

RNX2DB

INSTRUCTIONS TO INSTALL AND RUN

Copying RNX2DB package

1. Uncompress the rnx2db-main.zip file in C:\Projects such that we have the following file structure...

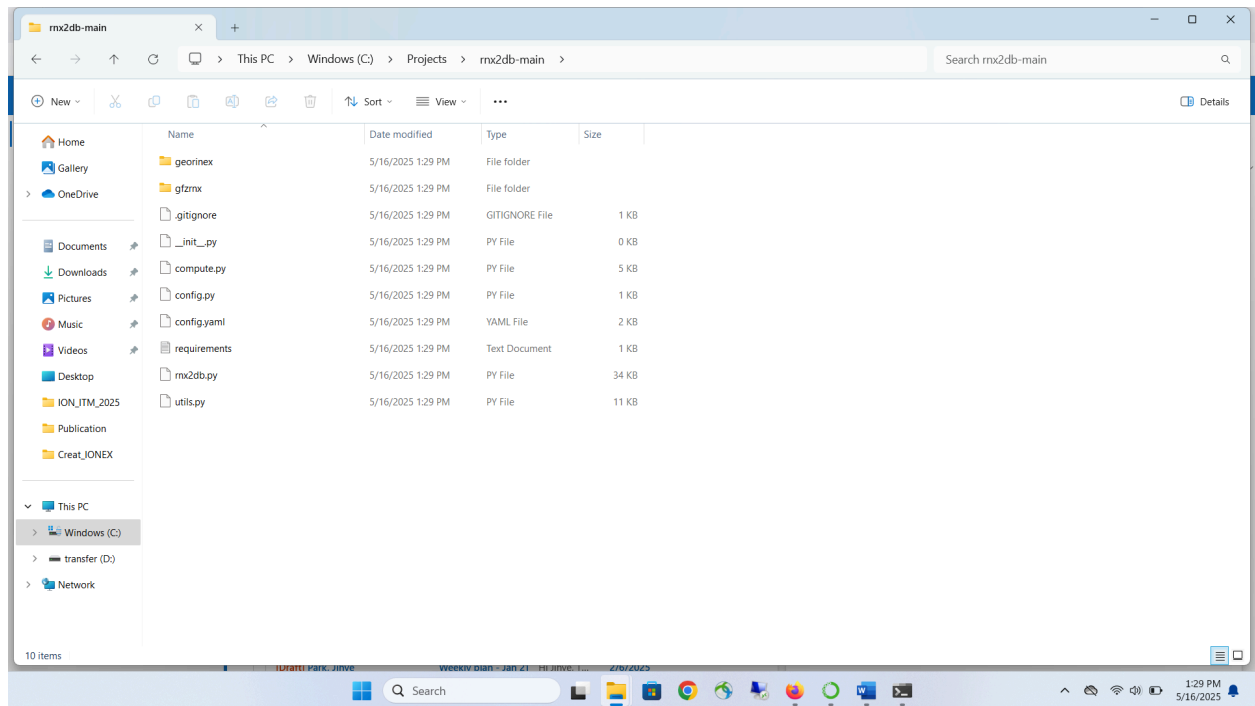


Figure 1: rnx2db file structure

2. Before we could run rnx2db, we need to install supporting packages. We use Anaconda, a package manager to install the necessary supporting packages.
3. Please note the path of requirements file in Figure 1

C:\Projects\rnx2db-main\requirements.txt

We will use this path in the next section to specify and install the supporting packages

Installing supporting packages via Anaconda

1. Install Anaconda by following the steps given in <https://www.anaconda.com/docs/getting-started/anaconda/install>
2. Open Anaconda Navigator and click on “Environments” (shown in red ellipse in Figure 2)

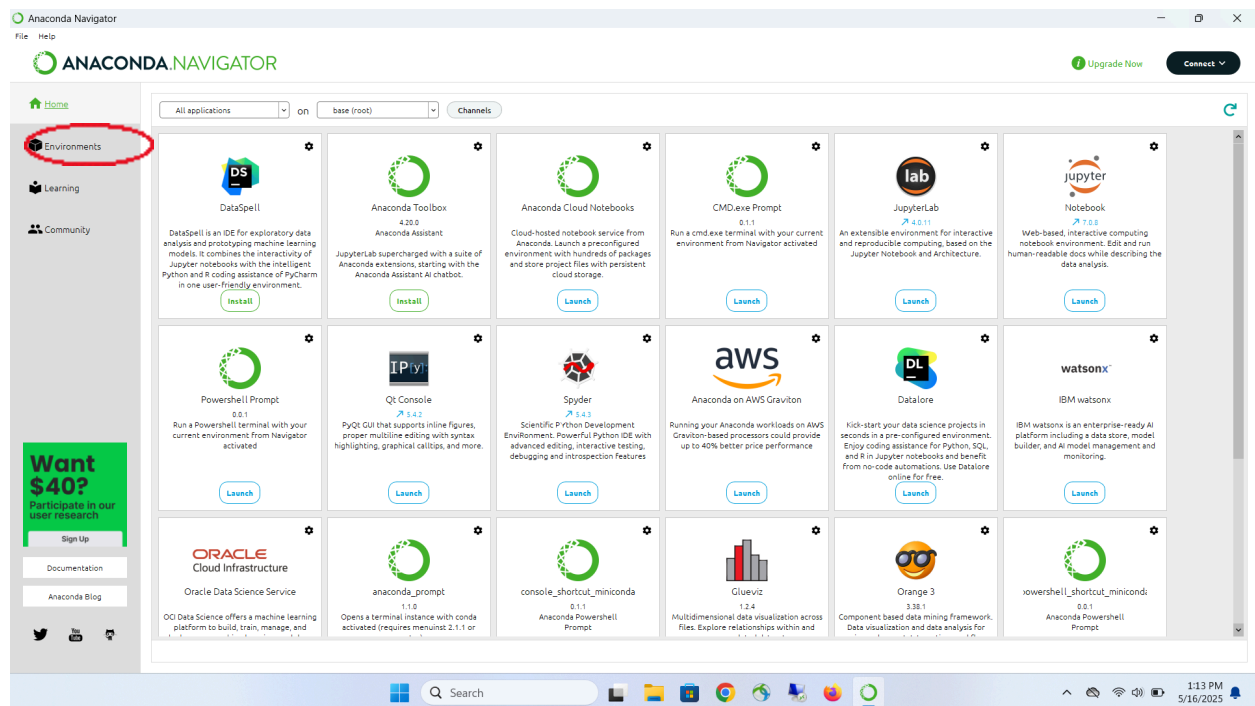


Figure 2: Anaconda Navigator main screen

3. Click on “Create” shown in Figure 3

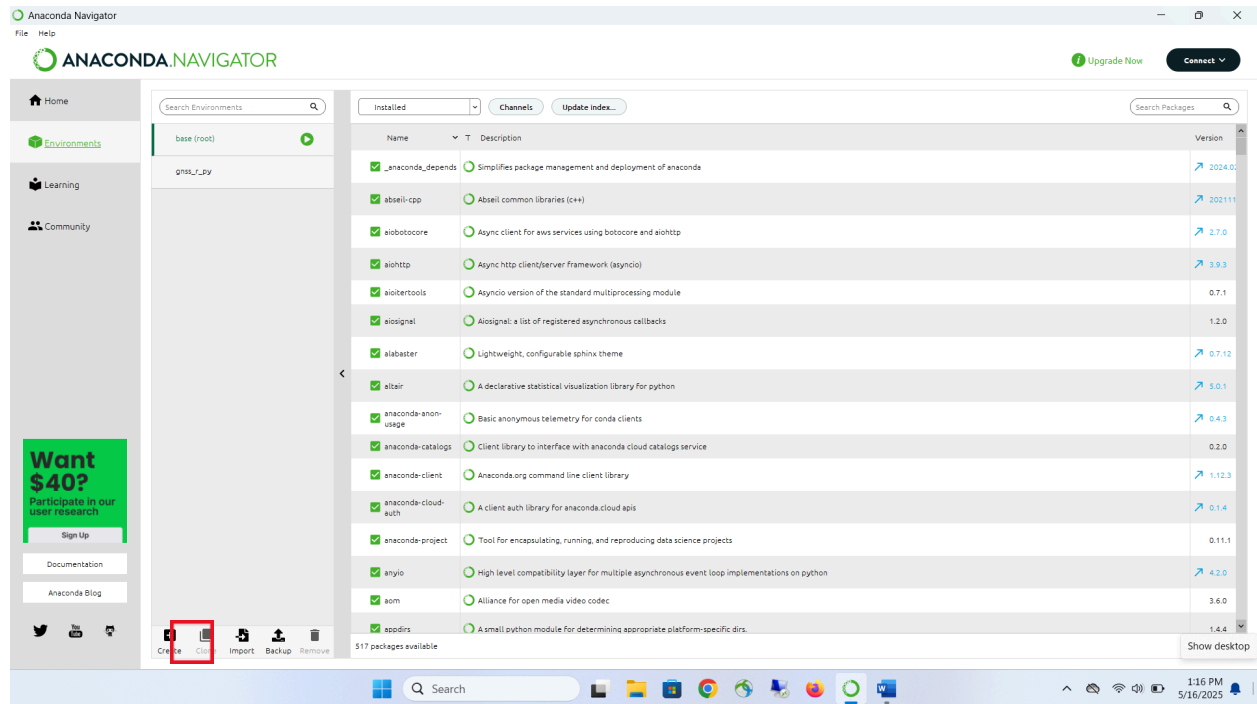


Figure 3: Environment screen

4. Fill in the dialog box shown in Figure 4

Name: *rnx2db_env*

Python: 3.8.X (where X in this case is 20)

and, click on “Create”

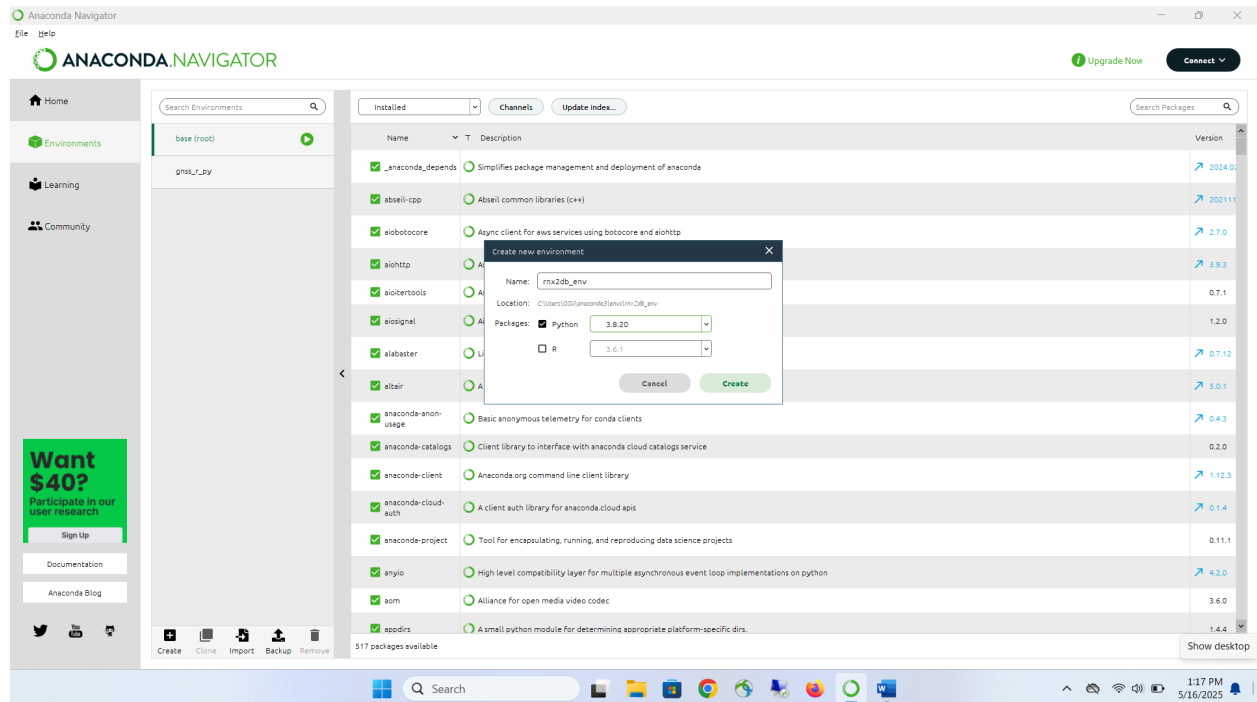


Figure 4: Create a new environment

5. Left click on the green triangle and click on “Open terminal”

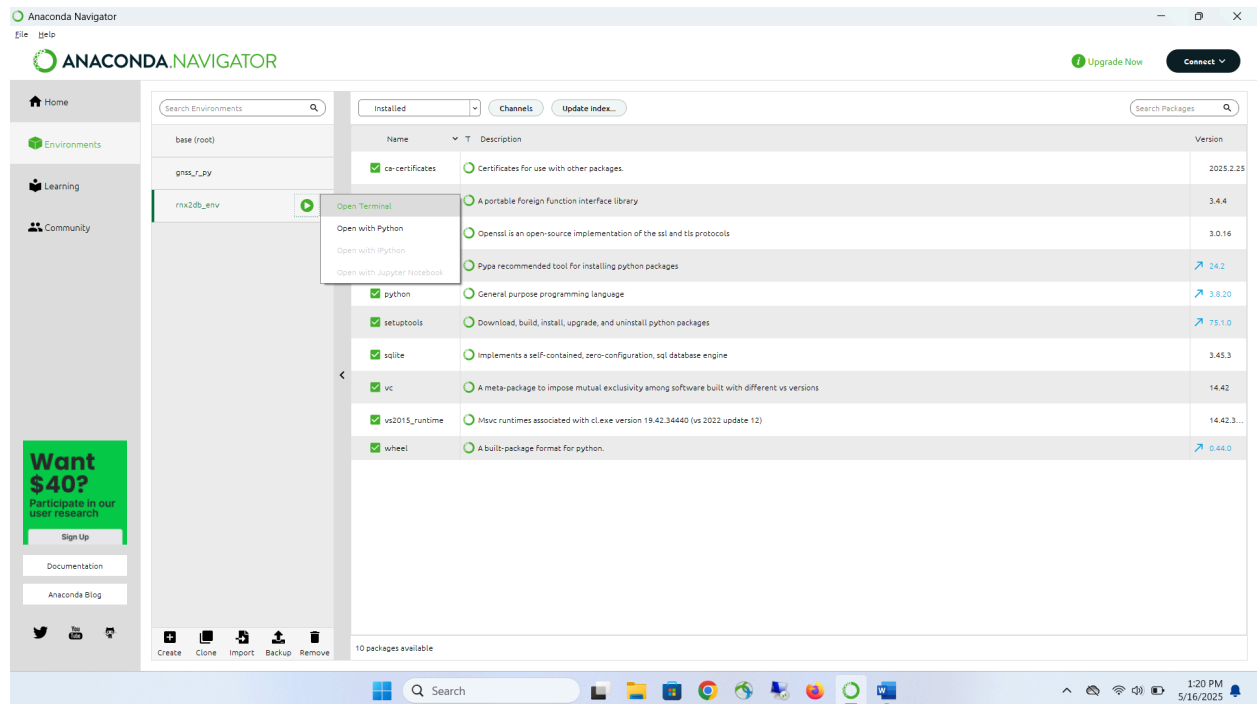


Figure 5: Open a terminal with new environment activated

6. Once the terminal is opened as shown in Figure 6, type in

- (a) *pip cache purge*

This clears the cache which sometimes becomes necessary to solve corrupted packages.

- (b) *pip install -r C:\Projects\rnx2db-main\requirements.txt* and press “Enter” to install the supporting packages

Note: path to requirements.txt should match the path shown in Figure 1

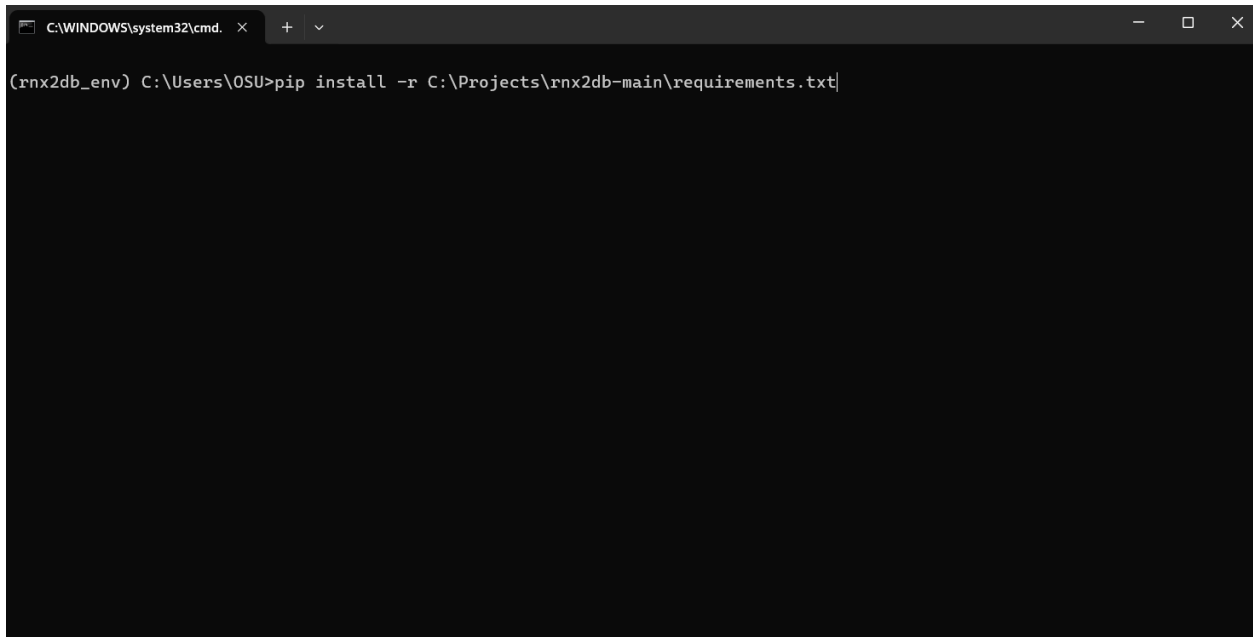


Figure 6: Installing support packages in rnx2db_env environment

7. Once installed, all the supporting packages will be visible in Anaconda Navigator as shown in Figure 7

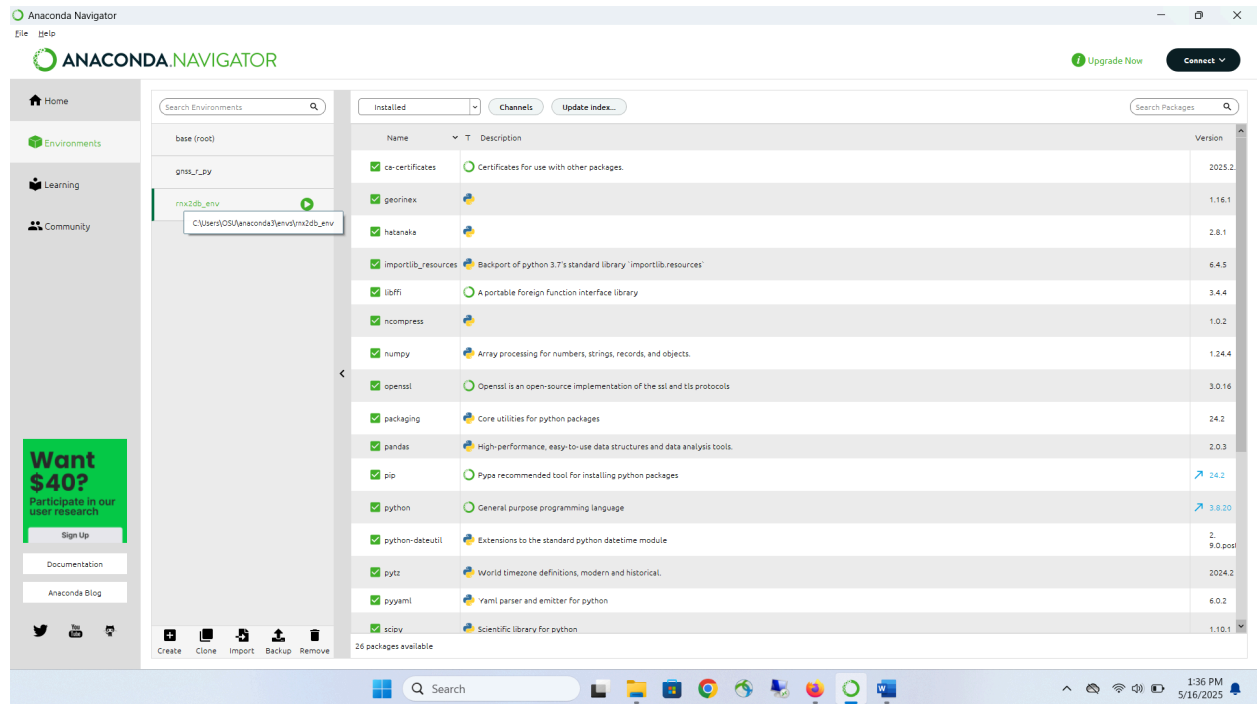


Figure 7: New packages installed in rxn2db_env environment.

Running RNX2DB to process rinex files

Specify rinex input files in config.yaml

1. For processing a single day's rinex observation and navigation file, set the following headers:

rinex:

multiday: # options for multiday process

*enabled: **false** # if true, it will read obs_location directory and try to process all data*

singlefile:

date: '2024-07-10'

observation:

- rnx2db_testdata/one_day/QRTR1920.24O

navigation:

- rnx2db_testdata/one_day/QRTR1920.24P

Invoke rnx2db_env and run

1. In order to run rnx2db.py in C:\Projects\rnx2db-main, invoke the rnx2db_env environment by opening Anaconda Navigator, and clicking on “Open Terminal” as shown in Figure 8

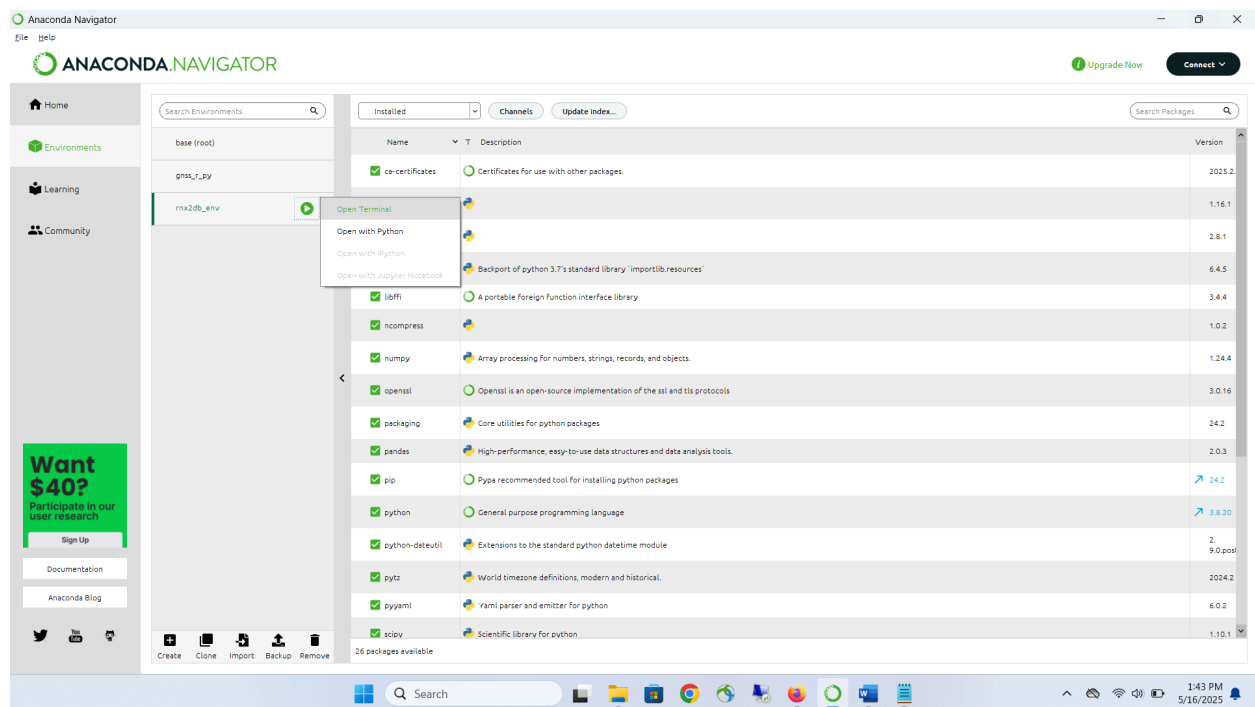


Figure 8: Invoke the rnx2db_env in terminal

2. Navigate to rnx2db-main folder as shown in Figure 9, and run “python rnx2db.py”

```
C:\WINDOWS\system32\cmd. x + v
(rnx2db_env) C:\Users\OSU>cd C:\Projects\rnx2db-main
(rnx2db_env) C:\Projects\rnx2db-main>dir
Volume in drive C is Windows
Volume Serial Number is B42B-DF22

Directory of C:\Projects\rnx2db-main

05/16/2025  01:41 PM    <DIR>          .
05/16/2025  01:29 PM    <DIR>          ..
05/16/2025  01:29 PM                30  .gitignore
05/16/2025  01:29 PM            4,554  compute.py
05/16/2025  01:29 PM            309  config.py
05/16/2025  01:43 PM          1,699  config.yaml
05/16/2025  01:29 PM    <DIR>        georinex
05/16/2025  01:29 PM    <DIR>        gfzrnx
05/16/2025  01:29 PM            262  requirements.txt
05/16/2025  01:29 PM          34,285  rnx2db.py
05/16/2025  01:42 PM    <DIR>        rnx2db_testdata
05/16/2025  01:24 PM       7,716,366  rnx2db_testdata.zip
05/16/2025  01:29 PM          11,037  utils.py
05/16/2025  01:29 PM              0  __init__.py
          9 File(s)          7,768,542 bytes
          5 Dir(s)  321,925,640,192 bytes free

(rnx2db_env) C:\Projects\rnx2db-main>python rnx2db.py
```

Figure 9: Run rnx2b.py