For Starting Hadoop any time use Following Commands on Terminal

- 1) ssh localhost
- 2) hadoop-3.3.1/bin/hdfs namenode -format
- 3) start-all.sh
- 4) Open the Browser and Type:- localhost:9870

Edit and save input file, mapper and reducer files

```
gedit input.txt
gedit mapper.py
gedit reducer.py
```

check files

1s

check contents

cat input.txt
cat mapper.py
car reducer.py

For simple output

```
cat input.txt | python mapper.py
cat input.txt | python mapper.py |sort | python reducer.py
```

Access HDFS

```
hdfs dfs -put /home/admin1/input.txt /
hdfs dfs -mkdir /input
hdfs dfs -put input.txt /input
hdfs dfs -ls /input
hdfs dfs -cat /input/input.txt
```

Run the program:

hadoop jar /home/admin1/hadoop-3.3.1/share/hadoop/tools/lib/hadoop-streaming-3.3.1.jar -file /home/admin1/mapper.py -mapper mapper.py -file /home/admin1/reducer.py -reducer reducer.py -input /input/input.txt -output /output

See the output:

hdfs dfs -ls /output

hdfs dfs -cat /output/part-00000