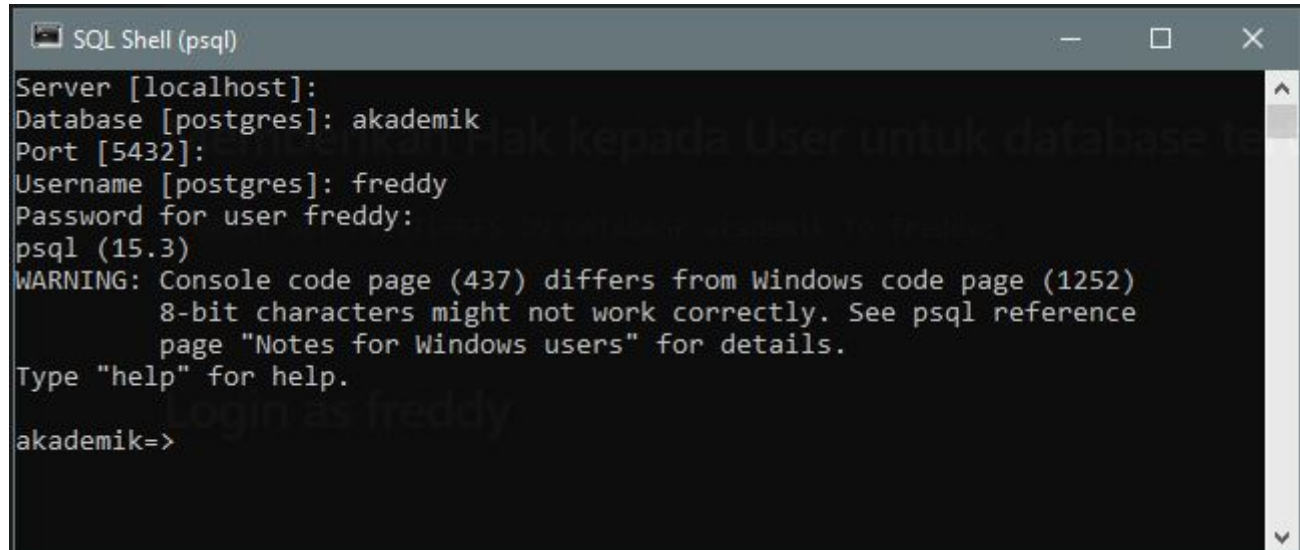
```
CREATE USER freddy WITH PASSWORD '123';
```

An Ordinary user doesn't have rights to create any table under **public** scheme

# Memberikan Hak kepada User untuk database tertentu

```
GRANT ALL PRIVILEGES ON DATABASE akademik TO freddy;
```

## Login as freddy



```
SQL Shell (psql)
Server [localhost]:
Database [postgres]: akademik
Port [5432]:
Username [postgres]: freddy
Password for user freddy:
psql (15.3)
WARNING: Console code page (437) differs from Windows code page (1252)
         8-bit characters might not work correctly. See psql reference
         page "Notes for Windows users" for details.
Type "help" for help.
akademik=>
```

## Create Schema (for ordinary user)

if not create schema then the default schema is **public**

```
create schema umc
```

## Display All Schema

```
\dn
```



```
SQL Shell (psql)
WARNING: Console code page (437) differs from Windows code page (1252)
        8-bit characters might not work correctly. See psql reference
        page "Notes for Windows users" for details.
Type "help" for help.

akademik=> \dn
          List of schemas
  Name  | Owner
-----+-----
 public | pg_database_owner
  umc   | freddy
(2 rows)

akademik=>
```

## Create Table mahasiswa inside SCHEMA umc

```
create table umc.mahasiswa(
id serial primary key not null,
nim varchar(10) unique not null,
nama varchar(50) not null,
jk varchar(1) not null,
prodi varchar(10) not null);
```

## Create Table mahasiswa without SCHEMA

```
create table mahasiswa(
id serial primary key not null,
nim varchar(10) unique not null,
nama varchar(50) not null,
jk varchar(1) not null,
prodi varchar(10) not null);
```