Final Project
For
System Integration Fall 2020
By

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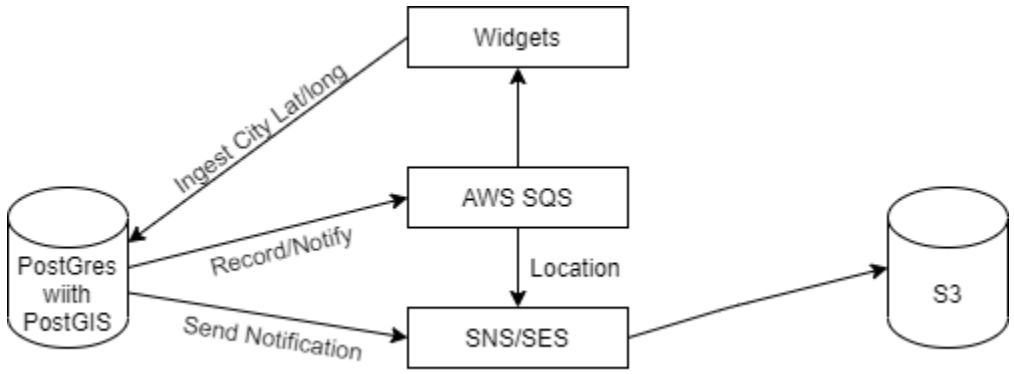
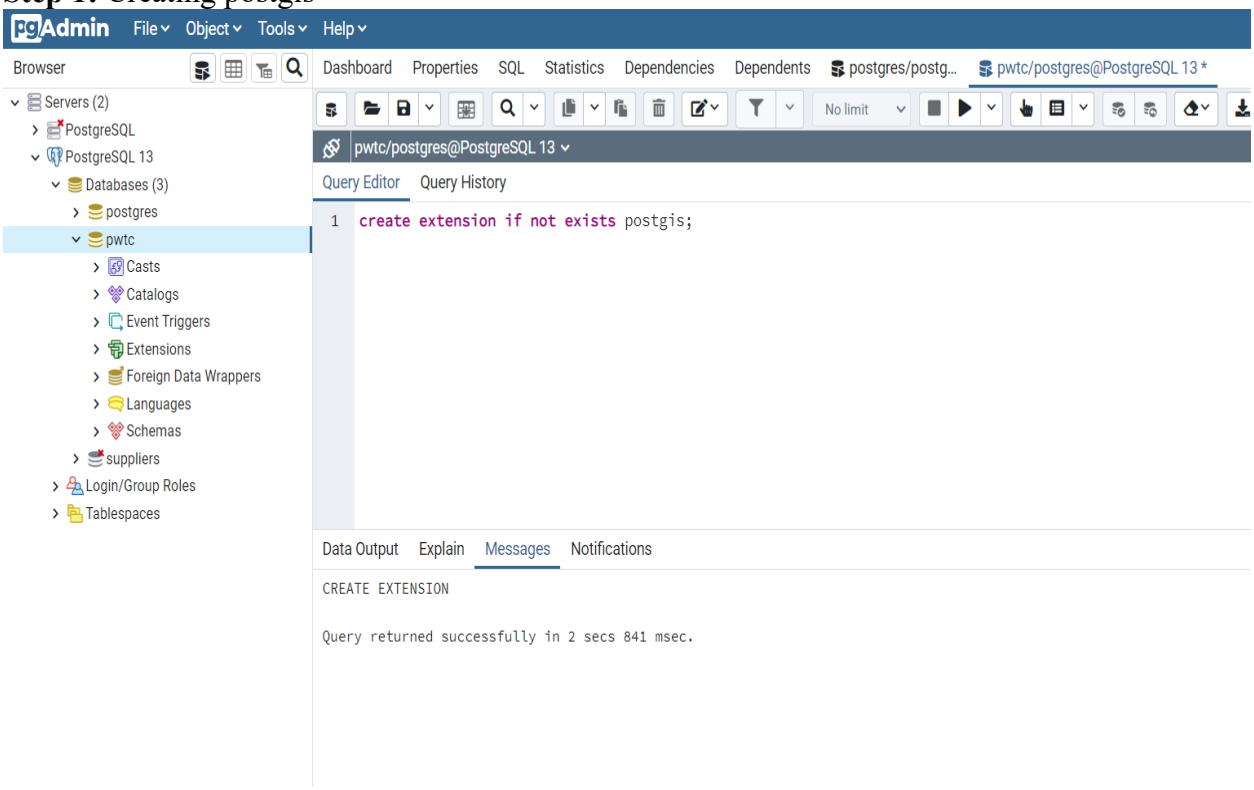
Project Topic:

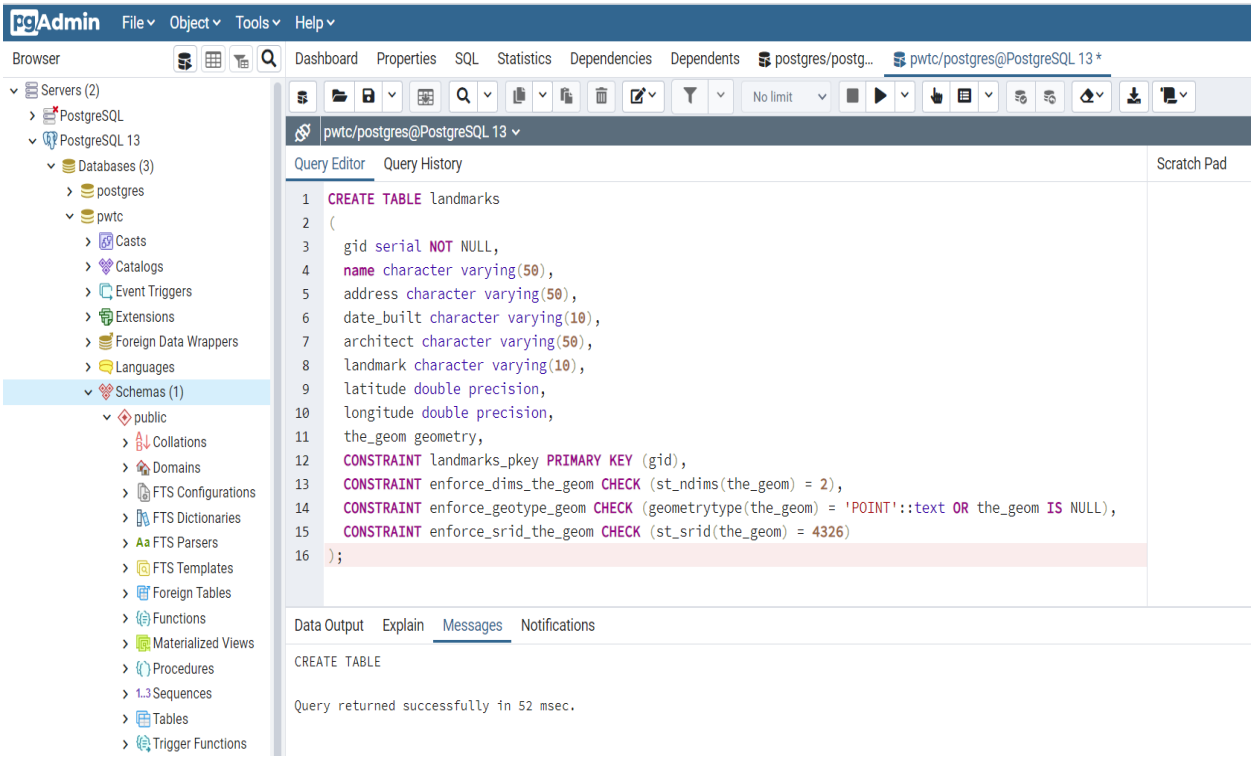
For the final project, I have chosen option 2. I have deployed PTWC Widgets as a communication GPS position for field operations. I am implementing database which can find out the widgets in the locations where worker is located. This will use PostGIS database and using latitude and longitude to provide site info.



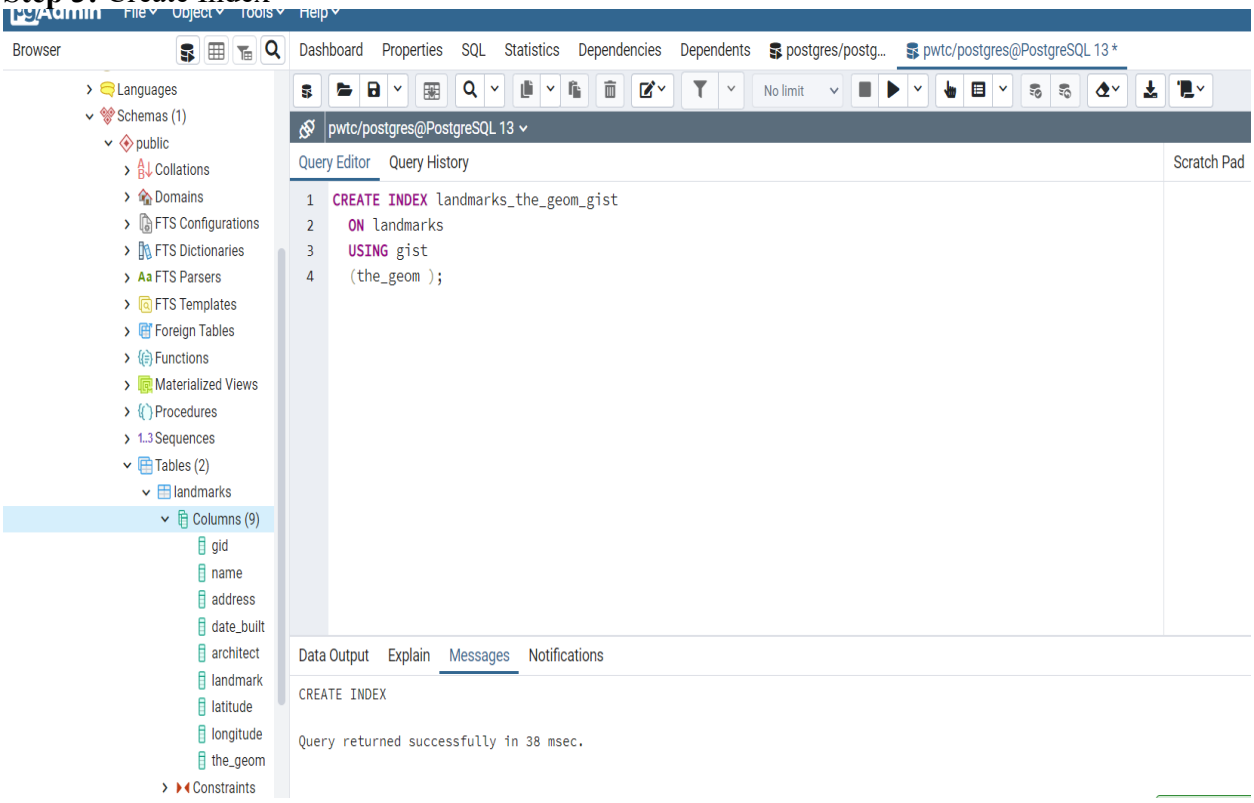
Step 1: Creating postgis



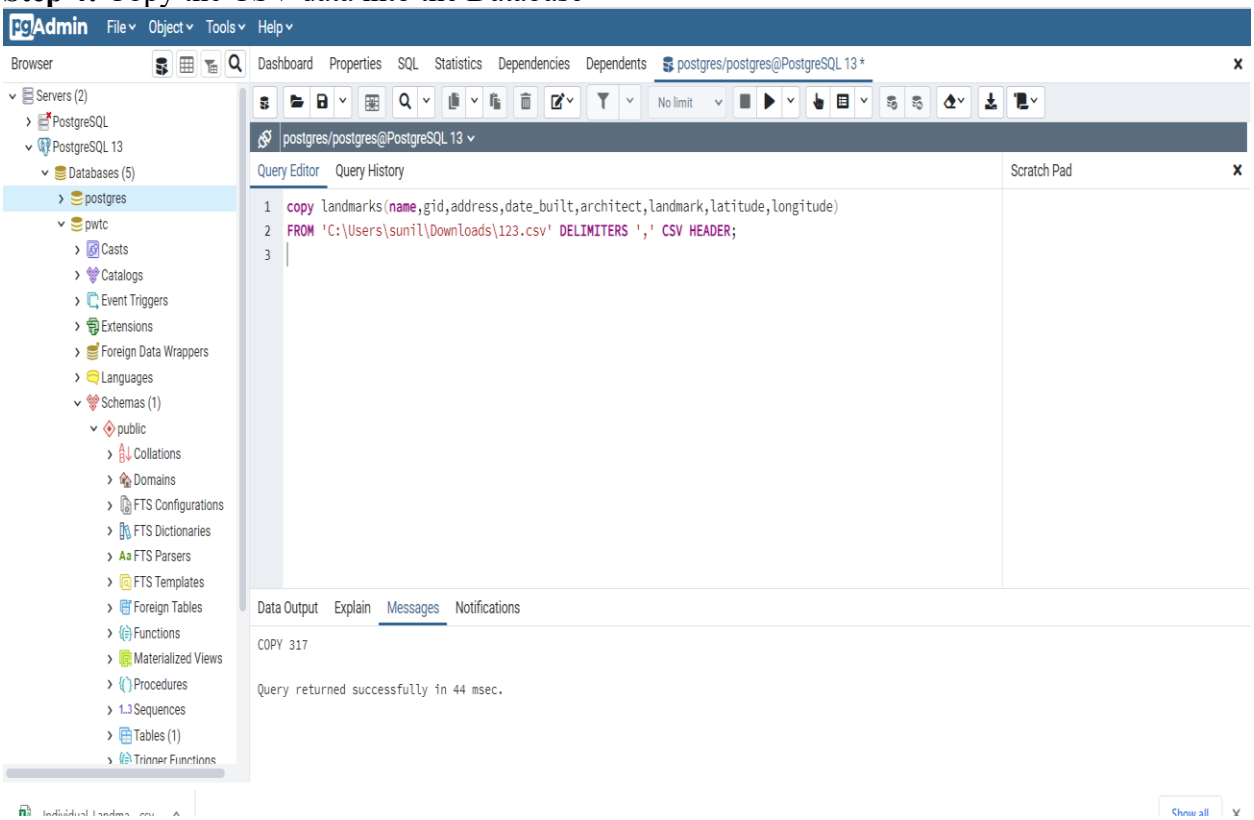
Step 2: Create the table in database



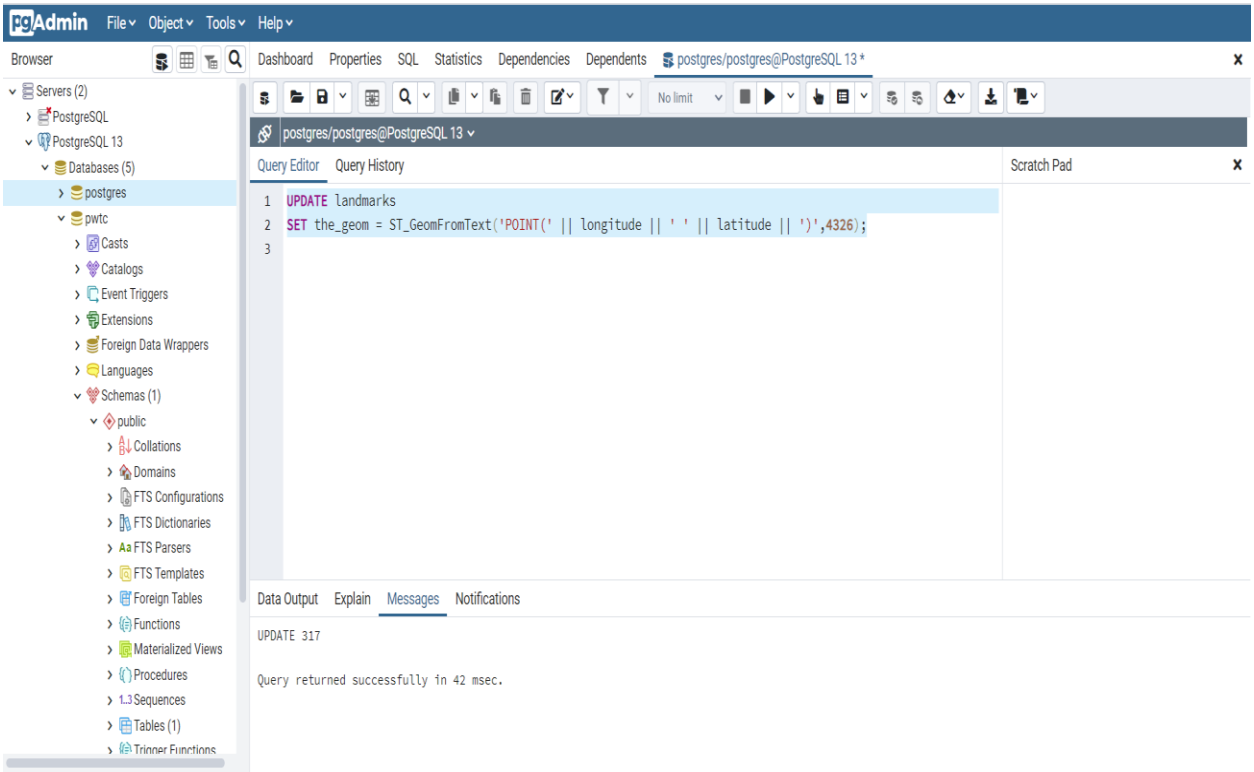
Step 3: Create Index



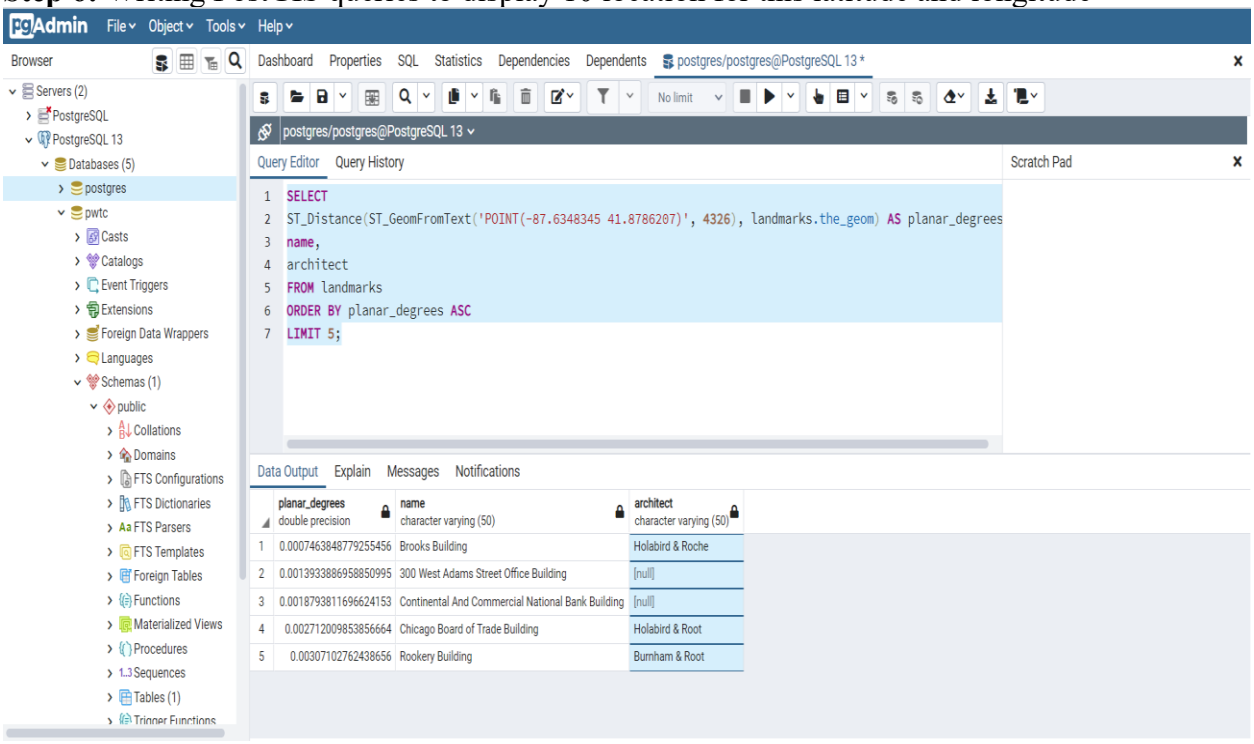
Step 4: Copy the CSV data into the Database



Step 5: Translate latitude and longitude into POINT geometry



Step 6: Writing PostGIS queries to display 10 location for this latitude and longitude



python implementation:

Anaconda Prompt (anaconda3)

```
(base) C:\Users\sunil>python 1.py
5 closest landmarks to -87.6348345 41.8786207
----------------------------------------------------------------------
Location-1
Planar_Degrees - 0.0007463848779255456
Name - Brooks Building
Architect - Holabird & Roche
Latitude - 41.87787644
Longitude - -87.63477822


Location-2
Planar_Degrees - 0.0013933886958850995
Name - 300 West Adams Street Office Building
Architect - None
Latitude - 41.87972743
Longitude - -87.63568107


Location-3
Planar_Degrees - 0.0018793811696624153
Name - Continental And Commercial National Bank Building
Architect - None
Latitude - 41.87907898
Longitude - -87.63301185


Location-4
Planar_Degrees - 0.002712009853856664
Name - Chicago Board of Trade Building
Architect - Holabird & Root
Latitude - 41.87773513
Longitude - -87.63227115


Location-5
Planar_Degrees - 0.00307102762438656
Name - Rookery Building
Architect - Burnham & Root
Latitude - 41.87907613
Longitude - -87.63179743


PostgreSQL connection is closed

(base) C:\Users\sunil>
```