1 Setting up the API

In this lab we will introduce the use of ERA5 and seasonal forecasting data. There are several key ways to access the datasets:

- Using the C3S online python-based toolbox to retrieve data and make simple analysis/plots (Advantage: less download volume. Disadvantage: system is slow, limited in type of analysis one can perform and can only access ERA5).

- Use the web interface to select data, and then manually download using the browser (Advantage: simple to use, Disadvantage: Very cumbersome if you want to have more than a single variable)

- Use the python API to download data directly to your desktop (Advantage, very flexible and convenient. Disadvantage, needs a little time to set up and you need anyway to refer to webpage to get example scripts)

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Most regular users will use the API to access data, referring to the webpage interface to help them set up the scripts.

To set up the API, you need to

- register with the C3S system
- Install the CDS API key (just once)
- Install the CDS API client (just once)
- Log in the C3S webpage to accept the terms and conditions on the dataset you wish to access (just once) and obtain an example script

There is a very simple to follow online blog `availablehere` https://cds.climate.copernicus.eu/api-how-to. Please follow the steps carefully.

NOTE: If you use pip to install the cdsapi you will run the retrieval script using python (python2). I recommend that you install instead (or as well) using pip3, which will give you the opportunity to run the script with python3 (python2 will

NOTE: If you see this text

```
key:   uid:api-key
```

rather than a long random string of letters it means that *you are not logged in!* Click on the "login/register" red button on the top right to log in and resolve this.

Once

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