Wang Materials Group
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Getting mercury to run locally

We will use a program called `mercury` to run the simulation locally on the computer. `mercury` is a convenient tool that converts our Python code into a web app.

Step 0: Logon to the computer

Username: .\lrcguest (note: backslash, not forward slash)
Password: (will be provided)

Step 1: Download the jupyter notebook `random-walk-2d-mercury.ipynb`.

On github:

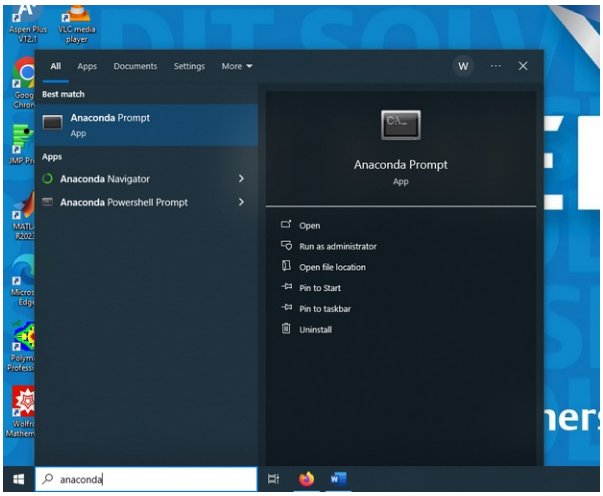
https://github.com/wangmatgroup/outreach/tree/main/MITE/Su24-diffusion/random-walk-mercury

On Google Drive:

https://shorturl.at/uebUF

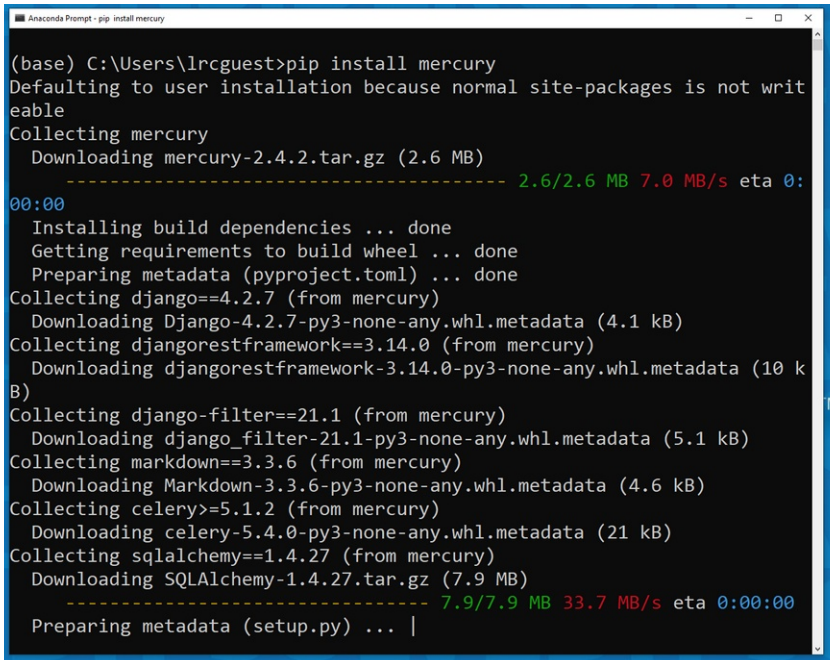
The notebook will automatically download to the `Downloads` folder.

Step 2: Open Anaconda Prompt. This will open a command window prompt.



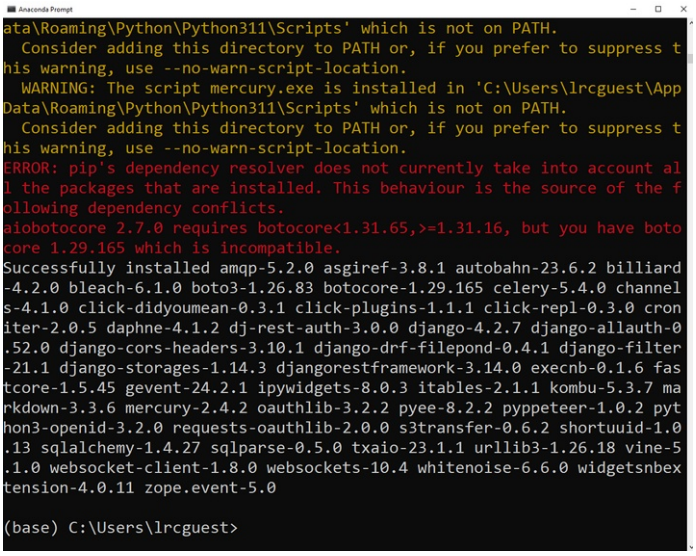
Step 3: Download mercury through the command window prompt.

Type in `pip install mercury` and hit 'Enter.' You will see a lot of text generating; something like the following.



Installation will take some time. When the installation ends, it will look something like the below. Notice in the white text, the command prompt describes that it successfully installed several different packages.

(The red text is related to the `pip` package manager; we will not worry about this error.)



Step 4: Find where mercury is installed

We need to find where `mercury` has been installed. Actually, our command prompt has given us some hints in the yellow `WARNING` text (depending on your environment, i.e., what has already been installed, you may or may not have this yellow text).

On the computer lab computers, mercury has been installed in the following path (note the use of the backslash, not the forward slash):

```
C:\Users\lrcguest\AppData\Roaming\Python\Python311\Scripts
```

Don't skip Step 5!

Step 5: Navigate to the folder where `random-walk-2d-mercury.ipynb` is using the change directory command (`cd`)

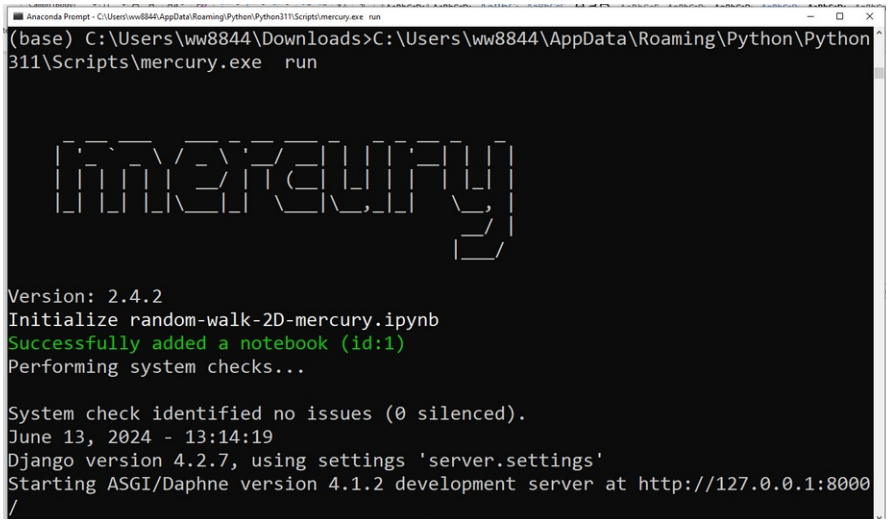
```
cd Downloads
```

Step 6: Run mercury

We are going to launch the mercury program through the command prompt. We will do this by entering the path to `mercury.exe,` followed by `mercury.exe,` and finally the command `run.` In this example, the command looks like the following.

```
C:\Users\lrcguest\AppData\Roaming\Python\Python311\Scripts\mercury.exe run
```

(Note: Ctrl+C/Ctrl+V copy/paste is possible in the command prompt). You should see something like the following appear in your command prompt session.



You might get a pop-up window that says something to effect of the task is something an administrator should run. Click “Ok” to acknowledge.

Running mercury will launch new browser window that looks like the following

MITE 2024 Summer
Random Walk Diffusion Demonstration

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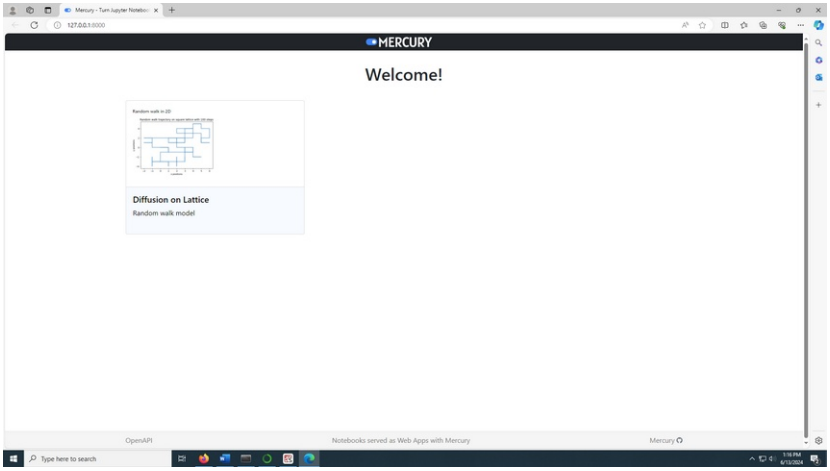

Click on the “Diffusion on Lattice” to bring you to the following page