PostgreSQL - CREATE TEMPORARY TABLE - Guide, Examples and Alternatives

http://www.sqlines.com/postgresql/statements/create_temporary_table

CREATE TEMPORARY TABLE statement creates a temporary table that is automatically dropped at the end of a session, or the current transaction (ON COMMIT DROP option).

Quick Example:

```
-- Create a temporary table
CREATE TEMPORARY TABLE temp_location
(
    city VARCHAR(80),
    street VARCHAR(80)
)
ON COMMIT DELETE ROWS;
```

Overview:

Syntax (*full...*)	**CREATE [GLOBAL | LOCAL] TEMPORARY | TEMP TABLE [IF NOT EXISTS]** *name* *(column definitions and constraints)* **[ON COMMIT PRESERVE ROWS | DELETE ROWS | DROP]**		
Visibility	*Both* table definition and data are visible to the **current session** only		
Definition	Is **not** stored permanently, each session **must** create it. GLOBAL is for compatibility with ANSI/ISO SQL only and ignored		
Transaction Commit	PRESERVE ROWS	Nothing happens	This is the default
	DELETE ROWS	All rows are deleted on COMMIT	
	DROP	The table is dropped on COMMIT	

Version: PostgreSQL 9.1

PostgreSQL CREATE TEMPORARY TABLE Details

Before you can use a temporary table in a session, you must create the table as their definitions are **not** stored permanently. GLOBAL keyword is currently ignored by PostgreSQL:

```
CREATE TEMP TABLE temp_cities
(
    name VARCHAR(80)
)
ON COMMIT DELETE ROWS;
```

ON COMMIT DELETE ROWS specifies that the data are removed from the temporary table at the end of each transaction:

```
BEGIN TRANSACTION;

INSERT INTO temp_cities VALUES ('Warsaw');
INSERT INTO temp_cities VALUES ('Prague');
INSERT INTO temp_cities VALUES ('Milan');

SELECT COUNT(*) FROM temp_cities;
-- Result: 3

COMMIT;

SELECT COUNT(*) FROM temp_cities;
-- Result: 0
```

PostgreSQL CREATE TEMPORARY TABLE in Other Databases

Temporary tables in other databases:

Oracle:

CREATE GLOBAL TEMPORARY TABLE statement:

Definition is stored **permanently**, visible to **all** sessions and **not** removed at the end of session
Each session can access only its **own** data

	DELETE ROWS	✅	This is the default (differs from PostgreSQL default)
ON COMMIT	PRESERVE ROWS	✅	Rows deleted at the end of **session**
	DROP	❌	Not supported

PostgreSQL CREATE TEMPORARY TABLE Conversion to Other Databases

Converting temporary tables to other databases:

Oracle:

Oracle stores the definitions of temporary tables permanently similar to the definitions of regular tables.

During the conversion, you usually need to extract CREATE TEMPORARY TABLE statements from application code, stored procedures, triggers etc. and execute them once to create the temporary table definitions.

- GLOBAL keyword must be specified

- Oracle does not support ON COMMIT DROP, so if this option is required, you need to explicitly execute DROP TABLE statement after each COMMIT

- ON COMMIT PRESERVE ROWS is the default in PostgreSQL, while ON COMMIT DELETE ROWS is the default in Oracle

```
CREATE GLOBAL TEMPORARY TABLE temp_cities
(
    name VARCHAR(80)
)
ON COMMIT DELETE ROWS;
```