General guide on how to get real climate data from CDS

1) Download given data from CDS after making account here https://cds.climate.copernicus.eu/#!/home. Select the specific data you would like from a given dataset on the website. The download file is in GRIB format (Gridded Binary).
2) Python cannot read GRIB files on its own, so we must use ecCodes which is a C-based decoder made by ECMWF used to read, open, and interpret GRIB files. Install cfgrib or pygrib to act as bridge between ecCodes and python. In my case pygrib is better to use because it allows for lazy reading so that you don't have a memory overload when reading large GRIB files.
3) Eccodes has no precompiled code on its website to install itself easily, so to save grief use miniconda (env manager) to create an eccodes environement which copiles and links all dependencies for you. Here is the installation link: https://repo.anaconda.com/miniconda/Miniconda3-py311_24.3.0-0-Windows-x86_64.exe then add miniconda to PATH and open a miniconda terminal and type a command like the following to make your environment:
    - conda create -n eccodes-env -c conda-forge python=3.11 pygrib pandas (… any other dependecies needed)
    - conda activate eccodes-env

   Next, in your editor, like VS Code, you select the python interpreter that shows eccodes-env. Now you can use your ecCodes environment to work with your downloaded GRIB file.
4) Python script to extract data (eg. hourly temp) from your downloaded grib file, followed by any necessary calculations.