Step2_Install_ComputationSoftware_For_Ubuntu_Mac_OR_Windows_5-20-21(done)
Ref is used as abbreviation for word Reference
lines preceded by # are comments for human not computable code

#######Install Code Editor works for multiple programing languages Atom (GitHub's Code Editor, MIT license)
On Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref : https://www.softwaretestinghelp.com/visual-studio-code-vs-atom/
Getting Started Tutorial(s) free
https://www.tutorialspoint.com/atom/index.asp
https://www.datacamp.com/community/tutorials/ide-atom
Install Atom on Windows Ref
Video: https://www.youtube.com/watch?v=nshxC0YO_X0
Written: https://flight-manual.atom.io/getting-started/sections/installing-atom/#platform-windows
Install Atom on Linux/Ubuntu Ref
Video: https://youtu.be/lzo9YFgJUFI
Written: https://flight-manual.atom.io/getting-started/sections/installing-atom/#platform-linux
Install Atom on Mac Ref
Video: https://youtu.be/EyG20hhON6E
Written: https://flight-manual.atom.io/getting-started/sections/installing-atom/#platform-mac
#
Atom and VS Code are code editors that allow for code writing, editing, execution and viewing of results
in same window. Both have pluging to enable suggestion promps to help write code
and this is called IDE (Interactive Development Environment) functionality.
With plugins, especially AI code support Kite (installation described later) coding
#
Description below is for Ubuntu
Type following commands on Ubuntu Terminal to install Atom
wget -qO - https://packagecloud.io/AtomEditor/atom/gpgkey | sudo apt-key add -
sudo sh -c 'echo "deb [arch=amd64] https://packagecloud.io/AtomEditor/atom/any/ any main" > /etc/apt/sources.list.d/atom.list'
sudo apt-get update
sudo apt-get install atom
sudo apt-get install atom-beta
# To launch Atom for use, type in Terminal command below
# or find it under the "show applications" 9-dot icon by typing Atom > double click icon
atom
To close Atom, close the Atom window or click File > quit/exit

#######Install Code Editor works for multiple programing languages Visual Studio Code (Microsoft's VS Code,

proprietary license) On Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref: https://code.visualstudio.com/
Getting Started Tutorial(s) free
https://code.visualstudio.com/learn/
https://flaviocopes.com/vscode/
Install VS Code on Windows Ref
Video: https://youtu.be/MlIzFUI1QGA
Written: https://code.visualstudio.com/docs/setup/windows
Install VS Code on Linux/Ubuntu Ref
Video: https://youtu.be/Y1fei1mzP7Q
Written: https://linuxhint.com/install_use_vs_code_ubuntu/
Written: https://websiteforstudents.com/how-to-install-visual-studio-code-on-ubuntu-20-04-18-04/
Install VS Code on Ref
Video: https://youtu.be/tCfbi5PF1y0
Written: https://vscode.readthedocs.io/en/latest/setup/mac/
#
# Description below is for Ubuntu
# VS code can be installed from software center of Ubuntu (icon on dock)
# or access it from "Show Applications" > "Ubuntu Software"
# Instead here VS code is installed from Ubuntu Terminal using standard apt-get method typing following commands
# apt method 1 Type following commands on Ubuntu Terminal to install VS Code
sudo apt install software-properties-common apt-transport-https wget
wget –q https://packages.microsoft.com/key/microsoft.asc -O- | sudo apt-key add -
sudo add-apt-repository "deb [arch=amd64] https://packages.microsoft.com/repos/vscode stable main"
sudo apt install code
# apt method 2 if above does not work ref: https://askubuntu.com/questions/616075/how-do-i-install-visual-studio-code
sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys EB3E94ADBE1229CF
sudo add-apt-repository -y "deb [arch=amd64] https://packages.microsoft.com/repos/vscode stable main"
sudo apt -y install code
# To launch VS Code for use, type in Terminal command below
# or find it under the "Show Applications" 9-dot icon by typing VS code > double click icon code
# To close VS code, close the VS code window or click File > quit/exit

#######Install Kite on Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref: https://www.kite.com/
Ref: https://help.kite.com/article/53-quickstart
Kite is an AI based code completion support plugin that works on Atom, VS Code and many others.

Install Kite on Windows, Linux/Ubuntu and Mac from here:
https://www.kite.com/download/
#
Description below is for Ubuntu
Type following commands on Ubuntu Terminal to install Kite
bash -c "$(wget -q -O - https://linux.kite.com/dls/linux/current)"
To launch Kite find it under the "Show Applications" 9-dot icon by typing Kite > double click icon
> select option 'install kite for all supported editors' > click 'continue without email'
(email optional, I didn't provide it) >select 'automatically integrate Kite when new editors are installed'.
More information on integration with Atom & VS Code, below.
To close Kite, close the Kite window or click File > quit/exit
Kite is a plugin that will auto-launch within code editor, Atom and VS Code. Configuration information below,
Kite configuration for Atom steps here https://help.kite.com/article/61-configuring-the-atom-plugin
Kite configuration for VS Code steps here https://help.kite.com/article/70-configuring-the-vs-code-plugin

#######Install Anaconda on Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref: https://www.anaconda.com/products/individual
Getting Started Tutorial(s) free
https://www.tutorialspoint.com/matplotlib/matplotlib_anaconda_distribution.htm
https://www.tutorialspoint.com/python/index.htm
https://www.w3schools.com/python/
Video https://www.udemy.com/course/pythonforbeginnersintro/
Video https://www.udemy.com/course/free-python/
Install Anaconda on Windows Install Version Python 3.* such as 3.8 version Graphic Installer Ref
Video: https://youtu.be/a7Ylbn1ikF0
Written: https://docs.anaconda.com/anaconda/install/windows/
Install Anaconda on Linux/Ubuntu Ref
Video: https://youtu.be/9Uy00NhbG6w
Written: https://docs.anaconda.com/anaconda/install/linux/
Install Anaconda on Mac Install Version Python 3.* such as 3.7 version Graphic Installer Ref
Video: https://youtu.be/2JeoNlCcLOM
Written: https://docs.anaconda.com/anaconda/install/mac-os/
#
Description below is for Ubuntu
Download Anaconda version Linux Python 3.8 64-bit (x86) Installer from
https://www.anaconda.com/products/individual#linux
Type following commands on Ubuntu Terminal to install Anaconda
sha256sum /home/shrad/Downloads/Anaconda3-2021.05-Linux-x86_64.sh #hash verification sha256sum /path/filename

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```
bash /home/shrad/Downloads/Anaconda3-2021.05-Linux-x86_64.sh #install anaconda bash
/path/filename
#  Hit enter to load terms and conditions> Do you agree? type yes, hit enter
#  > Do you want to init conda? type yes.
#  This will install anaconda in user's folder /home/shrad/anaconda3 and its ready to use.
#  Add anaconda3 folder to path so that can ust type anaconda3 instead of full path as
follows
echo $PATH #shows current path
echo 'export PATH="/home/shrad/anaconda3/bin:$PATH"' >> ~/.bashrc
source ~/.bashrc #instead of this close and reopen terminal will also work
#  At next turn on conda is turned on by default so (base) appers in Terminal prompt.
#  Turn this off by typing command below if not using Anaconda in the session.
conda config --set auto_activate_base False
source ~/.bashrc #instead of this close and reopen terminal will also work
#  If needed conda can be activated manually using command 'conda activate'
#  To launch anaconda navigator for use, type in Terminal command below
#  or find it under the "Show Applications" 9-dot icon by typing anaconda > double click icon
anaconda-navigator
#  select Anaconda software to launch or install additional software such as RStudio,
Orange, PyCharm etc
#  Launch Anaconda software directly
spyder #launches spyder from Anaconda
jupyter-notebook #launches jupyter notebook from Anaconda
#  To close anaconda navigator and its software, close the window or click exit or click File >
quit/exit.


#######Install R and RStudio on Ubuntu (linux OS), Windows OS or Apple Mac OS
laptop/computer#######
#  Ref: https://statistics.byu.edu/r-and-rstudio
#  Getting Started Tutorial(s) free
#    https://www.tutorialspoint.com/r/index.htm
#    https://www.w3schools.com/r/default.asp
#    https://chryswoods.com/beginning_r/
#    Video https://www.simplilearn.com/tutorials/data-science-tutorial/
#    Video https://www.udemy.com/course/r-and-rstudio-for-beginners-a-quick-introduction/
#  Install R and RStudio on Windows Ref
#    Video: https://youtu.be/K5FQoepK8YI
#    Written R: https://cran.r-project.org/bin/windows/base/
#    Written RStudio: https://www.datacamp.com/community/tutorials/installing-R-windows-
mac-ubuntu
#  Install R and RStudio on Linux/Ubuntu Ref
#    Video: https://youtu.be/WpNd6j1nvEE
#    Written R: https://cran.r-project.org/bin/linux/
#    Written RStudio: https://linuxconfig.org/how-to-install-rstudio-on-ubuntu-20-04-focal-
fossa-linux
#  Install R and RStudio on Mac Ref
#    Video: https://youtu.be/N2Jt1-iC5MU
```

Written R: https://cran.r-project.org/bin/macosx/
Written RStudio: https://www.datacamp.com/community/tutorials/installing-R-windows-mac-ubuntu
#
# Description below is for installation of R in Ubuntu
# Type following commands on Ubuntu Terminal to install R
sudo apt update -qq # update indices
sudo apt install --no-install-recommends software-properties-common dirmngr # install two helper packages we need
# import the signing key (by Michael Rutter) for these repo
sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys E298A3A825C0D65DFD57CBB651716619E084DAB9
# add the R 4.0 repo from CRAN -- adjust 'focal' to 'groovy' or 'bionic' as needed
sudo add-apt-repository "deb https://cloud.r-project.org/bin/linux/ubuntu $(lsb_release -cs)-cran40/"
sudo apt install --no-install-recommends r-base
# To launch R for use, type in Terminal command below
# or find it under the "Show Applications" 9-dot icon by typing R > double click icon
which R #type check path to R folder
R
q() #to exit R

# Description below is for installation of Rstudio in Ubuntu
# Download latest linux/ubuntu rstudio, here Ubuntu18/Debian10 rstudio-1.4.1106-amd64.deb
# It downloads in Downloads folder, path /home/shrad/Downloads
# Type following commands on Ubuntu Terminal to install Rstudio
sudo apt update
sudo apt -y install r-base gdebi-core
sudo gdebi /home/shrad/Downloads/rstudio-1.4.1106-amd64.deb
# Say yes to prompt asking if installation should continue
# To launch Rstudio for use, type in Terminal command below
# or find it under the "Show Applications" 9-dot icon by typing Rstudio > double click icon
rstudio
To close rstudio, close the window or click exit or click File > quit/exit.

#######Install Node.js javascript on Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref: https://nodejs.org/en/download/
Getting Started Tutorial(s) free
https://www.tutorialspoint.com/nodejs/index.htm
https://www.w3schools.com/nodejs/default.asp
Video https://www.simplilearn.com/tutorials/nodejs-tutorial
Install Node.js on Windows Ref
Video: https://youtu.be/qYwLOXjAiwM
Written: https://www.simplilearn.com/nodejs-installation-on-windows-and-ubuntu-article
Install Node.js on Linux/Ubuntu Ref

Video: https://youtu.be/P6rPI7x28nY
Video: https://youtu.be/OMhMnj7SBRQ
Written: http://www.codebind.com/linux-tutorials/install-latest-nodejs-npm-ubuntu-20-04-linux/
Written: https://www.simplilearn.com/nodejs-installation-on-windows-and-ubuntu-article
Install Node.js on Mac Ref
Video: https://youtu.be/TQks1p7xjdI
Written use method 1: https://www.newline.co/@Adele/how-to-install-nodejs-and-npm-on-macos--22782681
#
# Description below is for Ubuntu
# Type following commands on Ubuntu Terminal to install Node.js (and required npm)
sudo apt-get install curl
curl -sL https://deb.nodesource.com/setup_12.x | sudo -E bash -
sudo apt-get install nodejs
node --version #check installation worked
npm --version #check installatin worked
To launch node.js in Terminal, type in Terminal command below
node
.exit #to exit node.js
codes for node.js i.e. server work will be written using special text editor i.e. code editor Atom or VS Code

#######Install MongoDB javascript on Ubuntu (linux OS), Windows OS or Apple Mac OS laptop/computer#######
Ref: https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/
Ref: https://www.mongodb.com/try/download/community
Getting Started Tutorial(s) free
https://www.tutorialspoint.com/mongodb/mongodb_overview.htm
https://www.w3schools.com/nodejs/nodejs_mongodb.asp
Video https://www.udemy.com/course/mongodb-essentials/
https://docs.mongodb.com/manual/tutorial/getting-started/#std-label-getting-started
https://api.mongodb.com/
Install MongoDB on Windows Ref
Video: https://youtu.be/FwMwO8pXfq0
Written: https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/
Written:
Install MongoDB on Linux/Ubuntu Ref
Video: https://youtu.be/WH5GgHaEy7E
Written: http://www.codebind.com/linux-tutorials/install-mongodb-ubuntu-18-04-lts-linux/
Written: https://docs.mongodb.com/manual/tutorial/install-mongodb-on-ubuntu/
Install MongoDB on Mac Ref
Video: https://youtu.be/DX15WbKidXY
Written: http://www.codebind.com/mongodb/install-mongodb-mac-os-x/
Written: https://docs.mongodb.com/manual/tutorial/install-mongodb-on-os-x/
#
Description below is for Ubuntu

Type following commands on Ubuntu Terminal to install MongoDB Community Edition
#
wget -qO - https://www.mongodb.org/static/pgp/server-4.4.asc | sudo apt-key add -
if receive error gnupg not there then type command below before typing the above wget command
sudo apt-get install gnupg
lsb_release -dc #to determine version of ubuntu
create list file for Mongodb
echo "deb [arch=amd64,arm64] https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/4.4 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-4.4.list
sudo apt-get update #reload local package database
sudo apt-get install -y mongodb-org #install latest packages of Mongodb
ps --no-headers -o comm 1 #determine init system
# for systemmd use following commands
sudo systemctl start mongod
# If get failed service error type type command below before typing the above sudo dydtemctl command
# sudo systemctl daemon-reload
sudo systemctl status mongod #verify installation
sudo systemctl enable mongod #start mongo
sudo systemctl stop mongod #stop mongo
sudo systemctl restart mongod #restart mongo
# To launch mongo in Terminal and start using, type in Terminal command below
mongo
exit #to exit mongo

end of SM note 1