

## PL/Python Functions

Functions in PL/Python are declared via the standard CREATE FUNCTION syntax: CREATE FUNCTION *funcname* (*argument-list*) RETURNS *return-type* AS

*PL/Python function body*

LANGUAGE plpython3u; The body of a function is simply a Python script. When the function is called, its arguments are passed as elements of the list args; named arguments are also passed as ordinary variables to the Python script. Use of named arguments is usually more readable. The result is returned from the Python code in the usual way, with return or yield (in case of a result-set statement). If you do not provide a return value, Python returns the default None. PL/Python translates Python's None into the SQL null value. In a procedure, the result from the Python code must be None (typically achieved by ending the procedure without a return statement or by using a return statement without argument); otherwise, an error will be raised.

For example, a function to return the greater of two integers can be defined as: CREATE FUNCTION get\_max(*num1 integer, num2 integer*) RETURNS integer AS *if num1 > num2 : return num1 return num2* LANGUAGE plpython3u; *The Python code that is given as the body of the function is:*

*def plpython\_procedure\_get\_max(): if num1 > num2: return num1 return num2* assuming that 23456 is the OID assigned to the function. The arguments are set as global variables. Because of the scoping rules of Python, this has the subtle consequence that an argument variable cannot be reassigned inside the function to the value of an expression that involves the variable name itself, unless the variable is redeclared as global in the block. For example, the following won't work: CREATE FUNCTION strip\_text(*input\_text text*) RETURNS text AS *input\_text = input\_text.strip()* error return *input\_text* LANGUAGE plpython3u; *handside of the assignment refer to a not-yet-assigned local variable input\_text, not the PL/Python function.* CREATE FUNCTION strip\_text(*input\_text text*) RETURNS text AS *global input\_text input\_text = input\_text.strip()* ok now return *input\_text* LANGUAGE plpython3u; *But it is advisable not to rely on this simply.*

```
openssl genrsa -des3 -out server.key 1024
openssl rsa -in server.key -out server.key
openssl req -new -key server.key -out server.csr
openssl x509 -req -days 365 -in server.csr -signkey server.key -out server.crt
notepad "C:\Files7.conf"
notepad "C:\Files7_hba.conf"
net stop postgresql-x64-17
net start postgresql-x64-17
CREATE USER ris_admin WITH PASSWORD 'ris2016!';
psql -U postgres -h localhost
C:\Files3\postgresql.con
```