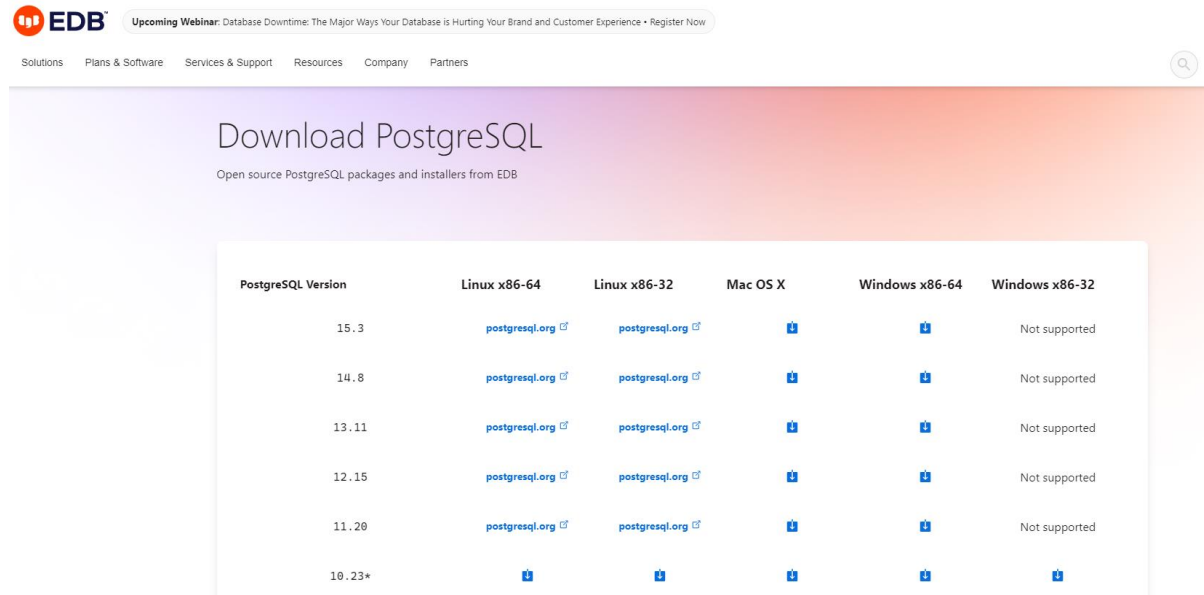
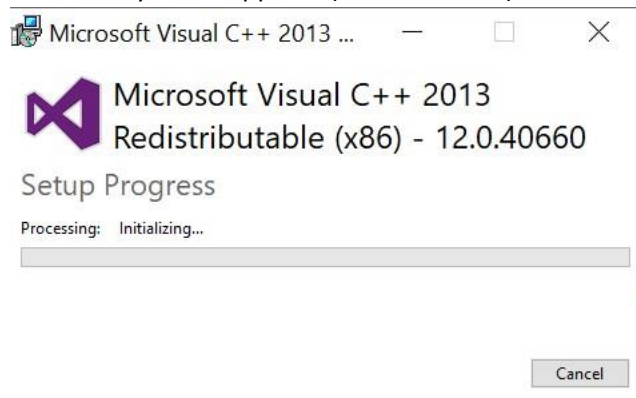


## Installing PostgreSQL on local machine

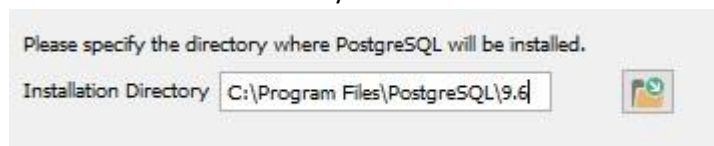
1. Go to <https://www.enterprisedb.com/downloads/postgres-postgresql-downloads> and download version 14.X or lower.



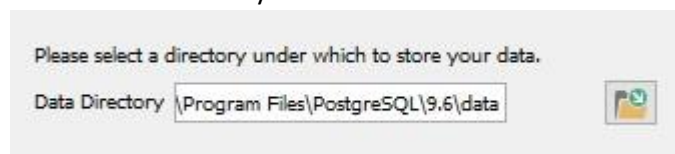
2. Download and run installer.
3. Don't worry if this appears (or if it doesn't)



4. Choose installation directory



5. Choose data directory



6. Provide a password for superuser postgres

Please provide a password for the database superuser (postgres).

Password

Retype password

7. Select the port the server listens on (default is 5432)

Please select the port number the server should listen on.

Port

8. Select the locale for DB cluster as “default locale”

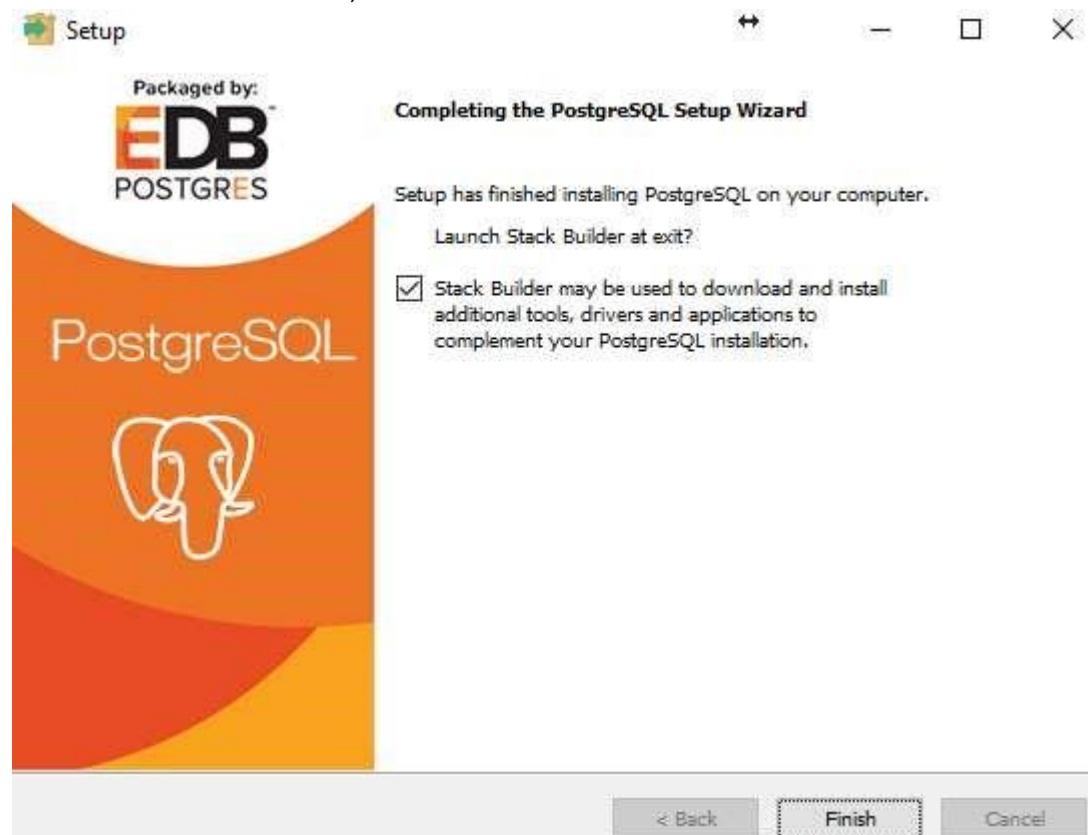
Select the locale to be used by the new database cluster.

Locale

9. Install the software

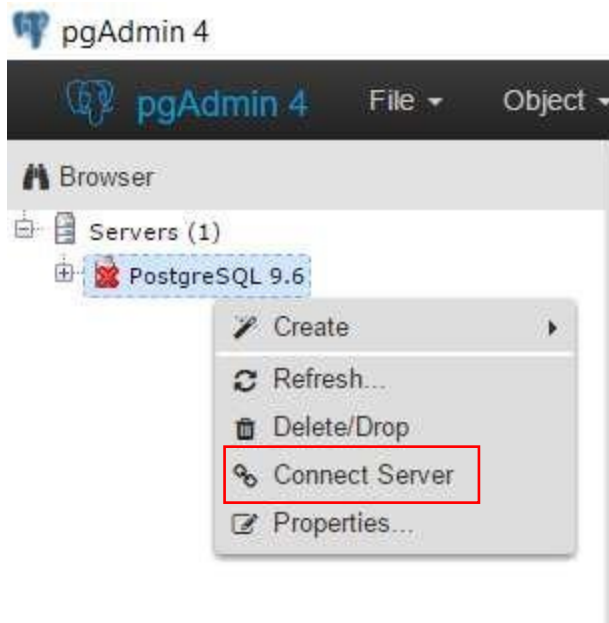
Setup is now ready to begin installing PostgreSQL on your computer.

10. No need to Run Stack Builder, finish installation



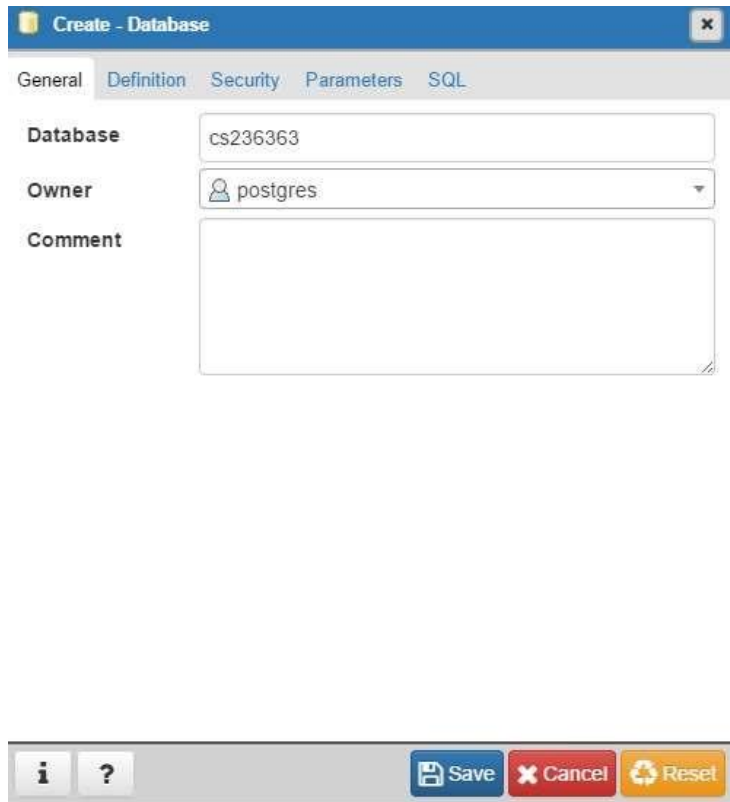
**First sign in (as superuser)**

1. Run pgAdmin (located under {installation directory}\pgAdmin 4\bin)
2. Connect to your server (right click on “PostgreSQL 9.6” and click “Connect Server”). Enter password for postgres user if prompted.



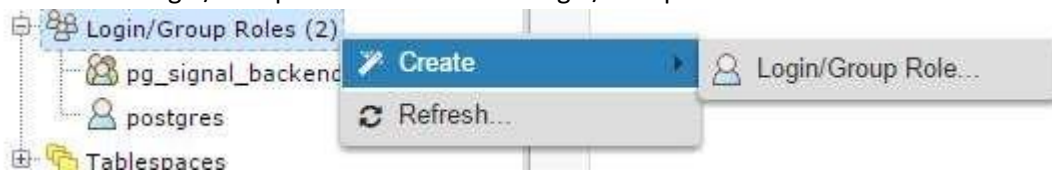
### Create Database

1. Right click on “databases” and choose “create”->”database”
2. Call the database “cs236363”



### Create user (for HW2)

1. Right click on “Login/Group Roles”->”create”->”Login/Group Role”.




2. In the “general” tab, give your user a name (I used the name “java”, for example)

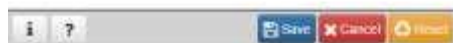


The screenshot shows the 'Create - Login/Group Role' dialog box with the 'General' tab selected. The 'Name' field contains the text 'java'. The 'Comments' field is empty. The dialog has tabs for General, Definition, Privileges, Membership, Parameters, Security, and SQL. At the bottom, there are buttons for Save, Cancel, and Reset.

3. In the “definition” tab, give your user a password



The screenshot shows the 'Create - Login/Group Role' dialog box with the 'Definition' tab selected. The 'Password' field is filled with a masked password (represented by asterisks). The 'Account expires' field shows a date and time 'YYYY-MM-DD +H:mm:ss Z'. The 'Connection limit' field shows '-1'. The dialog has tabs for General, Definition, Privileges, Membership, Parameters, Security, and SQL. At the bottom, there are buttons for Save, Cancel, and Reset.



This is a duplicate of the previous screenshot, showing the 'Create - Login/Group Role' dialog box with the 'Definition' tab selected. The 'Password' field is filled with a masked password (represented by asterisks). The 'Account expires' field shows a date and time 'YYYY-MM-DD +H:mm:ss Z'. The 'Connection limit' field shows '-1'. The dialog has tabs for General, Definition, Privileges, Membership, Parameters, Security, and SQL. At the bottom, there are buttons for Save, Cancel, and Reset.

4. In “privileges” tab mark “can login” and unmark “inherit rights from the parent roles?” and click save

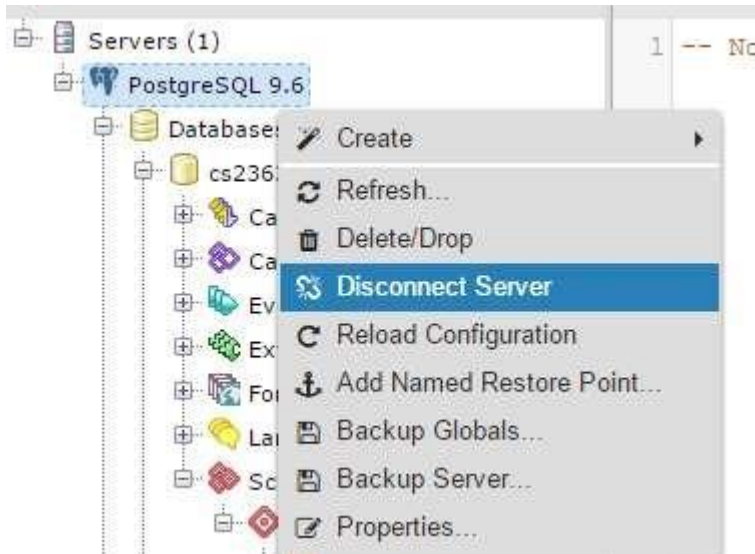


- 5.

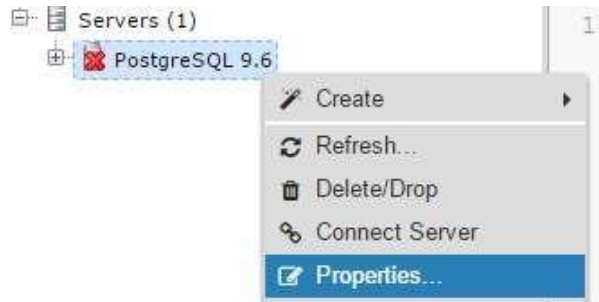
### Sign in as your user

Please sign in as your user to prevent any unnecessary mistakes, caused by superuser privileges.

1. Right click on “postgreSQL 9.6” server and choose “disconnect server”.



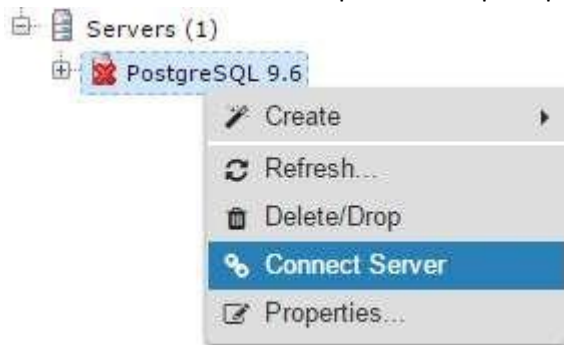
2. Right click on “PostgreSQL 9.6” server and choose “properties”



3. On the “connection” tab, change the user from “postgres” to your user name and save



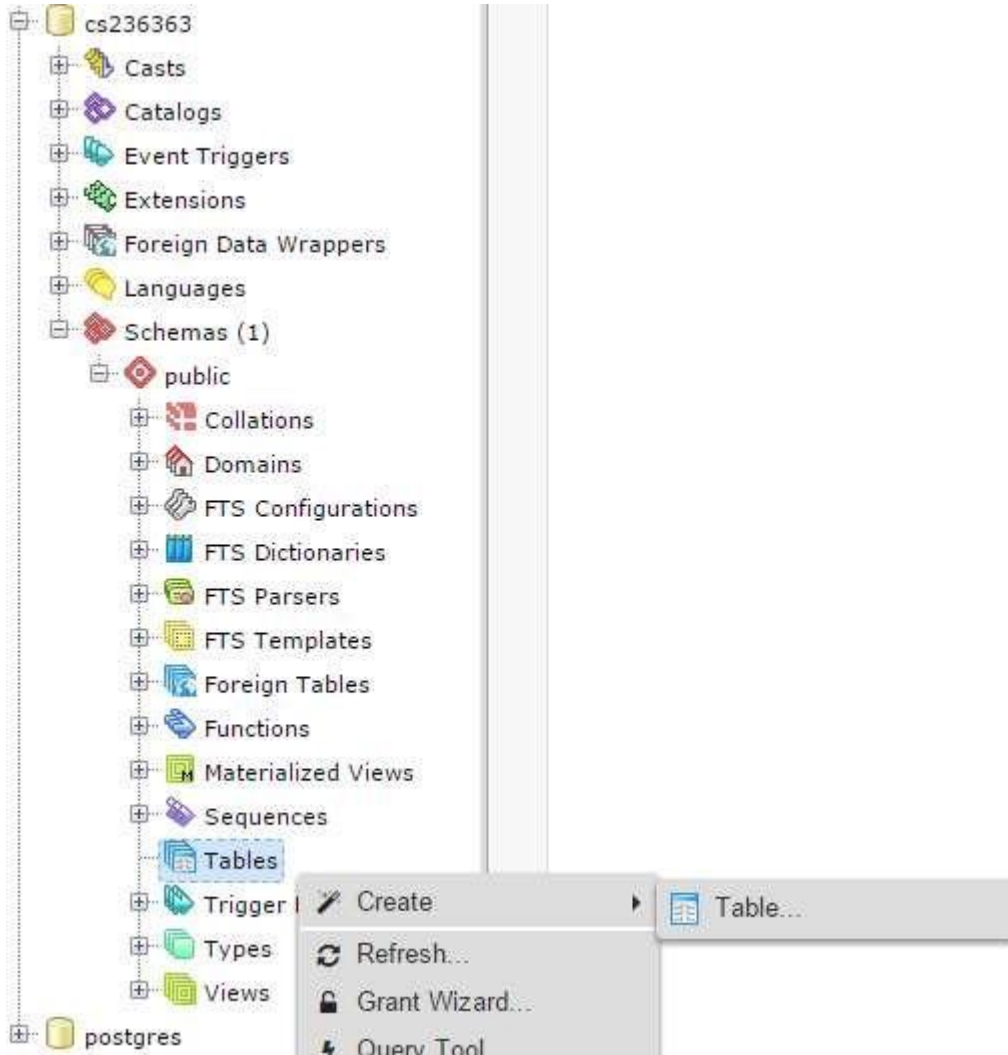
4. Connect to server and enter password if prompted



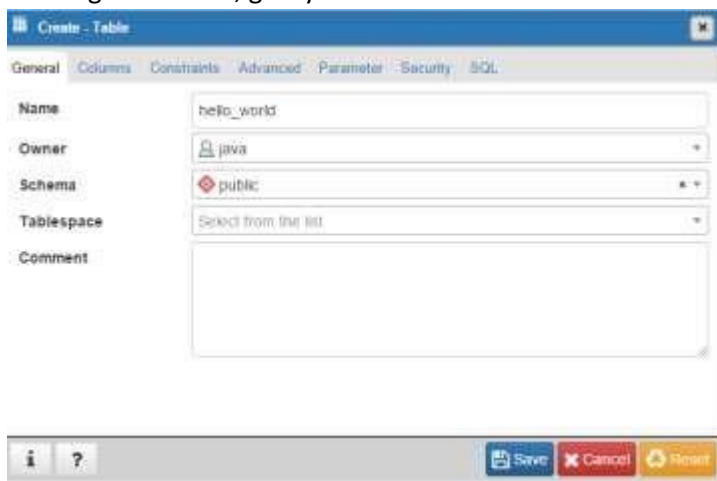
**Notice:** before you run any DB's command in Java you must configure the project with your account in postgresQL as explained in the HW PDF file in section 5.2 (Connecting to the Database using JDBC) – Do it before you try to run the Example.java you got in the zip file.

## Hello world

1. On the database “cs236363” go to “schemas”->“public”->right click on “tables”->“create table”



2. In the “general” tab, give your table a name





3. Create the columns you like with the “+” button

The screenshot shows the 'Create - Table' dialog box with the 'Columns' tab selected. At the top, there is a field for 'Inherited from table(s)' with a dropdown menu labeled 'Select to inherit from...'. Below this is a table with the following columns: Name, Data type, Length, Precision, Not NULL?, and Primary key?. The table contains two rows: 'id' with data type 'integer', 'Not NULL?' set to 'Yes', and 'Primary key?' set to 'Yes'; and 'short\_text' with data type 'text', 'Not NULL?' set to 'No', and 'Primary key?' set to 'No'. At the bottom right of the dialog, there are buttons for 'Save', 'Cancel', and 'Reset'.

Name	Data type	Length	Precision	Not NULL?	Primary key?
id	integer			Yes	Yes
short_text	text			No	No

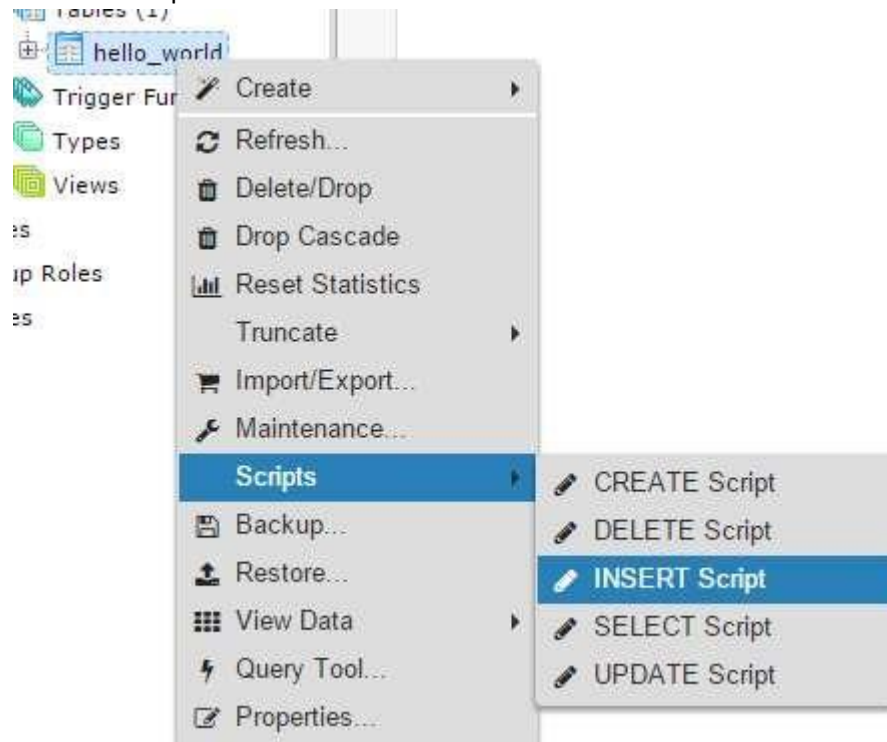
4. Notice that in the “Constraints” tab you can set everything we talked about in tutorial 1 (foreign keys, unique, check etc..)

The screenshot shows the 'Table - hello\_world' dialog box with the 'Constraints' tab selected. Under the 'Check' sub-tab, there is a 'Check constraint' section. It contains a table with two columns: 'Name' and 'Check'. The first row has 'pos\_id' in the 'Name' column and 'id > 0' in the 'Check' column. Below the table, there are two checkboxes: 'No inherit?' and 'Don't validate?'. Both checkboxes are currently unchecked. At the bottom right of the dialog, there are buttons for 'Save', 'Cancel', and 'Reset'.

Name	Check
pos_id	id > 0

5. When done, click save

6. Hint: right click on the table, and choosing scripts, will auto generate a script for you, for example, and insert script



Result:

```
cs236363 on java@PostgreSQL 9.6
1  INSERT INTO public.hello_world(
2      id, short_text)
3  VALUES (?, ?);|
```

You just need to replace the “?” placeholders with valid values, and click the flash button



to execute.

```
cs236363 on java@PostgreSQL 9.6
1  INSERT INTO public.hello_world(
2      id, short_text)
3  VALUES (1, 'Hello World!');|
```