# Lab Experiment 4: The Raft Consensus Algorithm Pre-installs

## Installations:

1. **Anaconda/Pyenv**
2. **Tmux**
3. **Linux/macOS system/VM/container. If you HAVE to use windows, use WSL2.**

# Instructions:

Please read **ALL the instructions** carefully before proceeding.

### 1: Installing Conda or Pyenv

Raftos was not designed for the newer versions of Python, so we're going to need **Python 3.6.8, or at the very most, Python 3.8.11.**

For Linux users, **pyenv** should suffice:
https://realpython.com/intro-to-pyenv/#installing-pyenv

After installing pyenv, make sure to add the following to your .bashrc/.zshrc:

```
export PATH="$HOME/.pyenv/bin:$PATH"
eval "$(pyenv init -)"
eval "$(pyenv virtualenv-init -)"
```

Then install the specific version of Python that we want, with
`pyenv install 3.6.8`

If you're on a Mac, it's possible pyenv won't work for you. In that case, you'll need to use **Conda.**
Follow **this** guide to install **Miniconda**. I
You will need to install **python 3.8.11**;, **you will encounter strange error messages (that can be ignored)** related to asyncio and Futures, later on in the experiment.

Then create a virtual environment with python 3.8.11.

```
conda create -n py3.8.11 python=3.8.11
```

### 2: Installing tmux

Install **tmux** by typing `sudo apt install tmux`, or if you're on Mac, `brew install tmux`. If you don't have brew installed on your Mac by this point (and you really should), use this guide to install brew first.

## 3: Downloading raftos

Create a directory called **CC_E4_<YOUR_SRN> (THIS IS IMPORTANT, WE'LL BE IDENTIFYING SCREENSHOTS BY THIS)** and clone the repo https://github.com/zhebrak/raftos inside it. Raftos is one of the many implementations of raft that are publicly available. You can clone raftos using the command

```
git clone https://github.com/zhebrak/raftos
```

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