Distributed Lab Setup

- Go Installation
  - You'll implement all the labs in Go. The Go web site contains lots of tutorial information. You should use Go 1.15 or any later version. You can check your Go version by running: "go version".
  - **Windows :**
    - It is not possible to do Lab work on Windows.
  - **macOS :**
    - You can use Homebrew to install Go. After installing Homebrew, run brew : install go.
  - **Linux :**
    - Depending on your Linux distribution, you might be able to get an up-to-date version of Go from the package repository, e.g. by running apt install golang. Otherwise, you can manually install a binary from Go's website. First, make sure that you're running a 64-bit kernel (uname -a should mention "x86_64 GNU/Linux"), and then run:

      $ wget -qO- https://go.dev/dl/go1.17.6.linux-amd64.tar.gz | sudo tar xz -C /usr/local

      You'll need to make sure /usr/local/go/bin is on your PATH. You can do this by adding export PATH=$PATH:/usr/local/go/bin to your shell's init file (commonly this is one of .bashrc, .bash_profile or .zshrc)

      If you face any difficulty refer to: https://youtu.be/0e_C1B8fDvg

- Lab Software
  - One need to have Go and Git installed on the system to setup the Lab Software.
  - Process of installation of Lab Software:
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$ git clone git://g.csail.mit.edu/6.824-golabs-2022 6.824
$ cd 6.824
$ ls
Makefile src
$
```
    - The Software comes with simple sequential mapreduce implementation in src/main/mrsequential.go. It runs the maps and reduces one at a time, in a single process. The Lab Software also provide you with a couple of MapReduce applications: word-count in mrapps/wc.go, and a text indexer in mrapps/indexer.go. You can run word count sequentially as follows:

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```
$ cd ~/6.824
$ cd src/main
$ go build -race -buildmode=plugin ../mrapps/wc.go
$ rm mr-out*
$ go run -race mrsequential.go wc.so pg*.txt
$ more mr-out-0
A 509
ABOUT 2
ACT 8
...
```