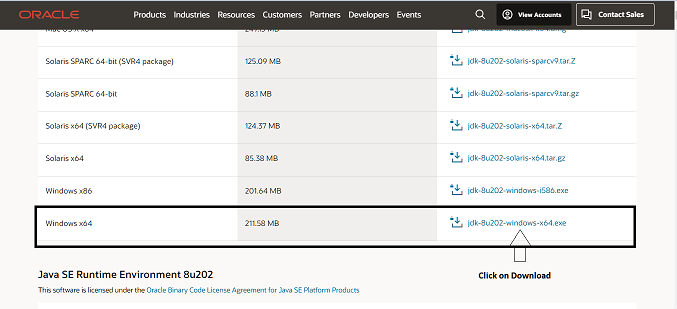
**Practical 3**

**Aim: Installation of Hadoop and java in windows.**

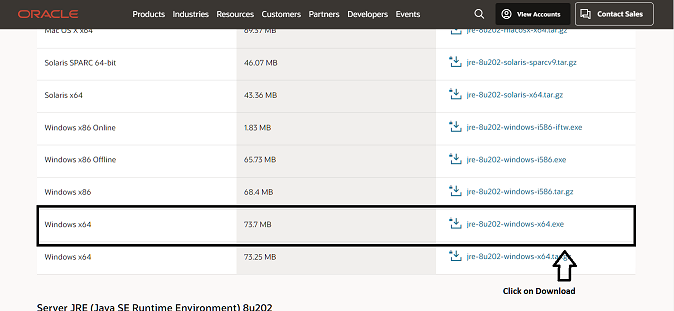
**🡪**

## Installation on java jdk and jre

### Step 1: Download SE Development Kit from the given link <https://www.oracle.com/in/java/technologies/javase/javase8-archive-downloads.html>



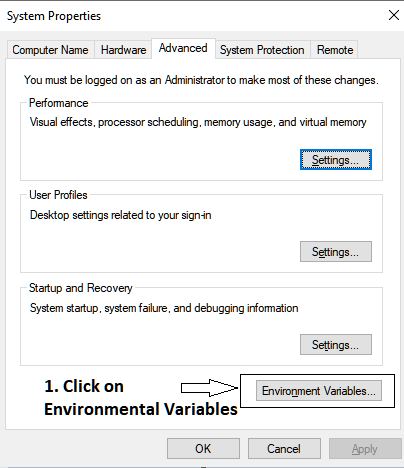
#### Step 2: Download Java SE Runtime Environment 8u202 from the given link <https://www.oracle.com/in/java/technologies/javase/javase8-archive-downloads.html>



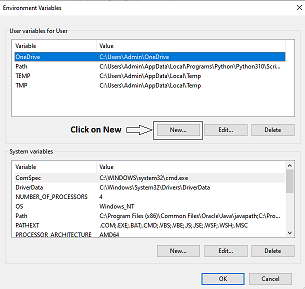
## Setting up the JDK in Environmental Variable

### Step 1: Start 🡪 Edit the system environment variables

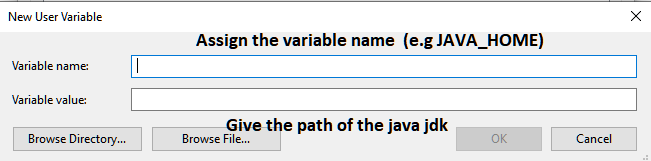
### Step 2: Click on the environment Variables

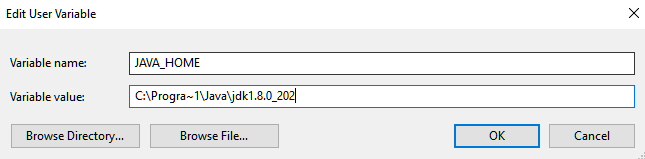


### Step 3: Create the new user variables

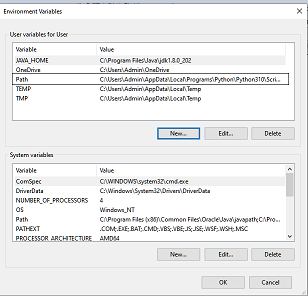


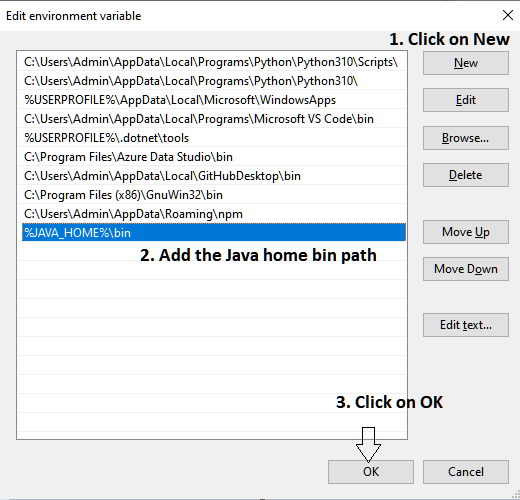
### Step 4: Give the Variable Name and java jdk path (NOTE: Rename the path C:\Program files\Java\jdk1.8.0\_202 to C:\Progra~1\Java\jdk1.8.0\_202)



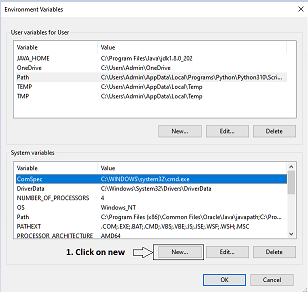


### Step 5: Add the Variable into the Path

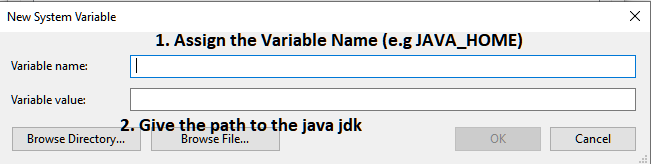


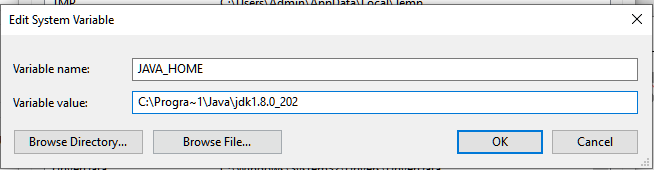


### Step 6: Create the new system variables

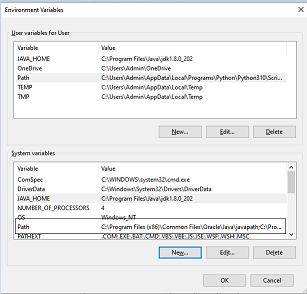


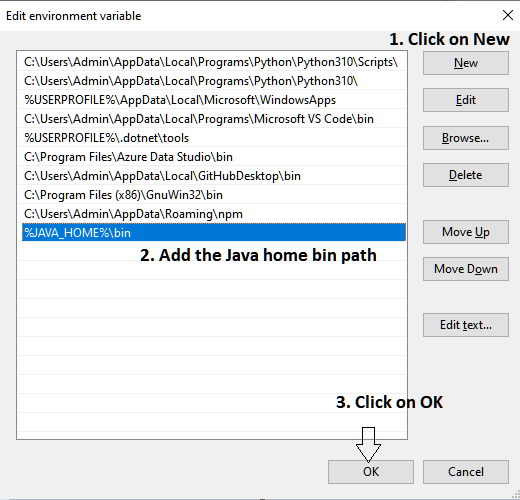
### Step 7: Give the Variable Name and java jdk path (NOTE: Rename the path C:\Program files\Java\jdk1.8.0\_202 to C:\Progra~1\Java\jdk1.8.0\_202)





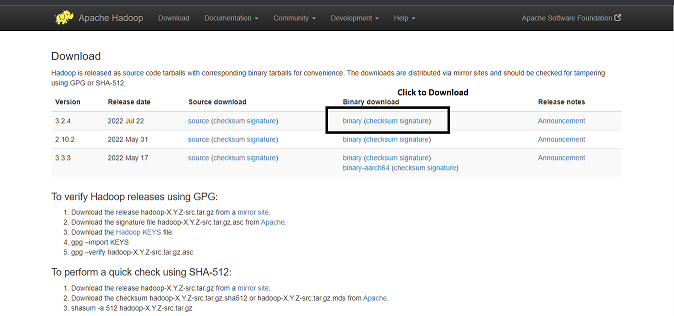
### Step 8: Add the Variable into the Path





## Installation of Hadoop

### Step 1: Download Apache Hadoop from the given link and click on the binary <https://hadoop.apache.org/releases.html>



### Step 2: Click the link to download the zip

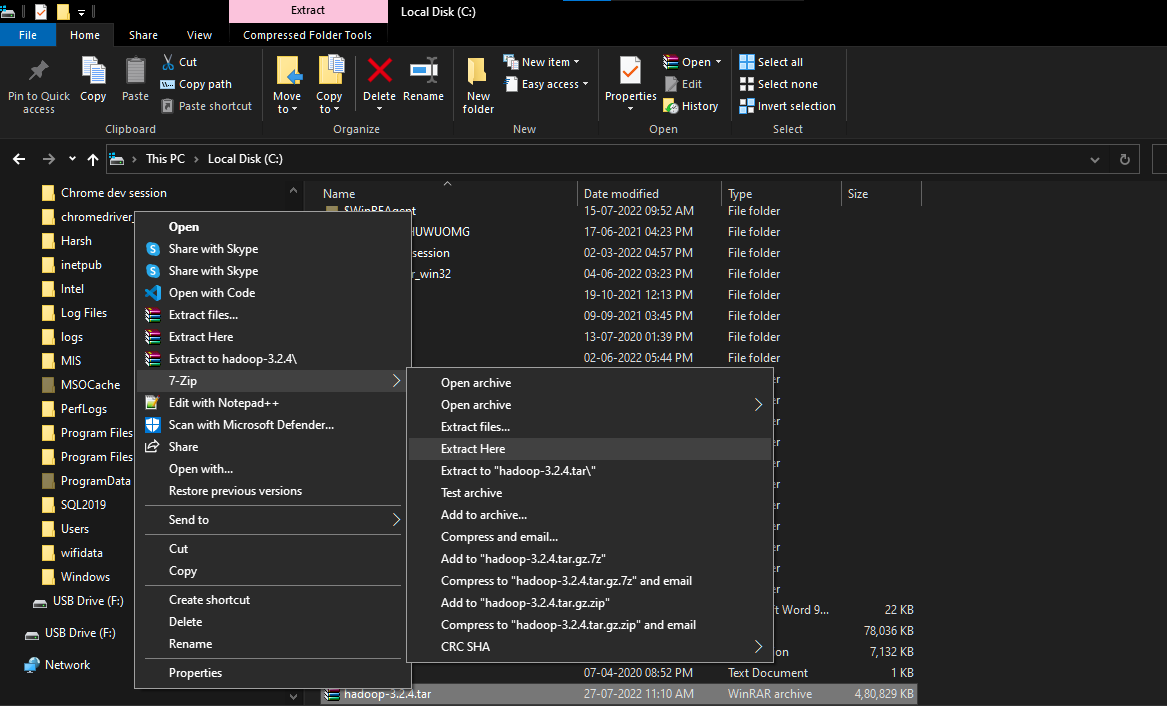


## Installation of the 7zip

### Step 1: Download the 7zip and install into the system <https://www.7-zip.org/download.html>

## Extracting Hadoop zip using 7Zip

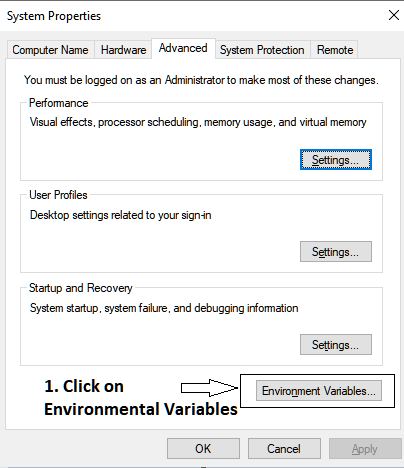
### Step 1 : Right Click on the zip 🡪 Click on 7-zip 🡪 Extract Here



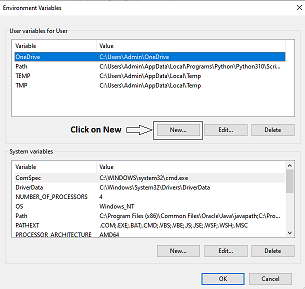
## Setting up the Hadoop in Environmental Variable

### Step 1: Start 🡪 Edit the system environment variables

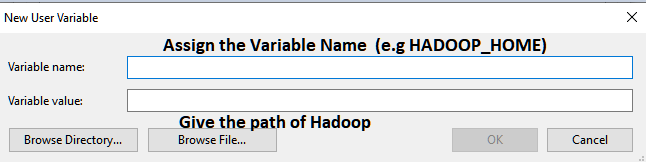
### Step 2: Click on the environment Variables

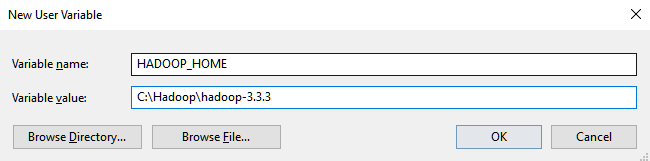


### Step 3: Create the new user variables

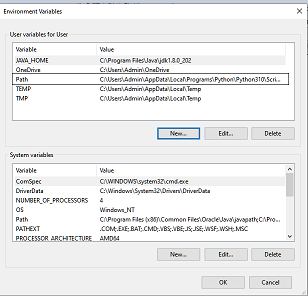


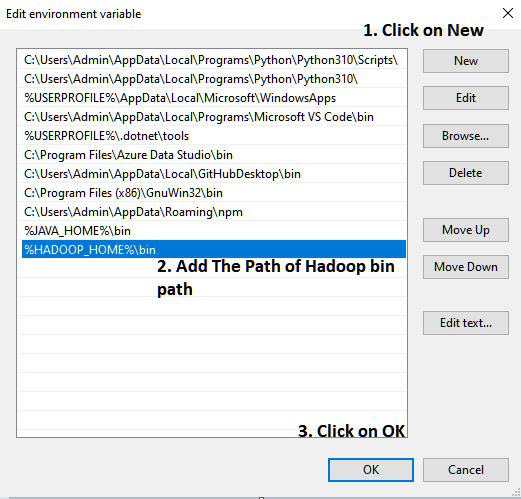
### Step 4: Give the Variable Name and java Hadoop path



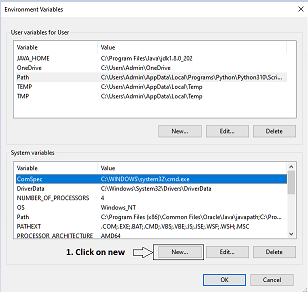


### Step 5: Add the Variable into the Path

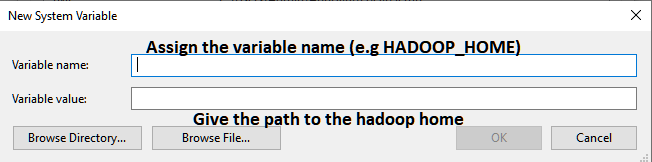


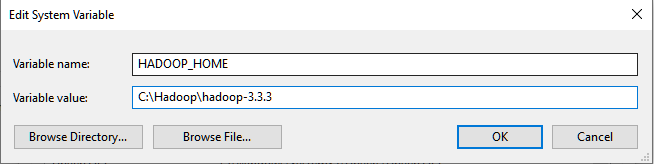


### Step 6: Create the new system variables

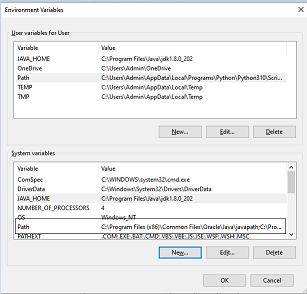


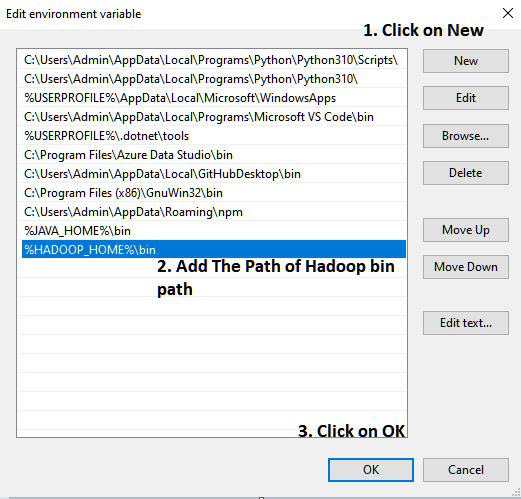
### Step 7: Give the Variable Name and java Hadoop path





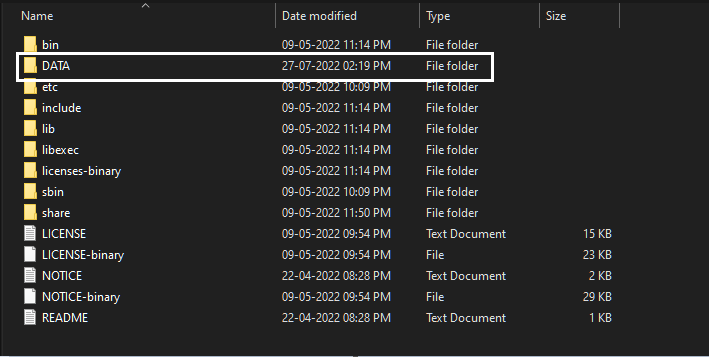
### Step 8: Add the Variable into the Path



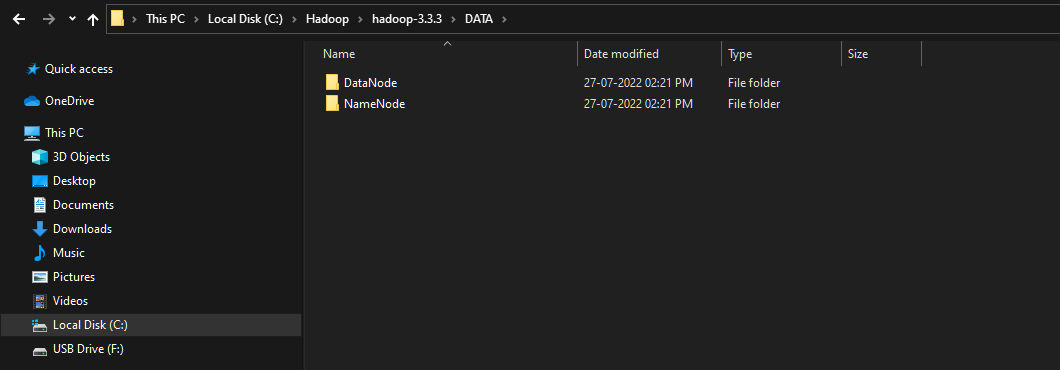


## Setting up Hadoop

### Step 1: Create the new Folder with the name DATA



### Step 2: Go inside the data folder and create 2 folder i.e. NameNode and DataNode



### Step 3: open the file **hdfs-site.xml** C:\Hadoop\hadoop-3.3.3\etc\hadoop

<?xml version="1.0" encoding="UTF-8"?>

<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>

<configuration>

  <property>

    <name>dfs.replication</name>

    <value>3</value>

  </property>

  <property>

<name>dfs.namenode.name.dir</name>

<value>C:\Hadoop\hadoop-3.3.3\DATA\NameNode</value>

</property>

<property>

<name>dfs.datanode.data.dir</name>

<value>C:\Hadoop\hadoop-3.3.3\DATA\DataNode</value>

</property>

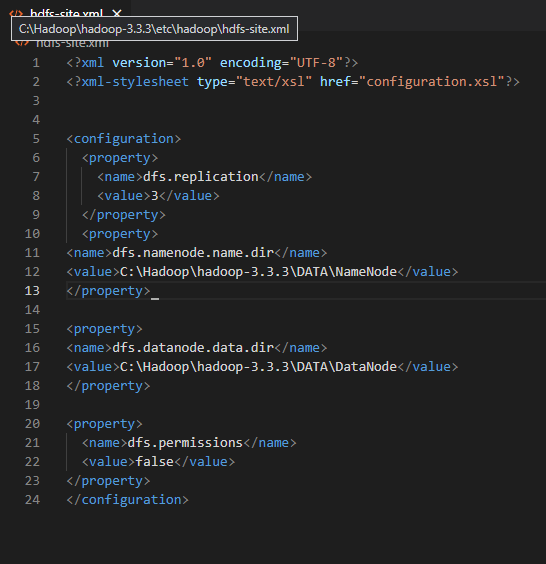
<property>

  <name>dfs.permissions</name>

  <value>false</value>

</property>

</configuration>



### Step 4: open the file **core-site.xml** C:\Hadoop\hadoop-3.3.3\etc\hadoop

<?xml version="1.0" encoding="UTF-8"?>

<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>

<!--

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-->

<!-- Put site-specific property overrides in this file. -->

<configuration>

<property>

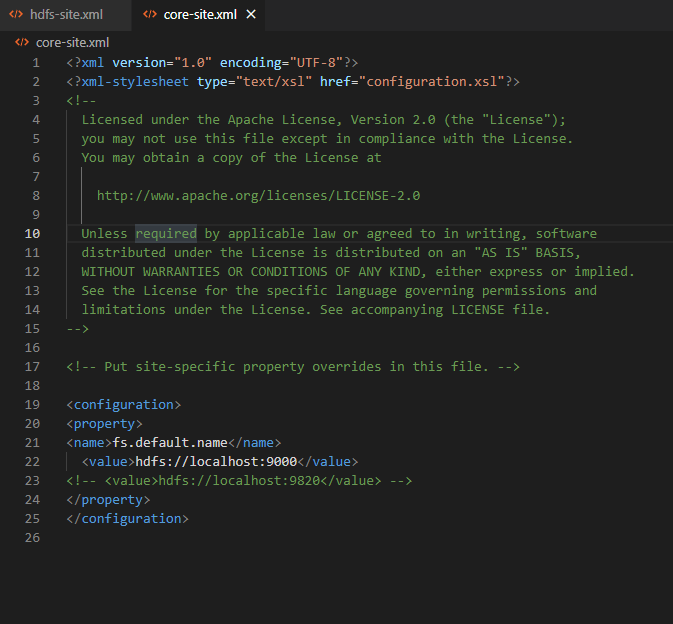
<name>fs.default.name</name>

  <value>hdfs://localhost:9000</value>

<!-- <value>hdfs://localhost:9820</value> -->

</property>

</configuration>



### Step 5: open the file **mapred-site.xml** C:\Hadoop\hadoop-3.3.3\etc\hadoop

<?xml version="1.0"?>

<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>

<!--

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-->

<!-- Put site-specific property overrides in this file. -->

<configuration>

<property>

<name>mapreduce.framework.name</name>

<value>yarn</value>

</property>

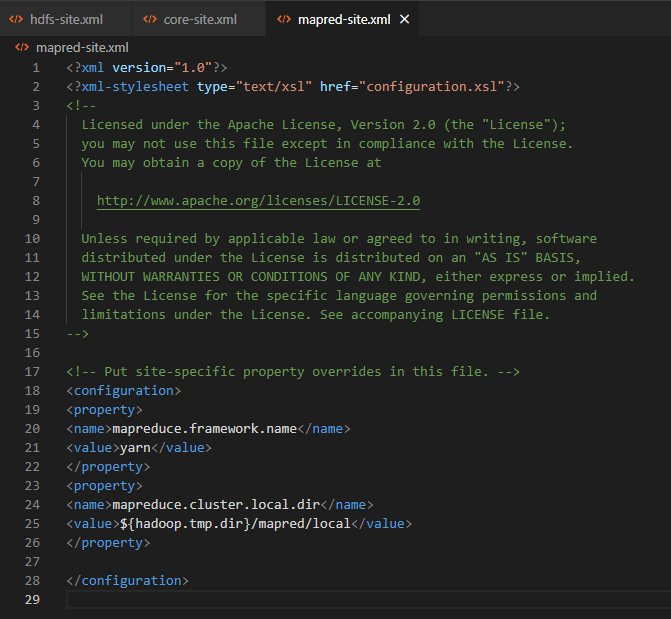
<property>

<name>mapreduce.cluster.local.dir</name>

<value>${hadoop.tmp.dir}/mapred/local</value>

</property>

</configuration>



### Step 6: open the file **yarn-site -site.xml** C:\Hadoop\hadoop-3.3.3\etc\hadoop

<?xml version="1.0"?>

<!--

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-->

<configuration>

<!-- Site specific YARN configuration properties -->

<configuration>

<property>

<name>yarn.nodemanager.aux-services</name>

<value>mapreduce\_shuffle</value>

</property>

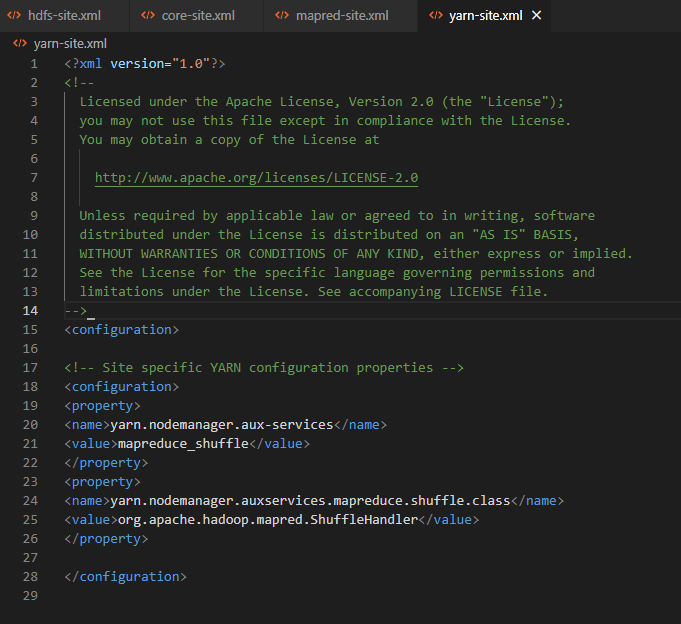
<property>

<name>yarn.nodemanager.auxservices.mapreduce.shuffle.class</name>

<value>org.apache.hadoop.mapred.ShuffleHandler</value>

</property>

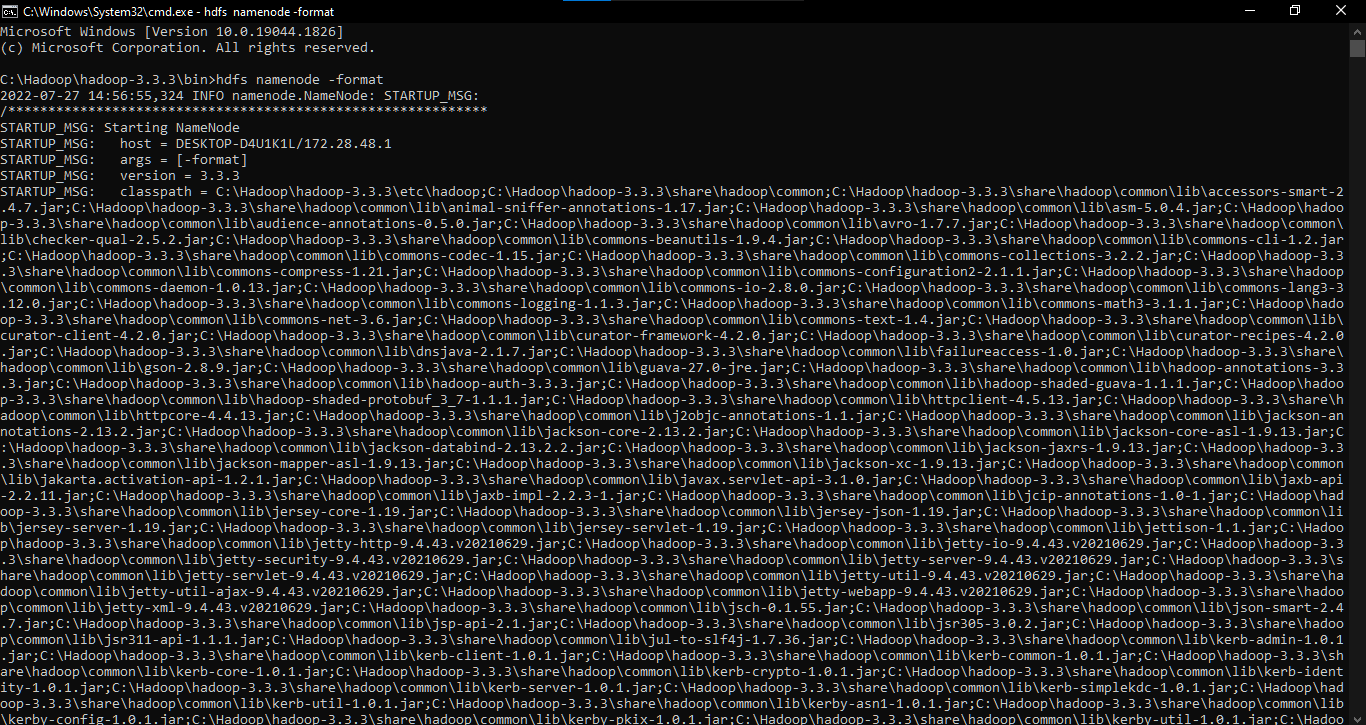
</configuration>

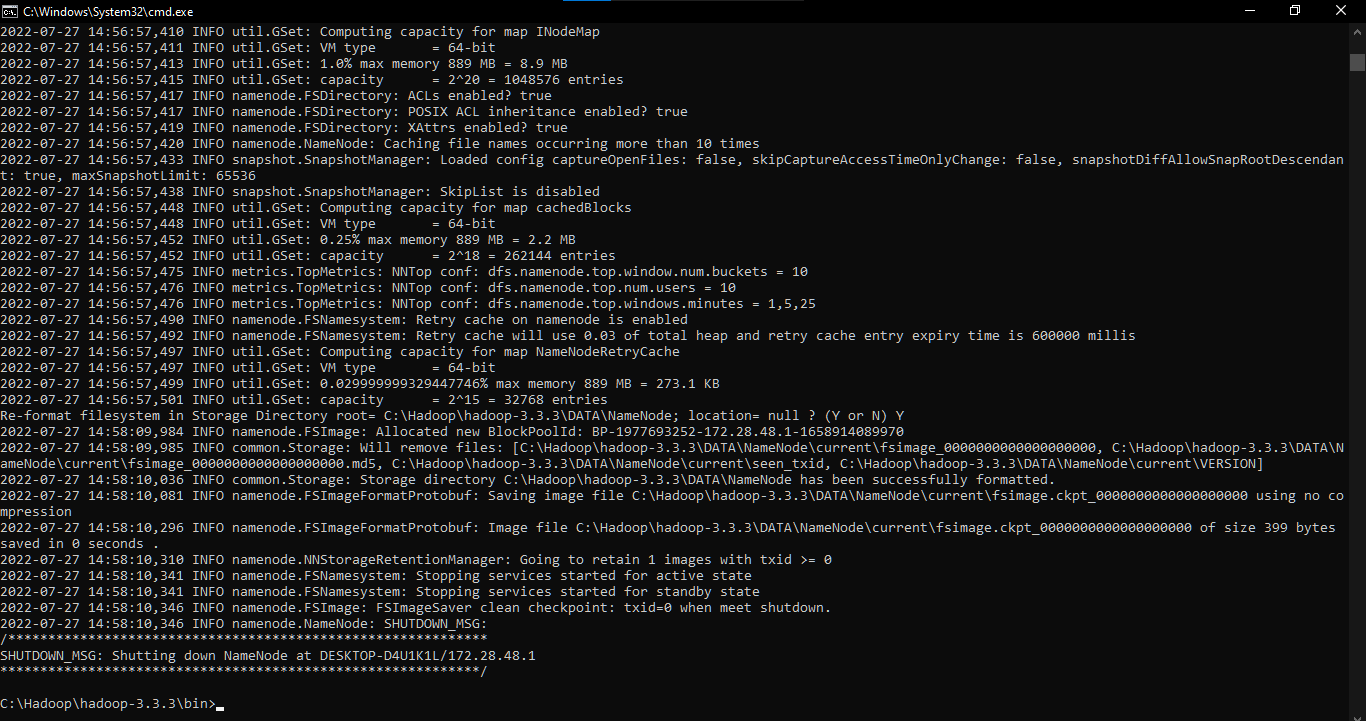


### Step 7: Go to GitHub <https://github.com/Selfgrowth/Apache-hadoop-3.1.1-winutils> and download the bin folder and replace all the files with the C:\Hadoop\hadoop-3.3.3\bin

### Step 8: Open the command prompt and change the location to C:\Hadoop\hadoop-3.3.3\bin

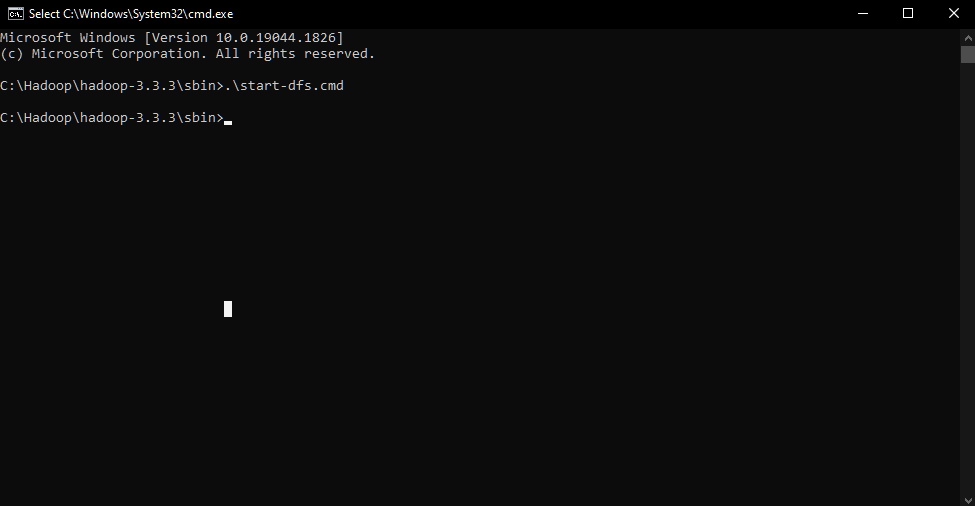
### Step 9: hdfs namenode -format



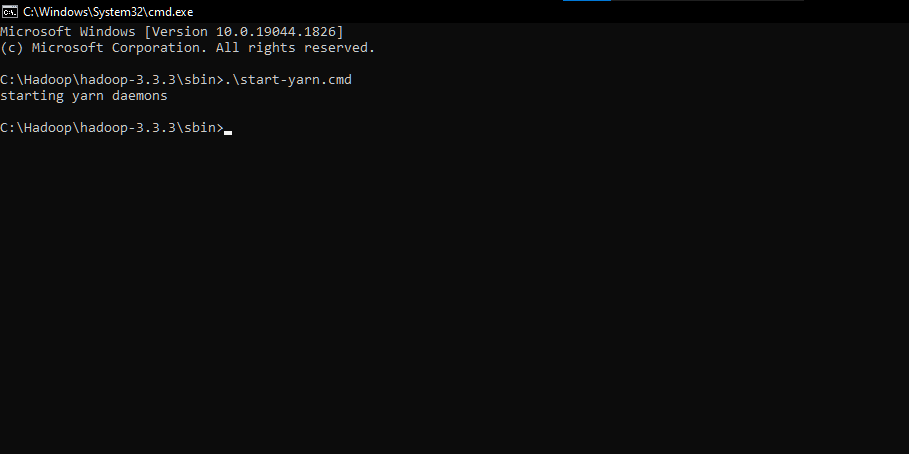


### Step 10: Go to sbin folder. Type cmd in the address bar and 2 different open command prompt

First cmd: **.\start-dfs.cmd**



Second cmd: **.\start-yarn.cmd**



### Step 11: now open chrome or any other browser and type <http://localhost:9870/>

