

CREATE DATABASE

```
CREATE DATABASE dbName;
```

CREATE TABLE (with auto numbering integer id)

```
CREATE TABLE tableName (  
  id serial PRIMARY KEY,  
  name varchar(50) UNIQUE NOT NULL,  
  dateCreated timestamp DEFAULT current_timestamp  
);
```

Add a primary key

```
ALTER TABLE tableName ADD PRIMARY KEY (id);
```

Create an INDEX

```
CREATE UNIQUE INDEX indexName ON tableName (columnName);
```

Backup a database (command line)

```
pg_dump dbName > dbName.sql
```

Backup all databases (command line)

```
pg_dumpall > pgbackup.sql
```

Run a SQL script (command line)

```
psql -f script.sql databaseName
```

Search using a regular expression

```
SELECT column FROM table WHERE column ~ 'foo.*';
```

The first N records

```
SELECT columns FROM table LIMIT 10;
```

Pagination

```
SELECT cols FROM table LIMIT 10 OFFSET 30;
```

Prepared Statements

```
PREPARE preparedInsert (int, varchar) AS  
  INSERT INTO tableName (intColumn, charColumn) VALUES ($1, $2);  
EXECUTE preparedInsert (1, 'a');  
EXECUTE preparedInsert (2, 'b');  
DEALLOCATE preparedInsert;
```

Create a Function

```
CREATE OR REPLACE FUNCTION month (timestamp) RETURNS integer  
AS 'SELECT date_part(''month'', $1)::integer';  
LANGUAGE 'sql';
```

Table Maintenance

```
VACUUM ANALYZE table;
```

Reindex a database, table or index

```
REINDEX DATABASE dbName;
```

Show query plan

```
EXPLAIN SELECT * FROM table;
```

Import from a file

```
COPY destTable FROM '/tmp/somefile';
```

Show all runtime parameters

```
SHOW ALL;
```

Grant all permissions to a user

```
GRANT ALL PRIVILEGES ON table TO username;
```

Perform a transaction

```
BEGIN TRANSACTION  
  UPDATE accounts SET balance += 50 WHERE id = 1;  
COMMIT;
```

Basic SQL

Get all columns and rows from a table

```
SELECT * FROM table;
```

Add a new row

```
INSERT INTO table (column1,column2)  
VALUES (1, 'one');
```

Update a row

```
UPDATE table SET foo = 'bar' WHERE id = 1;
```

Delete a row

```
DELETE FROM table WHERE id = 1;
```