

POSTGRESQL

PostgreSQL, often referred to as Postgres, is a powerful and feature-rich open-source relational database management system (RDBMS). It offers robust support for SQL and provides additional advanced features such as support for JSON, indexing capabilities, extensibility, and concurrency control. Here are some key concepts and syntax examples in PostgreSQL:

1) Creating a Database:-

```
CREATE DATABASE mydatabase;
```

Q) How to check the list of databases ?

Ans) SELECT datname FROM pg_database;

2) Creating a Table:-

```
CREATE TABLE employees (  
  id SERIAL PRIMARY KEY,  
  name VARCHAR(100),  
  age INTEGER,  
  salary NUMERIC(10, 2)  
);
```

3) Inserting Data into a Table:-

```
INSERT INTO employees (name, age, salary)  
VALUES ('John Doe', 30, 50000);
```

4) Querying Data:-

```
SELECT * FROM employees;
```

5) Updating Data:-

```
UPDATE employees  
SET salary = 60000  
WHERE id = 1;
```

6) Deleting Data:-

```
DELETE FROM employees
```

WHERE id = 1;

7) Creating Indexes:-

CREATE INDEX idx_employees_name ON employees (name);

8) Creating Views:-

**CREATE VIEW high_salary_employees AS
SELECT * FROM employees
WHERE salary > 50000;**

9) Creating Functions:-

**CREATE FUNCTION get_employee_count()
RETURNS INTEGER AS \$\$
DECLARE
 count INTEGER;
BEGIN
 SELECT COUNT(*) INTO count
 FROM employees;
 RETURN count;
END;
\$\$ LANGUAGE plpgsql;**

10) Transaction:-

**BEGIN;
-- SQL statements
COMMIT;**

11) Foreign Keys:-

**CREATE TABLE departments (
 id SERIAL PRIMARY KEY,
 name VARCHAR(100)
);**

**ALTER TABLE employees
ADD COLUMN department_id INTEGER,
ADD FOREIGN KEY (department_id) REFERENCES
departments(id);**

These examples cover some of the basic syntax and concepts in PostgreSQL.

However, PostgreSQL offers many more advanced features such as stored procedures, triggers, full-text search, replication, and more.

The syntax and usage for these features can be found in the PostgreSQL documentation, which provides detailed information and examples for each feature.

Q)List of tables in database?

Ans)

```
SELECT table_name  
FROM information_schema.tables  
WHERE table_schema = 'public'  
AND table_type = 'BASE TABLE';
```