Task-1 Create GitHub repo. Document summary of previous video in the GitHub repo

Refer the following repo https://github.com/sukanyasmeher/sfal-vsd?tab=readme-ov-file#day-0---tools-installation

Task-2 Install tools listed in this document using the machine configuration mentioned. Update your GitHub repo with Tool snapshot

----—----------Installation instructions ----------

Oracle virtual machine link

https://www.virtualbox.org/wiki/Downloads

System Check

6GB RAM, 50 GB HDD

Ubuntu 20.04+

4vCPU

Tool check

Yosys

```
$ sudo apt-get update
$ git clone https://github.com/YosysHQ/yosys.git
$ cd yosys
$ sudo apt install make (If make is not installed please install it)
$ sudo apt-get install build-essential clang bison flex \
   libreadline-dev gawk tcl-dev libffi-dev git \
   graphviz xdot pkg-config python3 libboost-system-dev \
   libboost-python-dev libboost-filesystem-dev zlib1g-dev
$ make config-gcc
$ make
$ sudo make install
```

Iverilog

Steps to install iverilog

sudo apt-get update

sudo apt-get install iverilog

gtkwave

Steps to install gtkwave
sudo apt-get update
sudo apt install gtkwave

OpenSTA (not needed for SFAL participants)

https://github.com/The-OpenROAD-Project/OpenSTA

—----—----------End----------

ngspice

After downloading the tarball from https://sourceforge.net/projects/ngspice/files/ to a local directory, unpack it using:

$ tar -zxvf ngspice-37.tar.gz
$ cd ngspice-37
$ mkdir release
$ cd release
$ ../configure --with-x --with-readline=yes --disable-debug
$ make
$ sudo make install

magic
$ sudo apt-get install m4
$ sudo apt-get install tcsh
$ sudo apt-get install csh
$ sudo apt-get install libx11-dev
$ sudo apt-get install tcl-dev tk-dev
$ sudo apt-get install libcairo2-dev
$ sudo apt-get install mesa-common-dev libglu1-mesa-dev
$ sudo apt-get install libncurses-dev
git clone https://github.com/RTimothyEdwards/magic
cd magic
./configure
make
make install

OpenLANE-

sudo apt-get update
sudo apt-get upgrade
sudo apt install -y build-essential python3 python3-venv python3-pip make git

```
sudo apt install apt-transport-https ca-certificates curl software-properties-common
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o
/usr/share/keyrings/docker-archive-keyring.gpg

echo "deb [arch=amd64 signed-by=/usr/share/keyrings/docker-archive-keyring.gpg]
https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable" | sudo tee
/etc/apt/sources.list.d/docker.list > /dev/null

sudo apt update

sudo apt install docker-ce docker-ce-cli containerd.io

sudo docker run hello-world

sudo groupadd docker
sudo usermod -aG docker $USER
sudo reboot

# After reboot
docker run hello-world
```

Check dependencies

```
git --version
docker --version
python3 --version
python3 -m pip --version
make --version
python3 -m venv -h
```

Below steps installs PDKs and Tools

```
cd $HOME
git clone https://github.com/The-OpenROAD-Project/OpenLane
cd OpenLane
make
make test
```