Cheat sheet for Ubuntu Operation System

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ssh remote access

`sudo apt-get install openssh-server`
`sudo service ssh restart`
`sudo ufw allow 22`

New User

`sudo adduser $USERNAME`
`sudo mkdir /data/$USERNAME`
`sudo chown -R $USERNAME /data/$USERNAME`

Two ways to modify code from a remote server

JupyterLab (or Jupyter Notebook, with inline python environment and nearly perfect user experience, currently in beta)

1. start JupyterLab (or Jupyter Notebook) on the remote server.
   `jupyter-lab --no-browser --port=8889` (for JupyerLab) or
   `jupyter-notebook --no-browser --port=8889` (for Jupyter Notebook)
2. port mapping on the local computer to access the web content on the remote server `ssh -N -L localhost:8888:localhost:8889 -p 2222 $USERNAME@$REMOTEHOST`
3. start the browser and type `localhost:8888` to access the JupyterLab (or Jupyter Notebook) on the remote server.

VS Code (with the Remote Workspace extension for remote access to the files and directories in the remote server, with excellent code editing experience but no integrated running environment)

1. install VS Code and its extension Remote Workspace.
   - VS Code, and
   - Remote Workspace
2. edit the code-workspace file in plain text (.code-workspace) following instructions in the readme of Remote Workspace. e.g., using sftp (via ssh)

```
{
    "folders": [{
        "uri": "sftp://$USERNAME:$PASSWORD@$REMOTEHOST:$PORT/",
        "name": "$WSNAME"
    }
]}
```

MATLAB(R) installation (R2018b)

install from dual .iso files

0. cd to the directory which contains the two .iso package(s)
1. `sudo mkdir /mnt/matlab` make a directory to mount the matlab .iso package(s).
2. `sudo mount -t auto -o loop R2018b_glnxa64_dvd1.iso /mnt/matlab/` mount the first DVD .iso file.
3. `sudo /mnt/matlab/install` run the install file in the mounted directory.
4. install matlab using the key provided in the license package.
5. wait until reminding of mounting the second DVD .iso file.
6. `sudo umount /mnt/matlab` unmount the first DVD .iso file.
7. `sudo mount -t auto -o loop R2018b_glnxa64_dvd2.iso /mnt/matlab/` mount the second DVD .iso file ***at exactly the same directory***.
8. click *continue* to install the package from the second DVD .iso file.
9. `sudo umount /mnt/matlab` unmount the second DVD .iso file after installation.

license

```
sudo cp Matlab\ R2018b\ Linux64\ Crack/license_standalone.lic
/usr/local/MATLAB/R2018b/licenses/
sudo cp Matlab\ R2018b\ Linux64\
Crack/R2018b/bin/glnxa64/matlab_startup_plugins/lmgrimpl/libmwlmgrimpl.so
/usr/local/MATLAB/R2018b/bin/glnxa64/matlab_startup_plugins/lmgrimpl/libmwlmgrimpl
.so
```

uninstall

X. `sudo rm -rf /usr/local/MATLAB/R2018b/` ***cautious*** remove MATLAB(R) R2018b from the computer (, and delete the symbolic links via `sudo rm /usr/bin/matlab`).