

1 PostgreSQL Primer: Installing PostgreSQL

On many Linux versions, you just run: `apt-get install postgresql` or `yum install postgresql`, etc.

For Windows, you can download PostgreSQL from <http://www.postgresql.org/>. You'll then run the installer, and click "next" a few times.

2 Creating a user and database

You need to become the 'postgres' user:

```
$ sudo su - postgres
postgres@eyepad ~ $
```

You then run `psql` command.

```
postgres@eyepad ~ $ psql
psql (9.5.8)
Type "help" for help.
```

```
postgres=#
```

Before you create a database, it's a good idea to create a database user.

```
postgres=# create role myuser with login password '12345';
CREATE ROLE
```

Now you can create a database owned by this user:

```
postgres=# create database mydata with owner myuser;
CREATE DATABASE
```

Now you can log out.

3 Connecting using psql

Now that you have a database and user, you can login:

```
$ psql -h localhost -p 5432 -U myuser -d mydata -W
Password for user myuser:
psql (9.5.8)
SSL connection (protocol: TLSv1.2)
Type "help" for help.
```

```
mydata=>
```

4 Creating tables

```
mydata=> create table customer (  
mydata(>     customerid bigint,  
mydata(>     lname varchar(20),  
mydata(>     fname varchar(20),  
mydata(>     email varchar(50)  
mydata(> );  
CREATE TABLE
```

5 Manipulating data

CRUD operations: Create, Retrieve, Update, Delete

5.1 Create

```
mydata=> insert into customer(customerid,lname,fname,email)  
values (1,'Doe','John','jdoe@gmail.com');  
INSERT 0 1  
mydata=> insert into customer(customerid,lname,fname,email)  
values (2,'Doe','Jane','jane.doe@gmail.com');  
INSERT 0 1
```

5.2 Retrieve/Select

```
mydata=> select * from customer;  
customerid | lname | fname | email  
-----+-----+-----+-----  
1 | Doe | John | jdoe@gmail.com  
2 | Doe | Jane | jane.doe@gmail.com  
(2 rows)
```

```
mydata=> select fname,lname,email from customer where customerid=2;  
fname | lname | email  
-----+-----+-----  
Jane | Doe | jane.doe@gmail.com  
(1 row)
```

5.3 Update

```
mydata=> update customer set email='jane@msn.com' where customerid=2;  
UPDATE 1  
mydata=> select fname,lname,email from customer where customerid=2;  
fname | lname | email
```

```
-----+-----+-----  
Jane | Doe | jane@msn.com  
(1 row)
```

5.4 Delete

```
mydata=> delete from customer where customerid=1;  
DELETE 1
```

```
mydata=> select * from customer;  
customerid | lname | fname | email
```

```
-----+-----+-----+-----  
2 | Doe | Jane | jane@msn.com  
(1 row)
```