

INDEX

S.NO	DATE	TITLE	PAGE NUMBER	SIGNATURE
1		Downloading and installing of Hadoop, Understanding different Hadoop modes.Startup scripts,Configuration files.		
2		Hadoop implementation of file managements tasks, such as Adding files and directories,retrieving files and deleting files.		
3		Implement of Matrix Multiplication wlith Hadoop Map Reduce.		
4		Run a basic Word Count Map Reduce program to understand Map Reduce Paradigm.		
5		Installation of Hive along with pratice examples		
6		Installation of HBase,Installing thrift along with Pratice examples.		
7		Pratice importing and exporting data from various databases.		

EX .NO:1 Downloading and installing of Hadoop;Understanding different hadoop modes.Startup scripts,configuration files.

Aim:

To download and installing of hadoop and understanding different hadoop modes then startup scripts and configuration files.

Procedure:

Java Installation and Configuration

Java Download

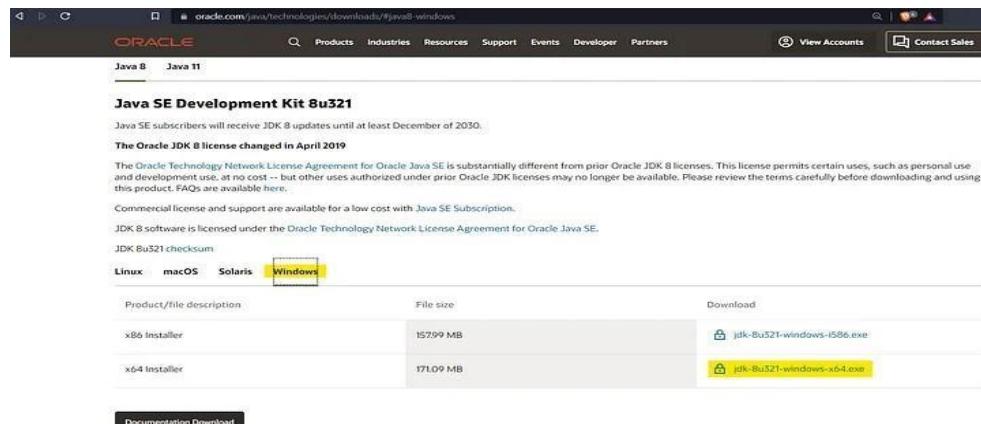
As stated in Hadoop Java Versions:

Apache Hadoop 3.3 and upper supports Java 8 and Java 11 (runtime only), but Hadoop compilation with Java 8 is mandatory.

Apache Hadoop from 3.0.x to 3.2.x now supports only Java 8. Apache Hadoop from 2.7.x to 2.10.x support both Java 7 and 8.

In this guide, I will explain how to install Hadoop 3.2.2, so you need Java 8. First of all you need an Oracle account. If you don't have one create it here. The procedure is straight forward, you just need to compute a form and verify your email.

After your Oracle account is created, you need to go to Windows Java 8 SE



Development Kit official download site and download the x64 Installer:

Then, you will be asked to accept (clicking on the checkbox) the Oracle Technology Network License Agreement for Oracle Java SE. Once the checkbox is marked, click the button to download the installer:

You must accept the [Oracle Binary Code License Agreement for the Java SE Platform Products](#) to download this software.

I reviewed and accept the Oracle Binary Code License Agreement for the Java SE Platform Products

Required

You will be redirected to the login screen in order to download the file.

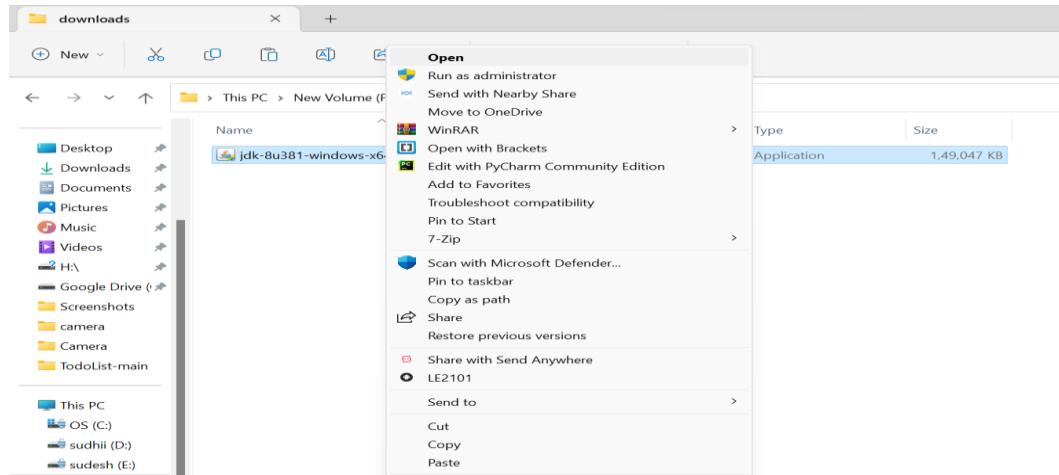
[Download jdk-8u202-windows-x64.exe](#) 

After that, you will be asked to sign in with your Oracle account and then the installer download will start immediately:

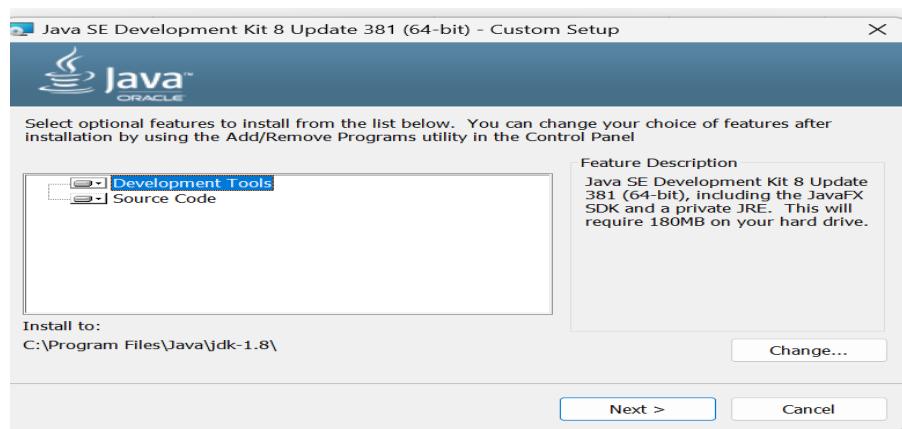
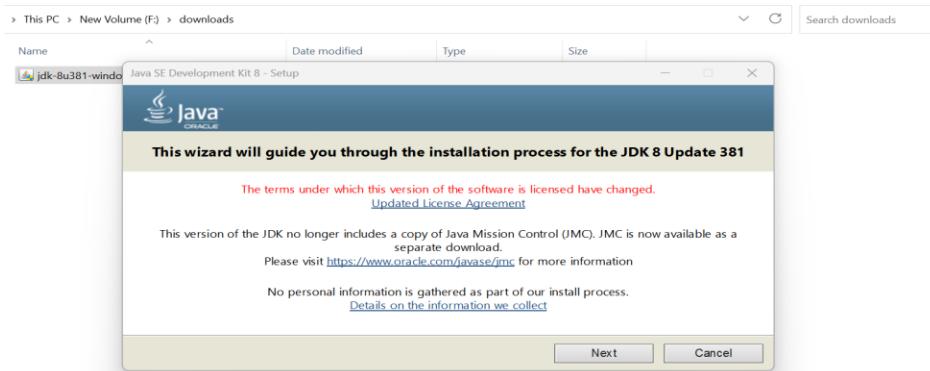


Java Installation

Then, you must proceed with the Java installation. Just open the folder where installer is in and run it:

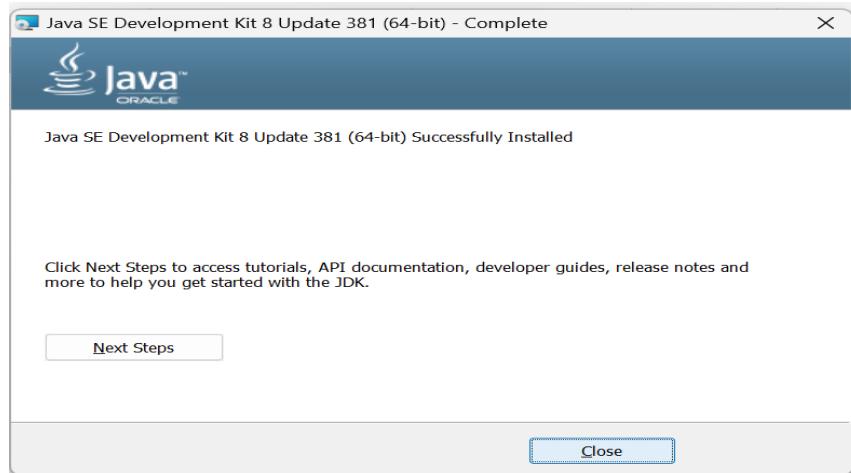


Next, the installation wizard will be shown, click on Next in the following two views:



The third view is to select the destination folder where SDK files will be stored. Here, you need to create the folder "Java" in the root path of your storage drive

1.- Select Change:



2. - In the Browse for Folder window, select your storage drive (In my case, the C: drive), click on Make New Folder button and assign the name “Java” to the new directory, then click OK:

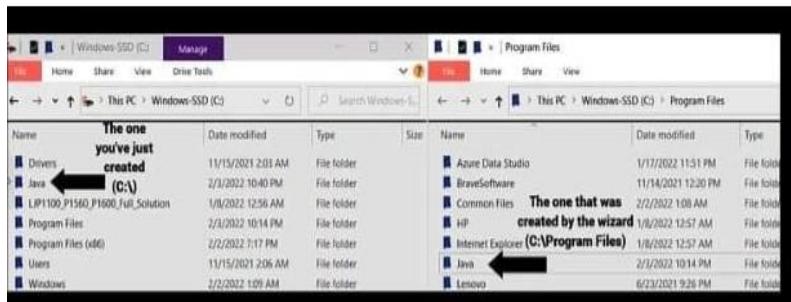


After that, you need to check if the destination folder has been updated. Once you have verified it, click on Next > and wait the installation to finish:

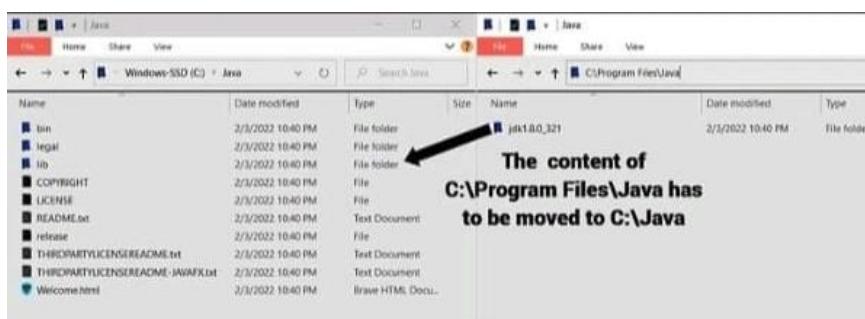
When this view displays, the installation has been finished and you can close the wizard:



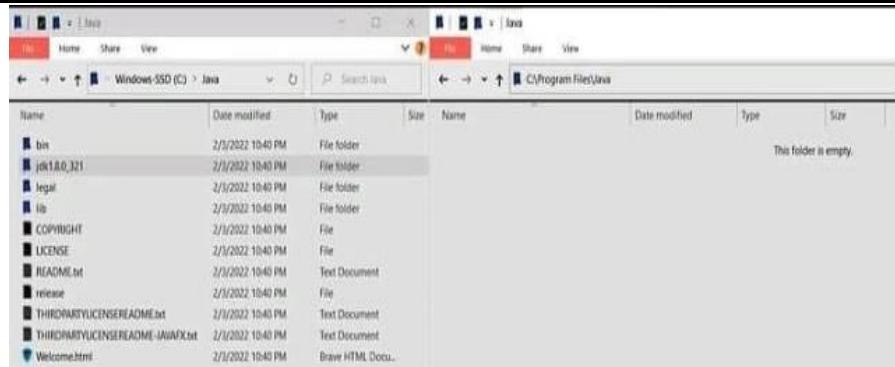
After this, you will see that there are two folders named "Java" the one you've just created and the other one will be inside the "Program Files" folder in your storage drive, the latter was created by the Java Installation Wizard:



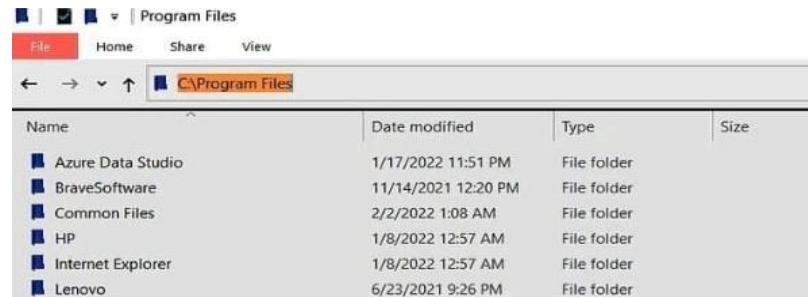
You need to move the content of the folder created by the wizard (C:\Program Files\Java) to the Java folder you have created (C:\Java) to avoid problems latter when you configure the environment variables:



After that, C:\Program Files\Java folder will be empty:



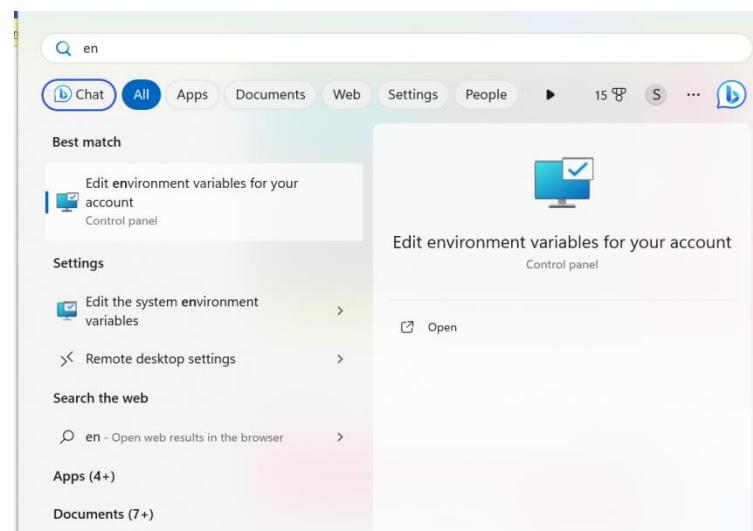
Then, you need to remove C:\Program Files\Java . As you can see, this folder no longer exists:



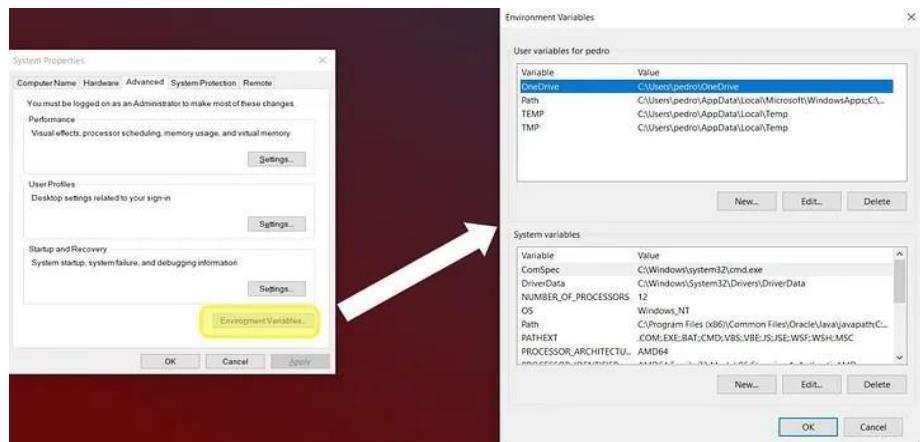
Java Environment Variable Configuration

Now, you need to create an environment variable for Java. To do so, type “Edit the system environment variables” in the Windows search bar and select that option

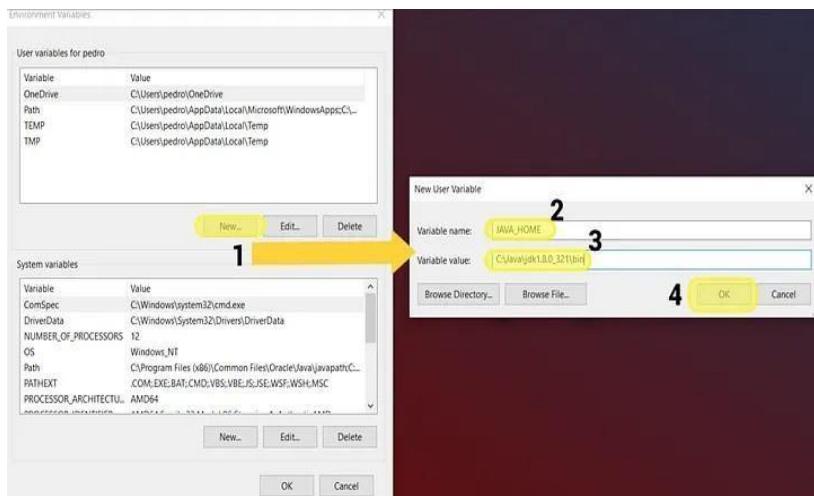
:



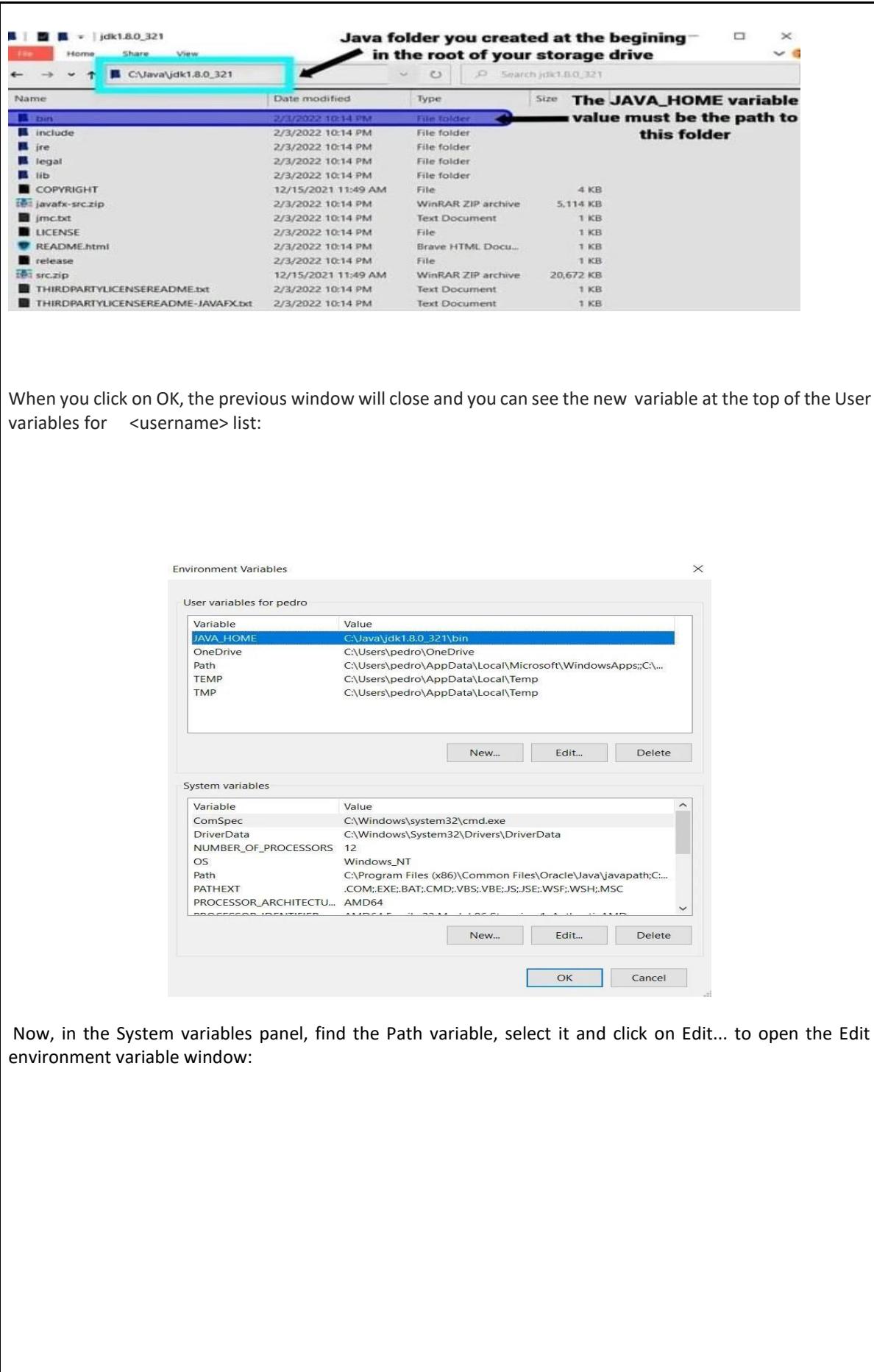
In the “System properties” view click on Environment Variables to open that window:

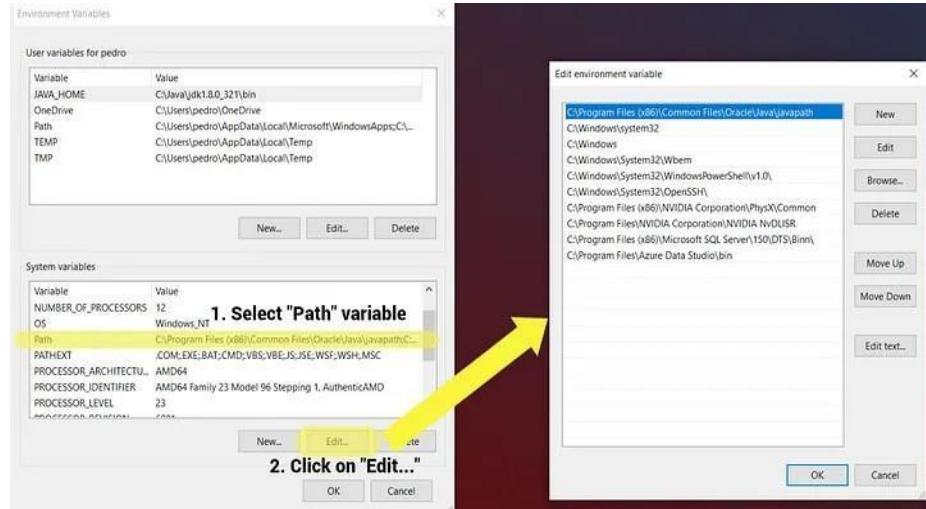


Now, in the “Environment Variables” window click on the New... button of the “User variables for <username>” panel. After that, “New User Variable” window will appear; there, you have to create the JAVA_HOME variable. In the Variable value field you need to write the path of the bin directory which is inside of the jdk folder.

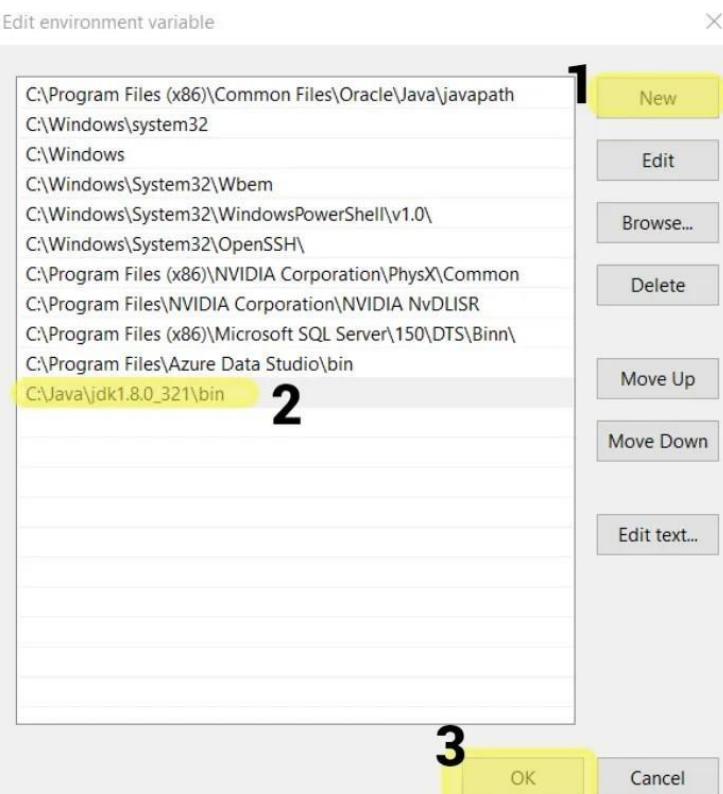


Recall that jdk folder is located inside of the Java folder you previously created in the root of your storage drive. In my case I had to write C:\Java\jdk1.8.0_321\bin :





In the Edit environment variable window, click on New and write the path to the jdk folder, the exact same path you've just assign to the JAVA_HOME user variable. Then, click on OK:



Now, be careful and click on OK in all windows related to the environment variables to save the changes; otherwise, you will need to repeat this process again.

Java Installation Verification

To check if Java was correctly installed, open the Windows Command Prompt. You can do this typing Command Prompt in the Windows search bar: In the command prompt write javac and hit Enter. If you see this output, then Java is working properly:

```
C:\WINDOWS\system32\cmd > Microsoft Windows [Version 10.0.22621.2134]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sudhi>javac
Usage: javac <options> <source files>
where possible options include:
  @<filename>                                Read options and filenames from file
  -A<key>[<value>]                            Options to pass to annotation processors
  --add-modules <module>[,<module>]*          Root modules to resolve in addition to the initial modules, or all modules
  on the module path if <module> is ALL-MODULE-PATH.
  --boot-class-path <path>, --bootclasspath <path>
  Override location of bootstrap class files
  --class-path <path>, --classpath <path>, -cp <path>
  Specify where to find user class files and annotation processors
  -d <directory>                               Specify where to place generated class files
  -deprecation
  Output source locations where deprecated APIs are used
  --enable-preview
  Enable preview language features. To be used in conjunction with either -source or --release.
  -encoding <encoding>                         Specify character encoding used by source files
  -endorseddirs <dirs>                          Override location of endorsed standards path
  -extdirs <dirs>                             Override location of installed extensions
  -g                                         Generate all debugging info
  -g:{lines,vars,source}                        Generate only some debugging info
  -g:none                                     Generate no debugging info
  -h <directory>
  Specify where to place generated native header files
  --help, -help, -?
  Print this help message
  --help-extra, -X
  Print help on extra options
  -implicit:{none,class}
  Specify whether or not to generate class files for implicitly referenced files
```

Now, you can check the installed Java version typing java -version :

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Windows\system32>java -version
java version "1.8.0_202"
Java(TM) SE Runtime Environment (build 1.8.0_202-b08)
Java HotSpot(TM) 64-Bit Server VM (build 25.202-b08, mixed mode)

C:\Windows\system32>
```

If you have had no problems, congratulations! that means you have installed Java successfully on your computer.

Hadoop File System Configuration

Hadoop Download

Once Java is working properly, you need to download and configure Hadoop File System. To do so, go to Hadoop official downloads site:

The screenshot shows the Apache Hadoop download page. At the top, there's a navigation bar with links for Apache Hadoop, Download, Documentation, Community, Development, Help, and Apache Software Foundation. Below the navigation bar, there's a section titled 'Download' with a sub-section 'Source code'. It lists three versions: 3.3.1 (released Jun 15), 3.2.2 (released Jan 9), and 2.10.1 (released Sep 21). Each row has columns for Version, Release date, Source download, Binary download, and Release notes. The 'Binary download' column for 3.3.1 and 3.2.2 contains links to binary tarballs with checksum signatures. The 'Release notes' column for both versions points to announcements. Below the table, there's a section for verifying releases using GPG, instructions for performing a quick check using SHA-512, and links to previous releases and the Apache release archive. At the bottom, there's a 'License' section mentioning the Apache License 2.0, and a footer with the Apache Software Foundation logo and copyright information.

Version	Release date	Source download	Binary download	Release notes
3.3.1	2021 Jun 15	source (checksum signature)	binary (checksum signature) binary-aarch64 (checksum signature)	Announcement
3.2.2	2021 Jan 9	source (checksum signature)	binary (checksum signature)	Announcement
2.10.1	2020 Sep 21	source (checksum signature)	binary (checksum signature)	Announcement

Once there, you need to download the latest stable version, how do we know which is this? For example, in the previous image latest version is 3.3.3, but latest stable version is the immediate previous version, which is the 3.2.2, click on binary in the Binary download column:

The screenshot shows the same Apache Hadoop download page as before, but with a yellow box highlighting the 'binary' link in the 'Binary download' column for the 3.2.2 version row. This indicates that the user should click on this link to download the latest stable version.

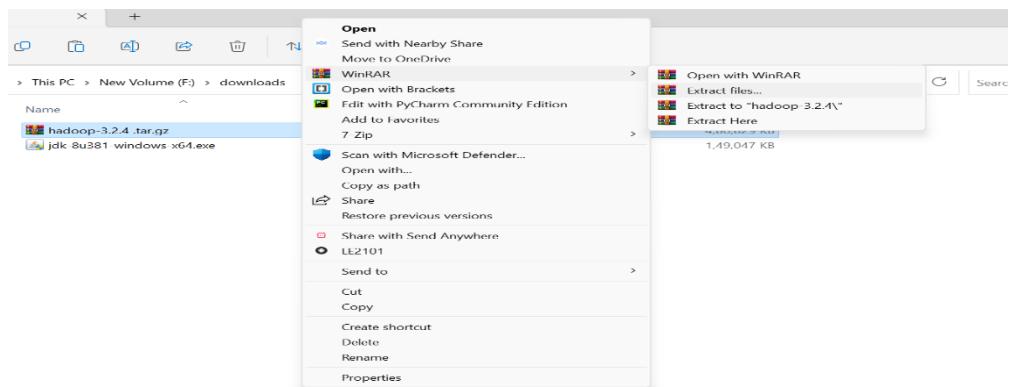
Version	Release date	Source download	Binary download	Release notes
3.3.1	2021 Jun 15	source (checksum signature)	binary (checksum signature) binary-aarch64 (checksum signature)	Announcement
3.2.2	2021 Jan 9	source (checksum signature)	binary (checksum signature)	Announcement
2.10.1	2020 Sep 21	source (checksum signature)	binary (checksum signature)	Announcement

You will be redirected to another site from where you can download a.tar.gz file corresponding to the selected Hadoop version. To start the download just click in the first link:

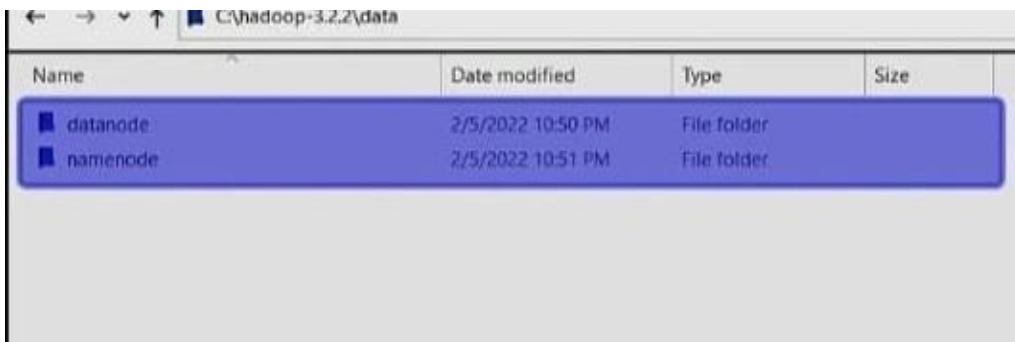
The screenshot shows the Apache Hadoop download page. At the top, there's a banner for "HADOOP 3.2.2 RELEASED". Below it, there are links for "HTTP" (to https://dlcdn.apache.org/hadoop/common/hadoop-3.2.2/hadoop-3.2.2.tar.gz) and a "BACKUP SITE" (to https://downloads.apache.org/hadoop/common/hadoop-3.2.2/hadoop-3.2.2.tar.gz). A note says "We suggest the following site for your download". Below that, there's a section titled "VERIFY THE INTEGRITY OF THE FILES" with instructions on how to verify the file using PGP or GPG keys.

Hadoop Extraction

Once you have the .tar.gz file locally, extract it directly in the root of your storage drive (the same folder where you have previously created Java directory) with WinRAR Extract files... option. If you don't do it this way (i.e. extract it on the current folder and after that move the result manually) you may encounter with Destination Path Too Long error as I did:



Now, create the datanode and namenode folders inside the new data directory:



As you can see, datanode folder has the path `C:\hadoop-3.2.2\data\datanode` and namenode directory path is `C:\hadoop-3.2.2\data\namenode`.

Once this is done, you need to provide this folders paths as properties in the `hdfs-site.xml` file. You can copy the following chunk directly into `<configuration>` tag, just be careful to adjust the datanode and namenode paths according to your machine locations:

```
<property>
    <name>dfs.replication</name>
    <value>1</value>
</property>

<property>
    <name>dfs.namenode.name.dir</name>
    <value>C:\hadoop-3.2.2\data\namenode</value>
</property>

<property>
    <name>dfs.datanode.data.dir</name>
    <value>C:\hadoop-3.2.2\data\datanode</value>
</property>
```

```
<!-- Put site-specific property overrides in this file. -->
<configuration>
    <property>
        <name>dfs.replication</name>
        <value>1</value>
    </property>

    <property>
        <name>dfs.namenode.name.dir</name>
        <value>C:\hadoop-3.2.2\data\namenode</value>
    </property>

    <!-- New property for datanode data directory -->
    <property>
        <name>dfs.datanode.data.dir</name>
        <value>C:\hadoop-3.2.2\data\datanode</value>
    </property>
</configuration>
```

In the mapred-site.xml file you need to set yarn as the MapReduce framework. Copy the following code inside <configuration> tag:

```
mapred-site.xml X
C: > hadoop-3.2.2 > etc > hadoop > mapred-site.xml
1  <?xml version="1.0"?>
2  <?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
3  <!--
4      Licensed under the Apache License, Version 2.0 (the "License");
5      you may not use this file except in compliance with the License.
6      You may obtain a copy of the License at
7
8          http://www.apache.org/licenses/LICENSE-2.0
9
10     Unless required by applicable law or agreed to in writing, software
11     distributed under the License is distributed on an "AS IS" BASIS,
12     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
13     See the License for the specific language governing permissions and
14     limitations under the License. See accompanying LICENSE file.
15 -->
16
17 <!-- Put site-specific property overrides in this file. -->
18
19 <configuration>
20   <property>
21     <name>mapreduce.framework.name</name>
22     <value>yarn</value>
23   </property>
24 </configuration>
25
```

<property>
 <name>mapreduce.framework.name</name>
 <value>yarn</value>
</property>

In the last file yarn-site.xml add the <configuration> tag as shown:

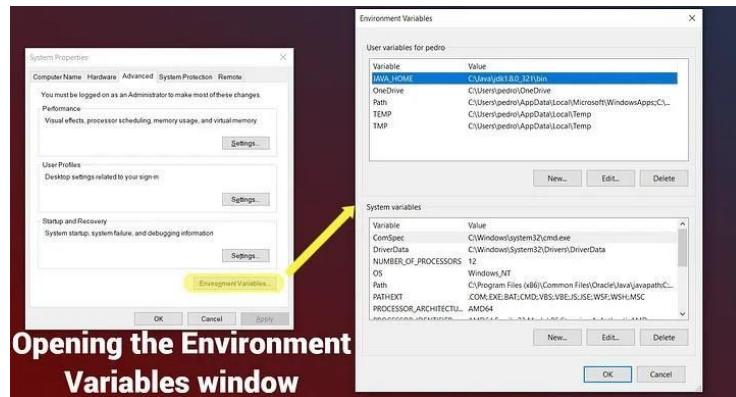
```
<property>
  <name>yarn.nodemanager.aux-services</name>
  <value>mapreduce_shuffle</value>
</property>

<property>
  <name>yarn.nodemanager.auxservices.mapreduce.shuffle.class</name>
  <value>org.apache.hadoop.mapred.ShuffleHandler</value>
</property>
```

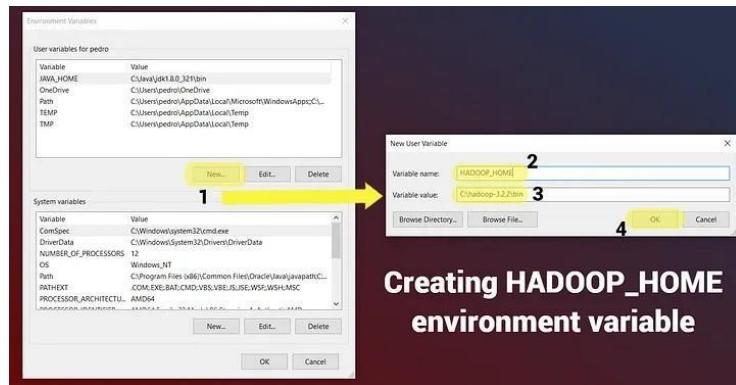
```
 ˜ yarn-site.xml ×
C: > hadoop-3.2.2 > etc > hadoop > ˜ yarn-site.xml
 1   <?xml version="1.0"?>
 2   <!--
 3     Licensed under the Apache license, Version 2.0 (the "License");
 4     you may not use this file except in compliance with the License.
 5     You may obtain a copy of the License at
 6
 7       http://www.apache.org/licenses/LICENSE-2.0
 8
 9     Unless required by applicable law or agreed to in writing, software
10     distributed under the License is distributed on an "AS IS" BASIS,
11     WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
12     See the License for the specific language governing permissions and
13     limitations under the License. See accompanying LICENSE file.
14   -->
15 <configuration>
16   <property>
17     <name>yarn.nodemanager.aux-services</name>
18     <value>mapreduce_shuffle</value>
19   </property>
20
21   <property>
22     <name>yarn.nodemanager.auxservices.mapreduce.shuffle.class</name>
23     <value>org.apache.hadoop.mapred.ShuffleHandler</value>
24   </property>
25 </configuration>
26
```

Hadoop Environment Variable Configuration

Once all five files are properly edited, now you need to create an environment variable for Hadoop. Open the environment variables window as you did when you created JAVA_HOME variable (recall you can open the Environment Variables typing "Edit the system environment variables" in the Windows search bar) and create the HADOOP_HOME variable, assign the Hadoop bin folder path as its value (in my case: C:\hadoop-3.2.2\bin):



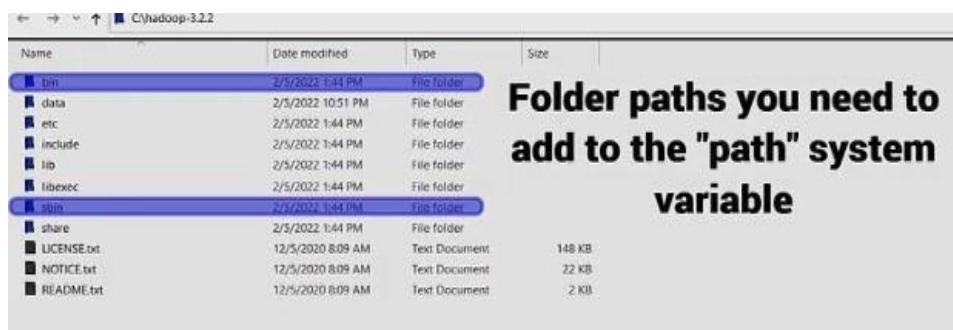
Opening the Environment Variables window



Creating HADOOP_HOME environment variable

Now, you need to edit the Pathsystem variable to add paths to binand sbinfolders of Hadoop. Both folders are in the root directoryof Hadoop.

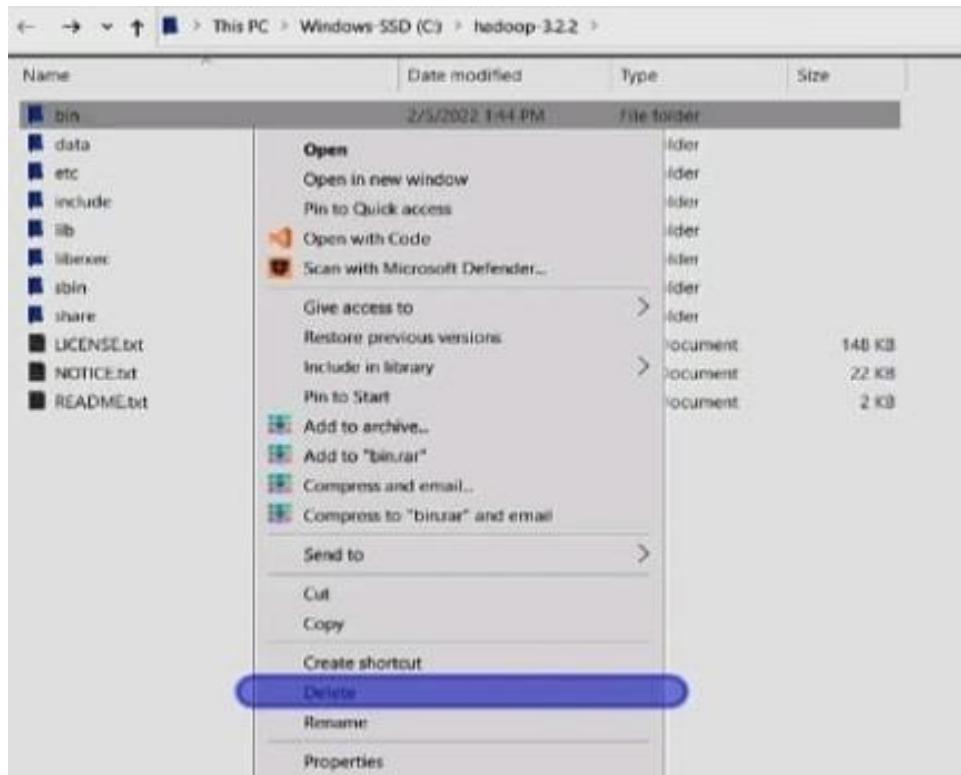
So, binpath is the same you've just assigned to HADOOP_HOMEvariable (C:\hadoop-3.2.2\bin); sbinpath, in my case will be C:\hadoop-3.2.2\sbin:



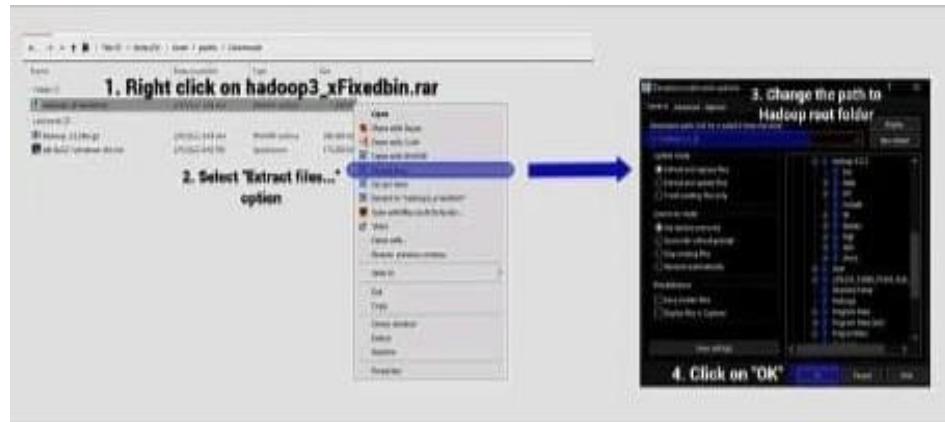
Once done, be careful and click on OK in all windows related to the environment variables to save the changes; otherwise, you will need to repeat this process again.

Fix of Hadoop 'bin' Folder

Now, you need to fix some configuration files. To do it, you need to replace the Hadoop bin folder with another bin folder which already contains all the files properly configured. First, download this compressed file ([hadoop3_xFixedbin.rar](#)). Then, you need to delete bin folder:



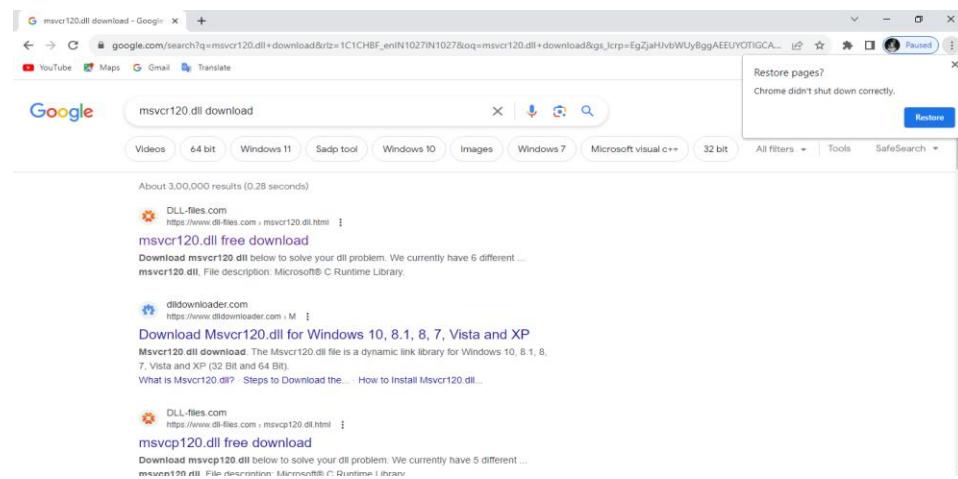
After that, you must decompress [hadoop3_xFixedbin.rar](#) in order to move the fixed binfolder to the Hadoop root location:



Now, you can check the new and fixed binfolder is in Hadoop root:

Name	Date modified	Type	Size
Fixed bin folder			
bin	7/29/2017 3:30 AM	File folder	
data	2/5/2022 10:51 PM	File folder	
etc	2/5/2022 1:44 PM	File folder	
sbin	2/5/2022 1:44 PM	File folder	
lib	2/5/2022 1:44 PM	File folder	
libexec	2/5/2022 1:44 PM	File folder	
sbin	2/5/2022 1:44 PM	File folder	
share	2/5/2022 1:44 PM	File folder	
LICENSE.txt	12/5/2020 8:09 AM	Text Document	146 kB
NONREC.txt	12/5/2020 8:09 AM	Text Document	22 kB
README.txt	12/5/2020 8:09 AM	Text Document	2 kB

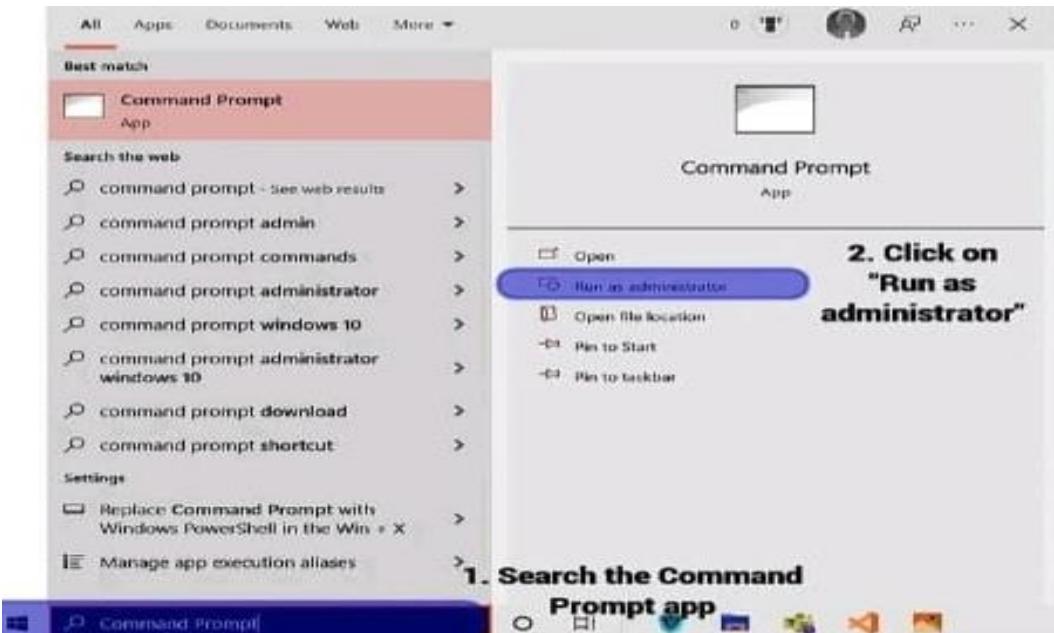
After fix bin folder open the bin folder and search a folder name “winutils”. This Folder will be missed to fix it we have to download “msvcr120.dll”. Go to Browser and search msvcr120.dll download



- Then click on first msvcr120.dll download and it goes to next page.
- And then download the file according to your architecture(bit 32 or 64). After downloading this file
- Extract the file by using 7zip or winwar . Go to local disk:C and then windows
- After open windows and go to system32
- After that missed file will be fixed. And we want to install microsoft visualstudioc++ redistributable to set the shutdown message of hadoop clusters.
- Run the hadoop clusters without shutdown message.
- To check hadoop clusters running successfully use the “localhost:50070”, “localhost:8080” In the browser.
- And that's it, you now have Hadoop File System configured on your computer.

Hadoop Installation Verification

Finally, to check if Hadoop is working properly you need to run it. To do so, open a command prompt as administrator. Recall you can do this typing “Command Prompt” in the Windows search bar:



Now, you need to go to the `sbin` directory inside `hadoop` folder; in my case, `sbin` directory is in `C:\hadoop-3.2.2\sbin`. Once you have typed this path press Enter:

The screenshot shows an 'Administrator: Command Prompt' window. The title bar indicates it is running as an administrator. The window displays the following text:
Microsoft Windows [Version 10.0.19044.1486]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\system32>cd c:\hadoop-3.2.2\sbin
c:\hadoop-3.2.2\sbin>

Then, write the command `start-all.cmd` and press Enter:

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.
C:\Windows\system32>start-all.cmd
```

You will see that several command prompts will open. If Hadoop is properly configured, then these four command prompts will remain open and running:

- `hadoop datanode`
- `hadoop namenode`
- `yarn resourcemanager`
- `yarn nodemanager`

Congratulations, Hadoop is running!

```
Apache Hadoop Distribution - hadoop_namenode
Apache Hadoop Distribution - hadoop_datanode
Apache Hadoop Distribution - yarn_resourcemanager
Apache Hadoop Distribution - yarn_nodemanager
Apache Hadoop Distribution - yarn_random_secrets.
fo[23/23/11/06 15:29:59 INFO http.HttpRequestLog: Http request log for http.requests.nodemanager is not defined
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: Added global filter 'safety' (class=org.apache.hadoop.http.HttpServer2$QuotingInputFilter)
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: Added filter static_user_filter (class=org.apache.hadoop.http.lib.StaticUserWebFilter$StaticUserFilter) to context node
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: Added filter static_user_filter (class=org.apache.hadoop.http.lib.StaticUserWebFilter$StaticUserFilter) to context static
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: Added filter static_user_filter (class=org.apache.hadoop.http.lib.StaticUserWebFilter$StaticUserFilter) to context logs
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: adding path spec: /node/*
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: adding path spec: /ws/*
fo[23/23/11/06 15:29:59 INFO http.HttpServer2: Jetty bound to port 8042
fo[23/23/11/06 15:29:59 INFO mortbay.log: jetty-6.1.26
fo[23/23/11/06 15:29:59 INFO mortbay.log: Extract jar:file:/C:/hadoop/share/hadoop/yarn/hadoop-yarn-common-2.7.0.jar!/webapps/
fo[23/23/11/06 15:29:59 INFO mortbay.log: Node to C:\Users\Adminin\AppData\Local\Temp\jetty_0_0_0_8042_node_19tj0x\webapp
at[23/23/11/06 15:29:59 INFO mortbay.log: Started HttpServer2$SelectChannelConnectorWithSafeStartup@0.0.0:8042
ec[23/23/11/06 15:29:59 INFO webapp.WebApps: Web app /node started at 8042
he[23/23/11/06 15:29:59 INFO webapp.WebApps: Registered webapp guice modules
ie[23/23/11/06 15:29:59 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8031
fo[23/23/11/06 15:29:59 INFO nodemanager.NodeStatusUpdaterImpl: Sending out 0 NM container statuses: []
fo[23/23/11/06 15:29:59 INFO nodemanager.NodeStatusUpdaterImpl: Registering with RM using containers :[]
fo[23/23/11/06 15:30:00 INFO security.NMContainerTokenSecretManager: Rolling master-key for container-tokens, got key with id
fo[23/23/11/06 15:30:00 INFO security.NMContainerTokenSecretManager: Rolling master-key for container-tokens, got key with id -218047545
fo[23/23/11/06 15:30:00 INFO security.NMContainerTokenSecretManager: Rolling master-key for container-tokens, got key with id 1150120066
fo[23/23/11/06 15:30:00 INFO nodemanager.NodeStatusUpdaterImpl: Registered with ResourceManager as 169.254.169.53:1890 with total resource of <memory:8192, vCores:8>
fo[23/11/06 15:30:00 INFO nodemanager.NodeStatusUpdaterImpl: Notifying ContainerManager to unblock new container-requests
```

Result:

Thus the downloading and installation of hadoop was installed successfully.

EX.NO:2 Hadoop implementation of file managements tasks, such as Adding files and
DATE: directories,retrieving files and deleting files.

Aim:

To implement the file management tasks,such as adding files and directories,receiving files and deleting files.

Procedure:

Step1:

Open command prompt as admin and check hadoop version then start all the daemons by using command “start-all.cmd”.

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Windows\system32>start-all.cmd
This script is Deprecated. Instead use start-dfs.cmd and start-yarn.cmd
starting yarn daemons

C:\Windows\system32>jps
7040 Jps
6260 NodeManager
1100 DataNode
2732 ResourceManager
5868 NameNode

C:\Windows\system32>
```

Step2:

To check the list use the command as “hdfs dfs -ls /.”

```
C:\Windows\system32>hdfs dfs -ls /
Found 4 items
-rw-r--r-- 3 user supergroup      0 2023-09-07 12:36 /1.txt
drwxr-xr-x - user supergroup      0 2023-09-08 11:01 /input
drwxr-xr-x - user supergroup      0 2023-09-08 11:27 /out
drwxr-xr-x - user supergroup      0 2023-09-08 12:39 /sbcec
```

Step2.1:

To check it run sucessfully go to localhost //localhost:50070 and check it in the hadoop cluster browser as below.



The screenshot shows a web browser window titled "Browsing HDFS" with the URL "localhost:50070/explorer.html#/". The navigation bar includes links for "Hadoop", "Overview", "Datanodes", "Snapshot", "Startup Progress", and "Utilities". Below the navigation bar, the title "Browse Directory" is displayed. A search bar contains the path "/". A table lists the contents of the root directory:

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	user	supergroup	0 B	9/7/2023, 12:36:53 PM	3	128 MB	1.txt
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 11:01:21 AM	0	0 B	input
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 11:27:38 AM	0	0 B	out

Step3:

Create a directory using command as “hadoop fs -mkdir <directory name> and sub directory as “hadoop fs -mkdir <directory name>/<subdirectory name>.

```
C:\Windows\system32>hdfs dfs -mkdir /sbcec1  
C:\Windows\system32>hdfs dfs -mkdir /sbcec1/sbcec2
```

Step3.1:

To check the directory is created successfully go to // localhost:50070 and check it in hadoop cluster browser.

The screenshot shows a web browser window titled "localhost:50070/explorer.html#/". The top navigation bar includes links for "Hadoop", "Overview", "Datanodes", "Snapshot", "Startup Progress", and "Utilities". Below the navigation bar, the title "Browse Directory" is displayed above a search bar with placeholder text "/". A "Go!" button is located to the right of the search bar. The main content area is a table listing directory entries:

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	user	supergroup	0 B	9/7/2023, 12:36:53 PM	3	128 MB	1.txt
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 11:01:21 AM	0	0 B	input
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 11:27:38 AM	0	0 B	out
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 12:39:21 PM	0	0 B	sbcec
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 1:03:45 PM	0	0 B	sbcec1

Step4:

To create a file using a command as “hadoop fs -touchz”

```
C:\Windows\system32>hdfs dfs -touchz /1.document  
C:\Windows\system32>
```

Step4.1:

To check this go to // localhost:50070 and check it in hadoop cluster browser.

The screenshot shows a web browser window titled "localhost:50070/explorer.html#/". The top navigation bar includes links for "Hadoop", "Overview", "Datanodes", "Snapshot", "Startup Progress", and "Utilities". Below the navigation bar, the title "Browse Directory" is displayed above a search bar with placeholder text "/". A "Go!" button is located to the right of the search bar. The main content area is a table listing directory entries:

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	user	supergroup	0 B	9/8/2023, 1:06:06 PM	3	128 MB	1.document
-rw-r--r--	user	supergroup	0 B	9/7/2023, 12:36:53 PM	3	128 MB	1.txt

Step5:

To delete a file use the command “hadoop fs -rm -r /<filename>”

```
C:\Windows\system32>hdfs dfs -touchz /1.document  
C:\Windows\system32>
```

Step5.1:

After deleting a file check it in hadoop cluster browser.



Browse Directory

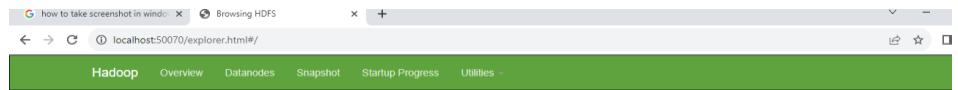
Step6:

To delete a directory using command as "hadoop fs -rm -r /<directory name>" and it same as for subdirectory "hadoop fs -rm -r /<directory name>/<subdirectory name>".

```
C:\Windows\system32>hdfs dfs -rm -r /sbcec1/sbcec2
23/09/08 13:08:39 INFO fs.TrashPolicyDefault: Namenode trash configuration: Deletion interval = 0 minutes
Deleted /sbcec1/sbcec2
```

Step6.1:

To check a deleting directory in hadoop cluster browser.



Browse Directory

Step7:

Stop all daemons using command as "stop-all.cmd".

Result:

Thus the implementation of file management tasks, such as adding files and directories, receiving files and deleting files was executed successfully.

**EX.NO:3 IMPLEMENTATION OF MATRIX MULTIPLICATION USING
DATE: MAPREDUCE**

Aim:

To implement the matrix multiplication using map reduce.

Procedure:

Step1: Open command prompt as admin and Start all daemons by using command "Start-all.cmd" and check all cluster run correctly use command as "jps"

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Windows\system32>start-all.cmd
This script is Deprecated. Instead use start-dfs.cmd and start-yarn.cmd
starting yarn daemons

C:\Windows\system32>jps
7040 Jps
6260 NodeManager
1100 DataNode
2732 ResourceManager
5868 NameNode

C:\Windows\system32>
```

Step2: Create as input directory in hdfs where input file will be uploaded into directory.

Step2.1: use the following command to create directory

"hadoop fs -mkdir /inpdir"

```
C:\Windows\system32>hadoop fs -mkdir /inpdir
```

Step2.2: Now upload the two text file with input data

File : 1.txt

M,0,0,1
M,0,1,2
M,1,0,3
M,1,1,4

File : 2.txt

N,0,0,5
N,0,1,6
N,1,0,7
N,1,1,8

Step2.3: To upload the file in ipdir by using the command as

"hadoop fs -put <path of file1> /inpdir"

"hadoop fs -put <path of file2> /inpdir"

```
C:\Windows\system32>hadoop fs -put D:\1.txt /inpdir
2023-10-01 14:02:28,056 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remi
C:\Windows\system32>hadoop fs -put D:\2.txt /inpdir
2023-10-01 14:03:38,386 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remi
```

Step2.4: View the list of files that have been uploaded in Hadoop by using command a "hadoop fs -ls /inpdir"

```
C:\Windows\system32>hadoop fs -ls /inpdir
Found 2 items
-rw-r--r-- 1 Kavitha supergroup 36 2023-10-01 14:02 /inpdir/1.txt
-rw-r--r-- 1 Kavitha supergroup 34 2023-10-01 14:03 /inpdir/2.txt
```

Step2.5:Now lets view the content of file has been uploaded in hadoop
“hadoop dfs -cat/ipdir/1.txt”

```
C:\Windows\system32>hadoop dfs -cat /ipdir/1.txt
DEPRECATED: Use of this script to execute hdfs command is deprecated.
Instead use the hdfs command for it.
2023-10-01 14:05:03,222 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, rem
@,0,0,1
@,0,1,2
@,1,0,3
@,1,1,4
```

“hadoop dfs -cat/ipdir/2.txt”

```
C:\Windows\system32>hadoop dfs -cat /ipdir/2.txt
DEPRECATED: Use of this script to execute hdfs command is deprecated.
Instead use the hdfs command for it.
2023-10-01 14:05:26,148 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remot
N,0,0,5
N,0,1,6
N,1,0,7
N,1,1,8
C:\Windows\system32>hadoop dfs -cat /ipdir/2.txt
```

Step3:

Now we need to create a jar file for performing matrix multiplication operation. To create jar file we need java IDE lets use eclipse with java environment set to Java 1.8.

Step3.1:Install eclipse IDE as shown:

Step3.2:After downloading Eclipse IDE then and click to install eclipse IDE for java developers



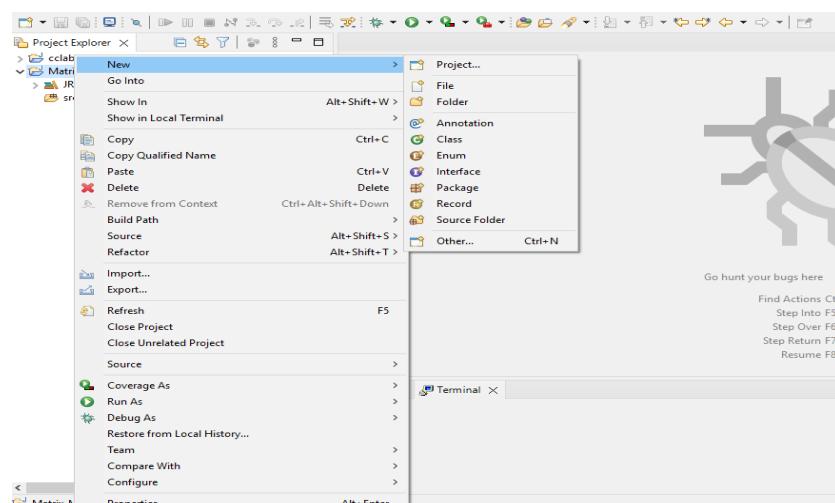
Step3.3:Then it will be installed



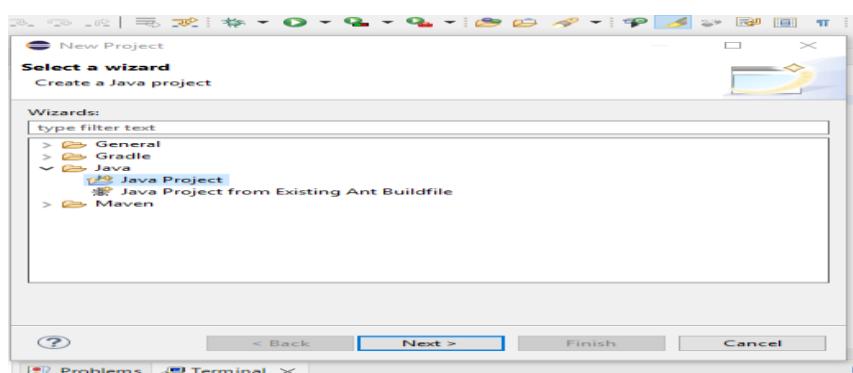
Step3.4: Now Open Eclipse IDE

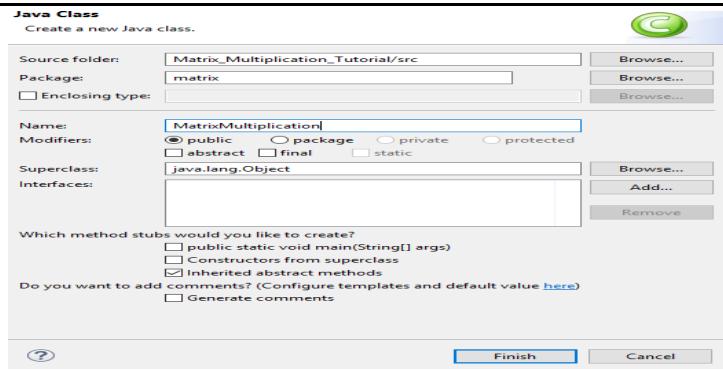


Step3.5: After open eclipse IDE click on file and in that click New and then click on project

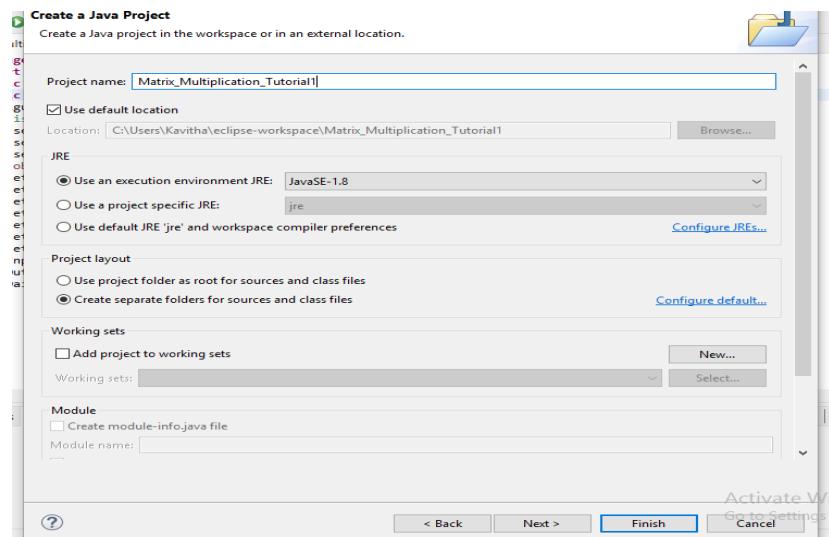


Step3.6: After click project the click Java project and then click on Next

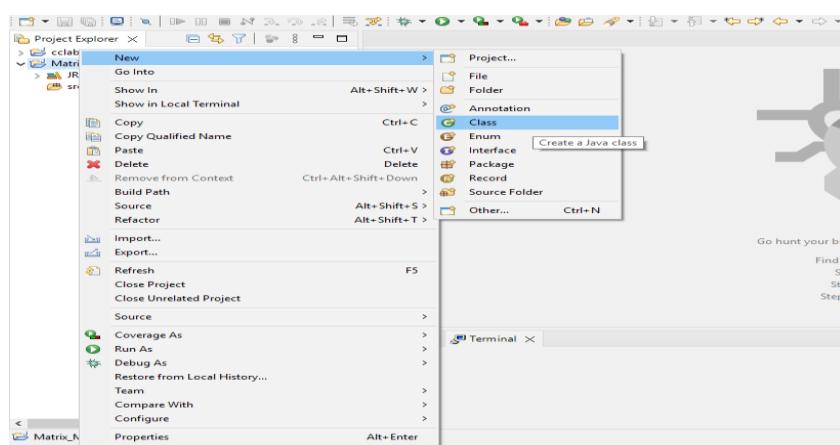




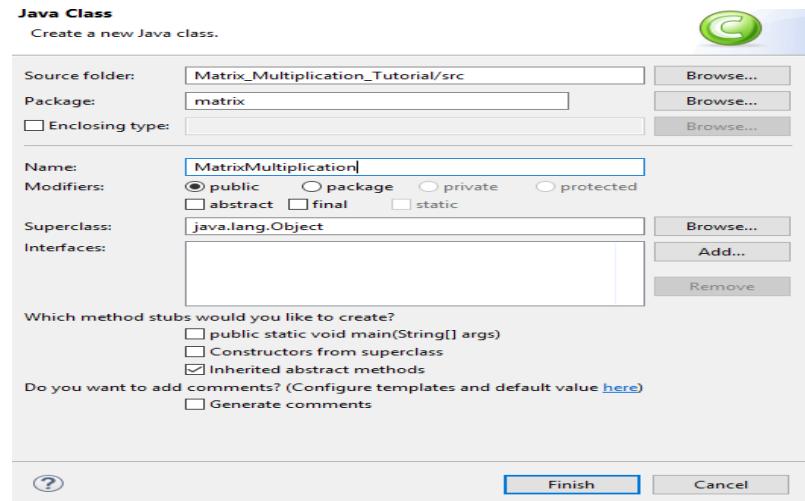
Step3.7:Now save the project by give the project name and click on finish



Step3.8:Now create a package and java class right click on the project name and in that click on New and click on class.



Step3.9:After that to save it give java class name and package name and click on finish as shown



Step 3.10:

Three Java classes are needed for creating a JAR file: MATRIXMAPPER.java, MATRIXREDUCER.java, and MATRIXMULTIPLICATION.java. Additionally, you will require two external JAR files for MapReduce and Hadoop Common.

Step 3.11:

Now, similar to step 3.9, create JAR files for only the Java classes MatrixMapper.java and MatrixReducer.java as shown below:

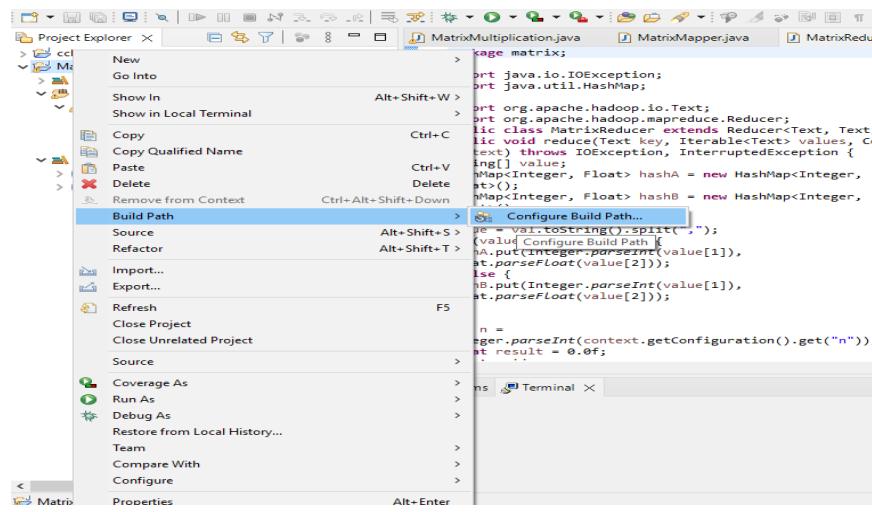
```

1 package matrix;
2
3 import java.io.IOException;
4 import java.util.HashMap;
5
6 import org.apache.hadoop.io.Text;
7 import org.apache.hadoop.mapreduce.Reducer;
8 public class MatrixReducer extends Reducer<Text, Text, Text, Text> {
9 public void reduce(Text key, Iterable<Text> values, Context
10 context) throws IOException, InterruptedException {
11 String[] value;
12 HashMap<Integer, Float> hashA = new HashMap<Integer,
13 Float>();
14 HashMap<Integer, Float> hashB = new HashMap<Integer,
15 Float>();
16 for (Text val : values) {
17 value = val.toString().split(",");
18 if (value[0].equals("A")) {
19 hashA.putInt(Integer.parseInt(value[1]),
20 Float.parseFloat(value[2]));
21 } else {
22 hashB.putInt(Integer.parseInt(value[1]),
23 Float.parseFloat(value[2]));
24 }
25 }
26 int n =
27 Integer.parseInt(context.getConfiguration().get("n"));
28 float result = 0.0f;
29 }

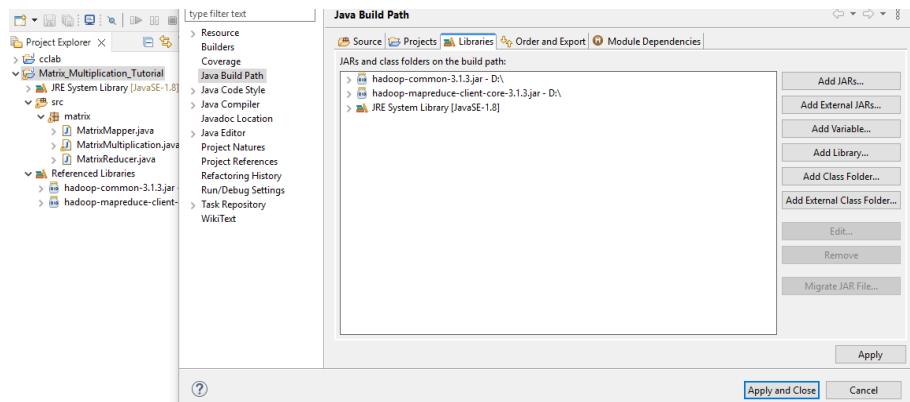
```

Step4: Now we need to Export the java project as jar file.

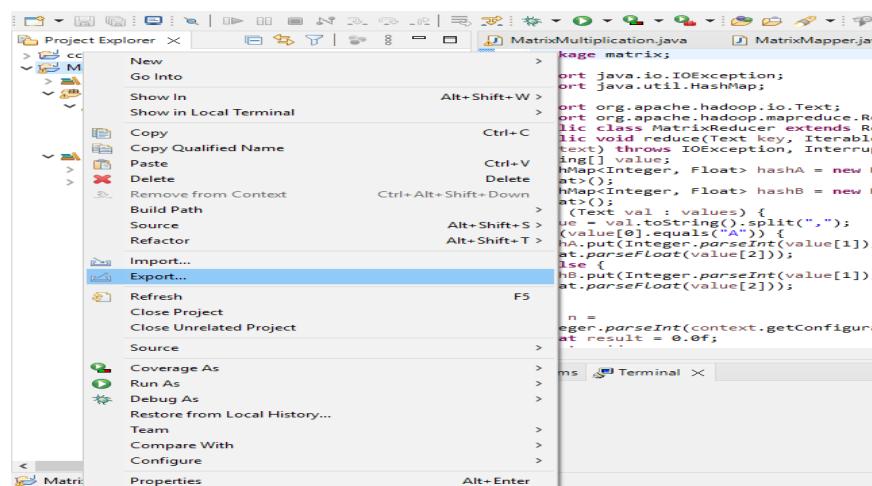
Step4.1: To export this first add hadoop jar file .To add this right click on project name and in that click on "buildpath" and click on "configure path"



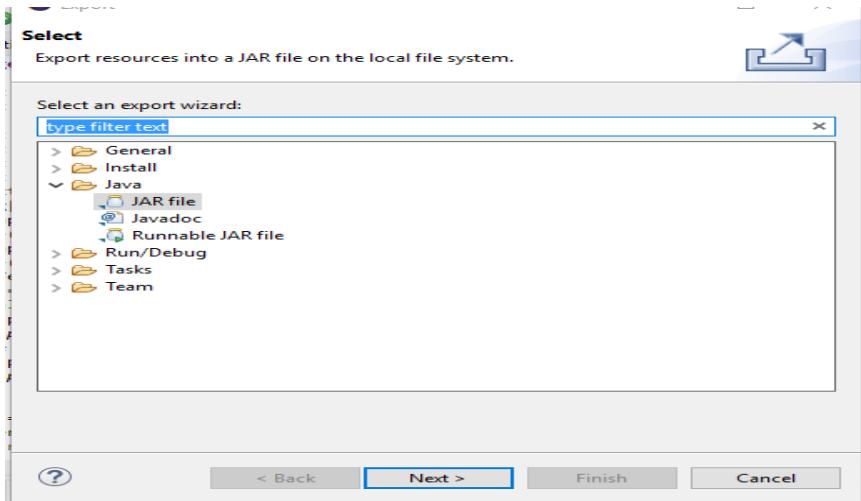
Step4.3:After this it moves on to the " java build path" and in that click on "Libraries".To add the jar files click on "AddExternalJar Files" and add the jar file as shown



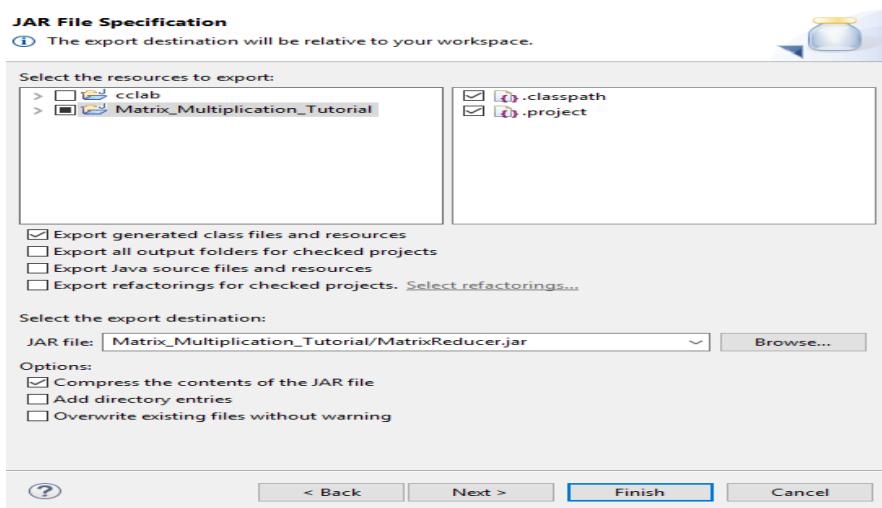
Step4.4:After add the jar we need to export the jar file.First right click on "project name " and click on export



Step4.5:Then click on jar file and click on next



Step4.6:Export the the three java class by click on finish.



Step4.7:After finishing this step the jar file for MatrixMultiplication,MatrixMapper, and MatrixReducer can be created

Step5:Now in command prompt after completing all previous steps. hadoop jar <location of jar file> package name /main class name/inpdir/* /opdir.

```
\,0,1,b  
\,1,0,7  
\,1,1,8  
:\Windows\system32>hadoop jar D:\MatrixMultiplication.jar com.mapreduce.wc/MatrixMultiply/inpdir/*/opdir
```

Step5.1:Then mapreduce function will run successfully as shown below

```
C:\Windows\system32>hadoop jar C:\hadoop-3.1.3\share\hadoop\mapreduce\hadoop-mapreduce-examples-3.1.3.jar wordcount /input1 /out1
2023-09-15 20:00:41,837 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
2023-09-15 20:00:43,836 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/Kavitha/.staging/job_1694787593555/_temp/part-r-00000
2023-09-15 20:00:44,243 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:44,618 INFO input.FileInputFormat: Total input files to process : 1
2023-09-15 20:00:44,864 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:45,119 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:45,240 INFO mapreduce.JobSubmitter: number of splits:1
2023-09-15 20:00:46,278 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:46,383 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1694787593555_0001
2023-09-15 20:00:46,387 INFO mapreduce.JobSubmitter: Executing with tokens: []
2023-09-15 20:00:47,133 INFO conf.Configuration: resource-types.xml not found
2023-09-15 20:00:47,139 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2023-09-15 20:00:48,142 INFO impl.YarnClientImpl: Submitted application application_1694787593555_0001
2023-09-15 20:00:48,281 INFO mapreduce.Job: The url to track the job: http://DESKTOP-RCURB38:8088/proxy/application_1694787593555_0001
2023-09-15 20:00:48,293 INFO mapreduce.Job: Running job: job_1694787593555_0001
2023-09-15 20:01:19,831 INFO mapreduce.Job: Job job_1694787593555_0001 running in uber mode : false
2023-09-15 20:01:19,974 INFO mapreduce.Job: map 0% reduce 0%
2023-09-15 20:01:37,526 INFO mapreduce.Job: map 100% reduce 0%
2023-09-15 20:01:51,824 INFO mapreduce.Job: map 100% reduce 100%
2023-09-15 20:01:55,900 INFO mapreduce.Job: Job job_1694787593555_0001 completed successfully
2023-09-15 20:01:56,366 INFO mapreduce.Job: Counters: 53
File System Counters
FILE: Number of bytes read=83
FILE: Number of bytes written=437301
FILE: Number of read operations=0
FILE: Number of large read operations=0
FILE: Number of writes=0
```

Step6: To get the output use the command as "hadoop dfs -cat/opdir/*.File in the opdir will be read and will be displayed in the command prompt.

PERMISSION DENIED: user or group does not have permission to access this command
Instead use the hdfs command for it.
0,0,19.0
0,1,22.0
1,0,43.0
1.1.58.0

Result:

Thus the implementation of matrix multiplication using mapreduce was executed successfully.

EX.NO:4 Run a basic WordCount MapReduce program to understand Map Reduce
DATE: Paradigm**Aim:**

To run a basic wordcount mapreduce program to understand map reduce paradigm.

Procedure:**Step 1:**

Open command prompt as run as administrator and start all the daemons by using "start-all.cmd" command and check to run the cluster successfully use "jps".

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Windows\system32>start-all.cmd
This script is Deprecated. Instead use start-dfs.cmd and start-yarn.cmd
starting yarn daemons
```

Step2:

The hadoop is running as shown below

```

Apache Hadoop Distribution - hadoop_namenode
Apache Hadoop Distribution - hadoop_datanode
Apache Hadoop Distribution - yarn_resourcemanager
Apache Hadoop Distribution - yarn_nodemanager
random secrets.
23/11/06 15:29:59 INFO http.HttpRequestLog: Http request log for http.requests.nodemanager is not defined
23/11/06 15:29:59 INFO http.HttpServer2: Added global filter 'safety' (class=org.apache.hadoop.http.HttpServer2$QuotingInputFilter)
23/11/06 15:29:59 INFO http.HttpServer2: Added filter static_user_filter (class=org.apache.hadoop.http.lib.StaticUserWebFilter$StaticUserFilter) to context node
23/11/06 15:29:59 INFO http.HttpServer2: Added filter static_user_filter (class=org.apache.hadoop.http.lib.StaticUserWebFilter$StaticUserFilter) to context static
23/11/06 15:29:59 INFO http.HttpServer2: Added filter static_user_filter (class=org.apache.hadoop.http.lib.StaticUserWebFilter$StaticUserFilter) to context logs
23/11/06 15:29:59 INFO http.HttpServer2: adding path spec: /node/*
23/11/06 15:29:59 INFO http.HttpServer2: adding path spec: /ws/*
23/11/06 15:29:59 INFO http.HttpServer2: Jetty bound to port 8042
23/11/06 15:29:59 INFO mortbay.log: jetty-6.1.26
23/11/06 15:29:59 INFO mortbay.log: Extract jar:file:/C:/hadoop/share/hadoop/yarn/hadoop-yarn-common-2.7.0.jar!/webapps/
23/11/06 15:29:59 INFO mortbay.log: Started HttpServer2$SelectChannelConnectorWithSafeStartup@0.0.0:8042
23/11/06 15:29:59 INFO webapp.WebApps: Web app /node started at 8042
23/11/06 15:29:59 INFO webapp.WebApps: Registered webapp guice modules
23/11/06 15:29:59 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8031
23/11/06 15:29:59 INFO nodemanager.NodeStatusUpdaterImpl: Sending out 0 NM container statuses: []
23/11/06 15:29:59 INFO nodemanager.NodeStatusUpdaterImpl: Registering with RM using containers :[]
23/11/06 15:30:00 INFO security.NMContainerTokenSecretManager: Rolling master-key for container-tokens, got key with id -218047545
23/11/06 15:30:00 INFO security.NMTokenSecretManagerInNM: Rolling master-key for container-tokens, got key with id 1150120066
23/11/06 15:30:00 INFO nodemanager.NodeStatusUpdaterImpl: Registered with ResourceManager as 169.254.169.53:1890 with total resource of <memory:8192, vCores:8>
23/11/06 15:30:00 INFO nodemanager.NodeStatusUpdaterImpl: Notifying ContainerManager to unblock new container-requests

```

Step3:

By using “jps” command we can check the hadoop cluster is running successfully.

```
C:\Windows\system32>jps
7840 Jps
6260 NodeManager
1100 DataNode
2732 ResourceManager
5868 NameNode
```

Step4:

Make a directory as input1 by using the command “hadoop fs -mkdir /input1” as shown below

```
C:\Windows\system32>hadoop fs -mkdir /input1
```

Step5:

In local disk c create a text document named data and write content as shown below

```
hi  
hello  
world  
hi  
hello  
kavitha  
how  
are  
you  
hi
```

Step6:

To create a datafile in input1 directory use the command as “hadoop fs -put <path of file> / Directory name” and to show the list use command as hadoop fs -ls / directory name as shown below

```
C:\Windows\system32>hadoop fs -put C:/data.txt /input1  
2023-09-15 19:54:08,441 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrustee  
C:\Windows\system32>hadoop fs -ls /input1  
Found 1 items  
rw-r--r-- 1 Kavitha supergroup 63 2023-09-15 19:54 /input1/data.txt
```

Step7:

To show the content of file use command as “hadoop fs -cat /<directory name>/<file name>

```
C:\Windows\system32>hadoop dfs -cat /input1/data.txt  
DEPRECATED: Use of this script to execute hdfs command is deprecated.  
Instead use the hdfs command for it.  
2023-09-15 19:55:38,800 INFO sasl.SaslDataTransferClient: SASL encryption trust che  
n|hi  
hello  
world  
hi  
hello  
kavitha  
how  
are  
you  
hi
```

Step8:

To perform word count operations, use the following command:

```
hadoop jar C:\hadoop\share\hadoop\mapreduce\hadoop-mapreduce-examples-3.1.3.jar wordcount  
/input1 /out
```

MapReduce function is started as shown below:

```
C:\Windows\system32>hadoop jar C:\hadoop-3.1.3\share\hadoop\mapreduce\hadoop-mapreduce-examples-3.1.3.jar wordcount /input1 /out1
2023-09-15 20:00:41,837 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
2023-09-15 20:00:43,836 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/Kavitha/.staging/job_1694787593555_0001/part-r-00000
2023-09-15 20:00:44,241 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:44,618 INFO input.FileInputFormat: Total input files to process : 1
2023-09-15 20:00:44,863 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:45,119 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:45,246 INFO mapreduce.JobSubmitter: number of splits:1
2023-09-15 20:00:46,278 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2023-09-15 20:00:46,383 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1694787593555_0001
2023-09-15 20:00:46,387 INFO mapreduce.JobSubmitter: Executing with tokens: []
2023-09-15 20:00:47,133 INFO conf.Configuration: resource-types.xml not found
2023-09-15 20:00:47,139 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2023-09-15 20:00:48,142 INFO impl.YarnClientImpl: Submitted application application_1694787593555_0001
2023-09-15 20:00:48,281 INFO mapreduce.Job: The url to track the job: http://DESKTOP-RCURB38:8088/proxy/application_1694787593555_0001
2023-09-15 20:00:48,293 INFO mapreduce.Job: Running job: job_1694787593555_0001
2023-09-15 20:01:19,831 INFO mapreduce.Job: Job job_1694787593555_0001 running in uber mode : false
2023-09-15 20:01:19,974 INFO mapreduce.Job: map 0% reduce 0%
2023-09-15 20:01:37,526 INFO mapreduce.Job: map 100% reduce 0%
2023-09-15 20:01:51,824 INFO mapreduce.Job: map 100% reduce 100%
2023-09-15 20:01:55,900 INFO mapreduce.Job: Job job_1694787593555_0001 completed successfully
2023-09-15 20:01:56,366 INFO mapreduce.Job: Counters: 53
  File System Counters
    FILE: Number of bytes read=83
    FILE: Number of bytes written=437301
    FILE: Number of read operations=0
    FILE: Number of large read operations=0
    FILE: Number of writes=0
    FILE: Number of append operations=0
```

Step9:

After mapreduce run successfully to display the output use command as “hadoop fs -cat /out/* and it show the output as show below

```
C:\Windows\system32>hadoop fs -cat /out1/*
2023-09-15 20:03:01,094 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
are      1
hello    2
hi       3
how     1
kavitha 1
world    1
you     1

C:\Windows\system32>
```

Step 10:

To check wordcount run successful using “localhost:50070” as shown below



Browse Directory

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	user	supergroup	0 B	9/7/2023, 12:36:53 PM	3	128 MB	1.txt
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 11:01:21 AM	0	0 B	input
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 11:27:38 AM	0	0 B	out
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 12:39:21 PM	0	0 B	sbcect
drwxr-xr-x	user	supergroup	0 B	9/8/2023, 1:03:45 PM	0	0 B	sbcect1

RESULT:

Thus the wordcount program using mapreduce was executed successfully.

EX.NO:5**Installation of Hive along with practice example****DATE:****Aim:**

To install the hive along with practice example.

Procedure:**Step1:**

To install hive we have to check that the java and hadoop are successfully installed. To check that use the command “java -version” and “hadoop version” as shown below.

```
Microsoft Windows [Version 10.0.10580]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Windows\system32>java -version
java version "1.8.0_202"
Java(TM) SE Runtime Environment (build 1.8.0_202-b08)
Java HotSpot(TM) 64-Bit Server VM (build 25.202-b08, mixed mode)

C:\Windows\system32>hadoop version
Hadoop 3.1.3
Source code repository https://gitbox.apache.org/repos/asf/hadoop.git -r ba631c436bb06728fb8
Compiled by ztang on 2019-09-12T02:47Z
Compiled with protoc 2.5.0
From source with checksum ec785077c385118ac91aadde5ec9799
This command was run using /C:/hadoop-3.1.3/share/hadoop/common/hadoop-common-3.1.3.jar

C:\Windows\system32>...
```

Step2:

In order to download apache hive go to the official website <https://downloads.apache.org/hive/hive-3.1.2/> and install the hive.

Index of /hive/hive-3.1.2

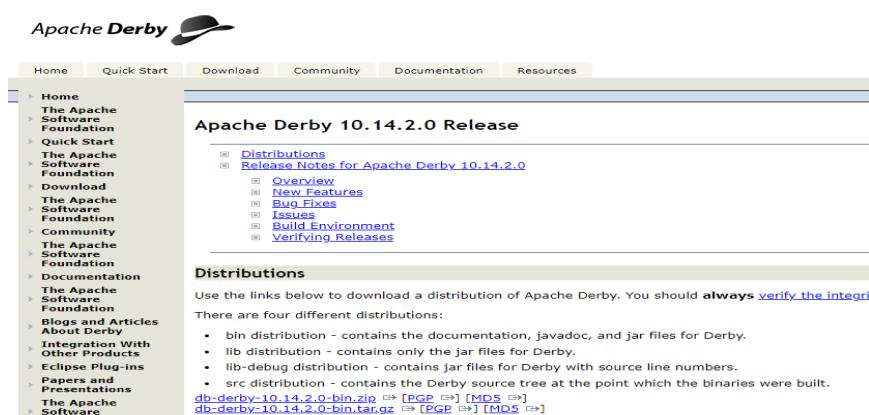
Name	Last modified	Size	Description
Parent Directory		-	
apache-hive-3.1.2-bin.tar.gz	2019-08-26 20:20	266M	
apache-hive-3.1.2-bin.tar.gz.asc	2019-08-26 20:20	833	
apache-hive-3.1.2-bin.tar.gz.sha256	2019-08-26 20:20	95	
apache-hive-3.1.2-src.tar.gz	2019-08-26 20:20	24M	
apache-hive-3.1.2-src.tar.gz.asc	2019-08-26 20:20	833	
apache-hive-3.1.2-src.tar.gz.sha256	2019-08-26 20:20	95	

When the download complete extract the file using 7zip or winwar and after extract file named as "hive" and save file in the directory localdisk:C "C:\hive"

Step3:

To run hive use the server "derby" to download this go to the website https://db.apache.org/derby/releases/release-10_14_2_0.html and download "tar.gz" as shown below



The screenshot shows the Apache Derby 10.14.2.0 Release page. The left sidebar has a navigation menu with links like Home, Quick Start, Download, Community, Documentation, and Resources. The main content area is titled "Apache Derby 10.14.2.0 Release". Under "Distributions", there are four options: "bin distribution", "lib distribution", "lib-debug distribution", and "src distribution". Each option has a link to its respective tar.gz file and a note about PGP and MD5 signatures. The "bin distribution" link is highlighted.

When the download complete extract the file using 7zip or winwar and save the extract file in same hive directory as "C:/derby".

Step4:

Configure Hive as follow:

Step4.1:

Now should go to the derby libraries directory(C:\derby\lib)and copy all jar*.files as shown below.

	Name	Date modified	Type	Size
cess	derby.jar	4/7/2018 4:10 AM	Executable Jar File	3,158 KB
ads	derby.war	4/7/2018 4:10 AM	WAR File	2 KB
nts	derbyclient.jar	4/7/2018 4:10 AM	Executable Jar File	575 KB
	derbyLocale_cs.jar	4/7/2018 4:10 AM	Executable Jar File	93 KB
	derbyLocale_de_DE.jar	4/7/2018 4:10 AM	Executable Jar File	110 KB
SSIS comp	derbyLocale_es.jar	4/7/2018 4:10 AM	Executable Jar File	104 KB
	derbyLocale_fr.jar	4/7/2018 4:10 AM	Executable Jar File	110 KB
ume (E)	derbyLocale_hu.jar	4/7/2018 4:10 AM	Executable Jar File	94 KB
	derbyLocale_it.jar	4/7/2018 4:10 AM	Executable Jar File	104 KB
	derbyLocale_ja_JP.jar	4/7/2018 4:10 AM	Executable Jar File	121 KB
	derbyLocale_ko_KR.jar	4/7/2018 4:10 AM	Executable Jar File	115 KB
	derbyLocale_pl.jar	4/7/2018 4:10 AM	Executable Jar File	92 KB
	derbyLocale_pt_BR.jar	4/7/2018 4:10 AM	Executable Jar File	89 KB
	derbyLocale_ru.jar	4/7/2018 4:10 AM	Executable Jar File	119 KB
	derbyLocale_zh_CN.jar	4/7/2018 4:10 AM	Executable Jar File	108 KB
	derbyLocale_zh_TW.jar	4/7/2018 4:10 AM	Executable Jar File	109 KB
	derbynet.jar	4/7/2018 4:10 AM	Executable Jar File	267 KB
	derbyoptionaltools.jar	4/7/2018 4:10 AM	Executable Jar File	81 KB
	derbyrun.jar	4/7/2018 4:10 AM	Executable Jar File	10 KB
	derbytools.jar	4/7/2018 4:10 AM	Executable Jar File	226 KB

Then we should paste them in hive libraries directory(C:\hive\lib) After paste it shown as

Name	Date modified	Type	Size
datanucleus-rdbms-4.1.19.jar	9/26/2018 10:33 PM	Executable Jar File	1,864 KB
derby.jar	4/7/2018 4:10 AM	Executable Jar File	3,158 KB
derby.war	4/7/2018 4:10 AM	WAR File	2 KB
derby-10.14.1.0.jar	9/26/2018 10:30 PM	Executable Jar File	3,157 KB
derbyclient.jar	4/7/2018 4:10 AM	Executable Jar File	575 KB
derbyLocale_cs.jar	4/7/2018 4:10 AM	Executable Jar File	93 KB
derbyLocale_de_DE.jar	4/7/2018 4:10 AM	Executable Jar File	110 KB
derbyLocale_es.jar	4/7/2018 4:10 AM	Executable Jar File	104 KB
derbyLocale_fr.jar	4/7/2018 4:10 AM	Executable Jar File	110 KB
derbyLocale_hu.jar	4/7/2018 4:10 AM	Executable Jar File	94 KB
derbyLocale_it.jar	4/7/2018 4:10 AM	Executable Jar File	104 KB
derbyLocale_ja_JP.jar	4/7/2018 4:10 AM	Executable Jar File	121 KB
derbyLocale_ko_KR.jar	4/7/2018 4:10 AM	Executable Jar File	115 KB
derbyLocale_pl.jar	4/7/2018 4:10 AM	Executable Jar File	92 KB
derbyLocale_pt_BR.jar	4/7/2018 4:10 AM	Executable Jar File	89 KB
derbyLocale_ru.jar	4/7/2018 4:10 AM	Executable Jar File	119 KB
derbyLocale_zh_CN.jar	4/7/2018 4:10 AM	Executable Jar File	108 KB
derbyLocale_zh_TW.jar	4/7/2018 4:10 AM	Executable Jar File	109 KB
derbynet.jar	4/7/2018 4:10 AM	Executable Jar File	267 KB
derbyoptionaltools.jar	4/7/2018 4:10 AM	Executable Jar File	81 KB
derbyrun.jar	4/7/2018 4:10 AM	Executable Jar File	10 KB
derbytools.jar	4/7/2018 4:10 AM	Executable Jar File	226 KB
disruptor-3.3.6.jar	9/26/2018 10:38 PM	Executable Jar File	83 KB
dropwizard-metrics-hadoop-metrics2-re...	9/26/2018 10:28 PM	Executable Jar File	16 KB
druid-hdfs-storage-0.12.0.jar	11/15/2018 7:31 PM	Executable Jar File	40 KB

Step4.2:

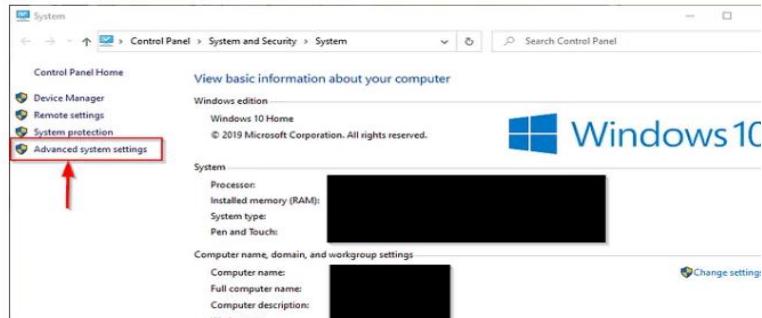
Configuring hive-site.xml file:

Now we should go to the hive configuration directory as (C:\hive\conf). Create a new folder "hive-site.xml" we should paste the following xml code within this file.

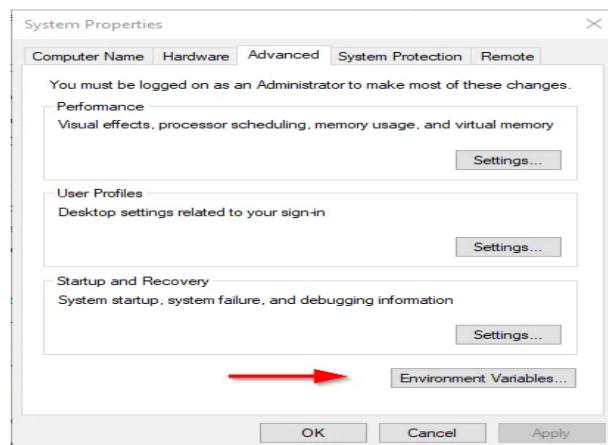
```
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
<configuration><property> <name>javax.jdo.option.ConnectionURL</name>
<value>jdbc:derby://localhost:1527/metastore_db;create=true</value>
<description>JDBC connect string for a JDBC metastore</description>
</property><property>
<name>javax.jdo.option.ConnectionDriverName</name>
<value>org.apache.derby.jdbc.ClientDriver</value>
<description>Driver class name for a JDBC metastore</description>
</property>
<property>
<name>hive.server2.enable.doAs</name>
<description>Enable user impersonation for HiveServer2</description>
<value>true</value>
</property>
<property>
<name>hive.server2.authentication</name>
<value>NONE</value>
<description> Client authentication types. NONE: no authentication
check LDAP: LDAP/AD based authentication KERBEROS: Kerberos/GSSAPI
authentication CUSTOM: Custom authentication provider (Use with
property hive.server2.custom.authentication.class) </description>
</property>
<property>
<name>datanucleus.autoCreateTables</name>
<value>True</value>
</property>
</configuration>
```

Step5:

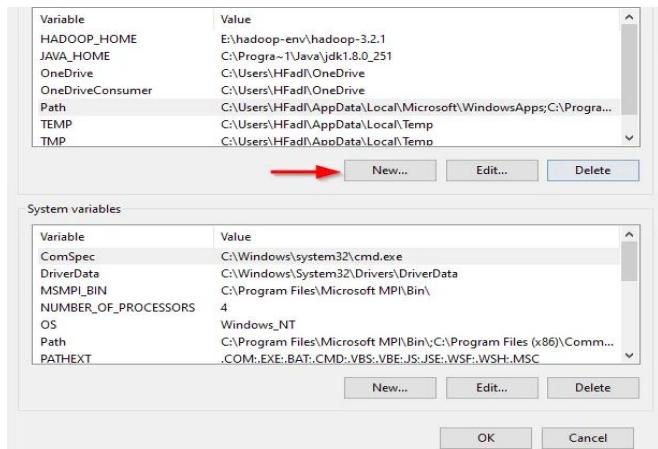
Finally set path for "derby" and "herby" as follow. Go to control panel>System and Security> and System. Then click on "advanced system setting"



In the advanced system settings click on the "environment variables"



Now should add the following user variables



We have to set path for the following user variables:

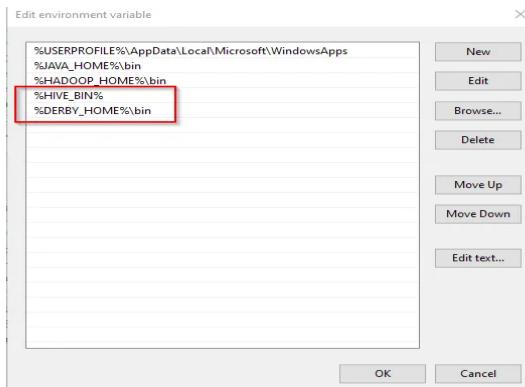
- *HIVE_HOME:C:\hive
- *HIVE_LIB:C:\hive\lib
- *HIVE_BIN:C:\hive\bin
- *DERBY_HOME:C:\derby
- *HADOOP_USER_CLASSPATH_FIRST:"true"

Besides should add the following system variables

- *HADOOP_USER_CLASSPATH_FIRST:"true"

Now we should add the path user variables to add the following path as

- *%HIVE_BIN%
- *%DERBY_HOME%\bin



Step6:

Starting Service

Step6.1:

Start hadoop by using command as "start-all.cmd"

Step6.2:

Start the derby network server localhost using the command as "StartNetworkServer -h 0.0.0.0" in command prompt as run as administrator and derby server as started as below:

```
::\Windows\system32>StartNetworkServer -h 0.0.0.0
iat Sep 16 18:16:15 IST 2023 : Security manager installed using the Basic server security policy.
iat Sep 16 18:16:17 IST 2023 : Apache Derby Network Server - 10.14.2.0 - (1828579) started and ready to accept connec
```

Step6.3:

The open new command as admin and type "hive" then hive is started as below

```
Windows\System32\hive
OK StatusLogger No log4j2 configuration file found. Using default configuration: logging only errors to the console.
necting to jdbc:hive2://
43: Class path contains multiple SLF4J bindings.
43: Found binding in [jar:file:/C:/hive/lib/log4j-slf4j-impl-2.4.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
43: Found binding in [jar:file:/C:/hadoop/share/hadoop/common/lib/slf4j-log4j12-1.7.10.jar!/org/slf4j/impl/StaticLoggerBinder.class]
43: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
43: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
ected to: Apache Hive (version 2.1.0)
ver: Hive 2.0.0 (version 2.1.0)
raction isolation: TRANSACTION_REPEATABLE_READ
line version 2.1.0 by Apache Hive
go> create database test;

rows affected (2.526 seconds)
go> show databases;
```

Step7:

Pratice example for hive

```
hive> create database test;
OK
No rows affected (2.526 seconds)
hive> show databases;
OK
default
rakib
rakib_db
test
4 rows selected (0.662 seconds)
hive> use test;
OK
No rows affected (0.057 seconds)
hive> create table student(id int, name string, grade string, score double);
OK
No rows affected (0.448 seconds)
hive> desc student;
OK
id int
name string
grade string
score double
4 rows selected (0.308 seconds)
```

Result:

Thus the installation of hive was installed and executed successfully.

EX.NO:6 Installation of Hbase along with some practice examples.

DATE:

Aim:

To install Hbase along with some practice examples.

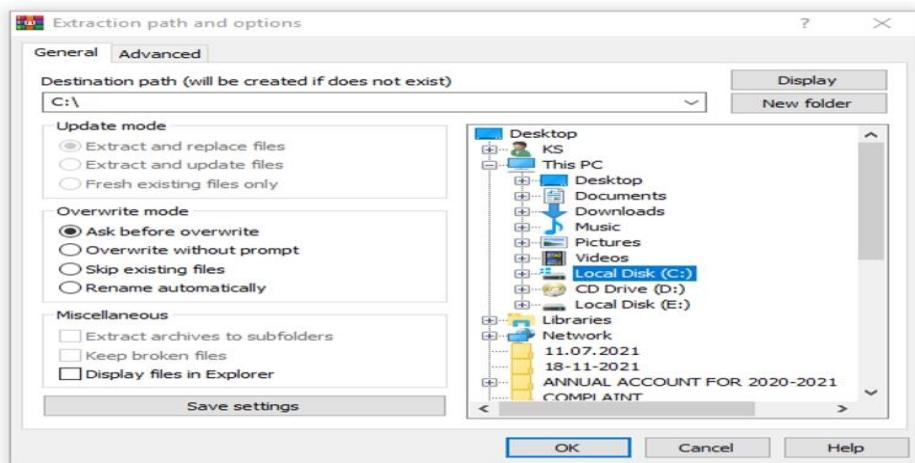
Procedure:

Step1:

Download the hbase from apache by using link "<https://hbase.apache.org/downloads.html>".

Step2:

After downloading extracting all the files in c drive as below



Step3:

This PC > Local Disk (C:) > hbase-2.4.9			
	Name	Date modified	Type
s	bin	1/29/2022 2:42 PM	File folder
s	conf	1/29/2022 2:42 PM	File folder
s	docs	1/29/2022 2:42 PM	File folder
s	hbase	1/29/2022 2:45 PM	File folder
s	hbase-webapps	1/29/2022 2:42 PM	File folder
I	lib	1/29/2022 2:42 PM	File folder
I	zookeeper	1/29/2022 2:45 PM	File folder
I	CHANGES	1/22/2020 8:40 PM	MD File
I	LEGAL	1/22/2020 8:40 PM	File
I	LICENSE	1/22/2020 8:40 PM	Text Document
I	NOTICE	1/22/2020 8:40 PM	Text Document
I	README	1/22/2020 8:40 PM	Text Document
I	RELEASENOTES	1/22/2020 8:40 PM	MD File
			99 KB
			1 KB
			137 KB
			561 KB
			2 KB
			1,034 KB

In the hbase folder adding two files named as "hbase" and "zookeeper" as shown below

Step4:

Deleting this line in Hbase.cmd. Open hbase.cmd in text editor and search for line "HEAP_SETTINGS" and remove it as below

```
16     set HBASE_SECURITY_LOGGER=INFO,DRFAS
17 )
18 )
19 set HBASE_OPTS=%HBASE_OPTS% -Dhbase.security.logger="%HBASE_SECURITY_LOGGER%"
20
21 set HEAP_SETTINGS=%JAVA_HEAP_MAX% %JAVA_OFFHEAP_MAX%
22 set java_arguments=%HBASE_OPTS% -classpath "%CLASSPATH%" %CLASS% %hbase-command-arguments%
23
24 if defined service_entry (
25     call :makeServiceXml %java_arguments%
26 ) else (
27     call %JAVA% %java_arguments%
28 )
29
30 endlocal
31 goto :eof
```

Step5:

In conf folder open hbase-env.cmd in text editor and add these below file in the file after the comment session

```
set JAVA_HOME=%JAVA_HOME%
set HBASE_CLASSPATH=%HBASE_HOME%\lib\client-facing-thirdparty\*
set HBASE_HEAPSIZE=8000
set HBASE_OPTS="-XX:+UseConcMarkSweepGC" "-Djava.net.preferIPv4Stack=true"
set SERVER_GC_OPTS="-verbose:gc" "-XX:+PrintGCDetails" "-XX:+PrintGCDateStamps" %HBASE_GC_OPTS%
set HBASE_USE_GC_LOGFILE=true
set HBASE_JMX_BASE="Dcom.sun.management.jmxremote.ssl=false" "
-Dcom.sun.management.jmxremote.authenticate=false"
set HBASE_MASTER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10101"
set HBASE_REGIONSERVER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10102"
set HBASE_THRIFT_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10103"
set HBASE_ZOOKEEPER_OPTS=%HBASE_JMX_BASE% -Dcom.sun.management.jmxremote.port=10104"
set HBASE_REGIONSERS=%HBASE_HOME%\conf\regionservers
set HBASE_LOG_DIR=%HBASE_HOME%\logs
set HBASE_IDENT_STRING=%USERNAME%
set HBASE_MANAGES_ZK=true

@rem Set environment variables here.
20
21 @rem The java implementation to use. Java 1.8+ required.
22 @rem set JAVA_HOME=c:\apps\java
23 set JAVA_HOME=%JAVA_HOME%
24 set HBASE_CLASSPATH=%HBASE_HOME%\lib\client-facing-thirdparty\*
25 set HBASE_HEAPSIZE=8000
26 set HBASE_OPTS="-XX:+UseConcMarkSweepGC" "-Djava.net.preferIPv4Stack=true"
27 set SERVER_GC_OPTS="-verbose:gc" "-XX:+PrintGCDetails" "-XX:+PrintGCDateStamps" %HBASE_GC_OPTS%
28 set HBASE_USE_GC_LOGFILE=true
29
30 set HBASE_JMX_BASE="Dcom.sun.management.jmxremote.ssl=false" "-Dcom.sun.management.jmxremote.authenticate=false"
31
32 set HBASE_MASTER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10101"
33 set HBASE_REGIONSERVER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10102"
34 set HBASE_THRIFT_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10103"
35 set HBASE_ZOOKEEPER_OPTS=%HBASE_JMX_BASE% -Dcom.sun.management.jmxremote.port=10104"
36 set HBASE_REGIONSERS=%HBASE_HOME%\conf\regionservers
37 set HBASE_LOG_DIR=%HBASE_HOME%\logs
38 set HBASE_IDENT_STRING=%USERNAME%
39 set HBASE_MANAGES_ZK=true
40
41 @rem Extra Java CLASSPATH elements. Optional.
42 @rem set HBASE_CLASSPATH=
43
```

Step6:

In conf folder Open hbase-site.xml file in any text editor and these line in this file as shown

```
<property>
<name>hbase.rootdir</name>
<value>file:///C:/Documents/hbase-2.2.5/hbase</value>
</property>
<property>
<name>hbase.zookeeper.property.dataDir</name>
<value>/C:/Documents/hbase-2.2.5/zookeeper</value>
</property>
<property>
<name> hbase.zookeeper.quorum</name>
<value>localhost</value>
</property>
```

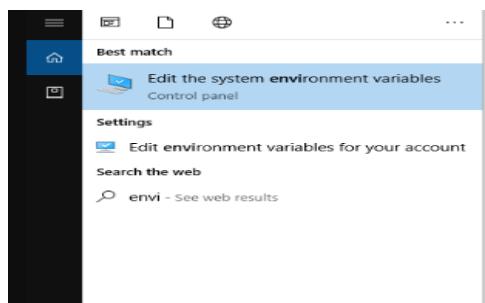
```
52      <value>false</value>
53  </property>
54  <property>
55    <name>hbase.rootdir</name>
56    <value>file:///C:/Documents/hbase-2.2.5/hbase</value>
57  </property>
58  <property>
59    <name>hbase.zookeeper.property.dataDir</name>
60    <value>/C:/Documents/hbase-2.2.5/zookeeper</value>
61  </property>
62  <property>
63    <name> hbase.zookeeper.quorum</name>
64    <value>localhost</value>
65  </property>
66 </configuration>
```

Step7:

Set up the environment variables as shown

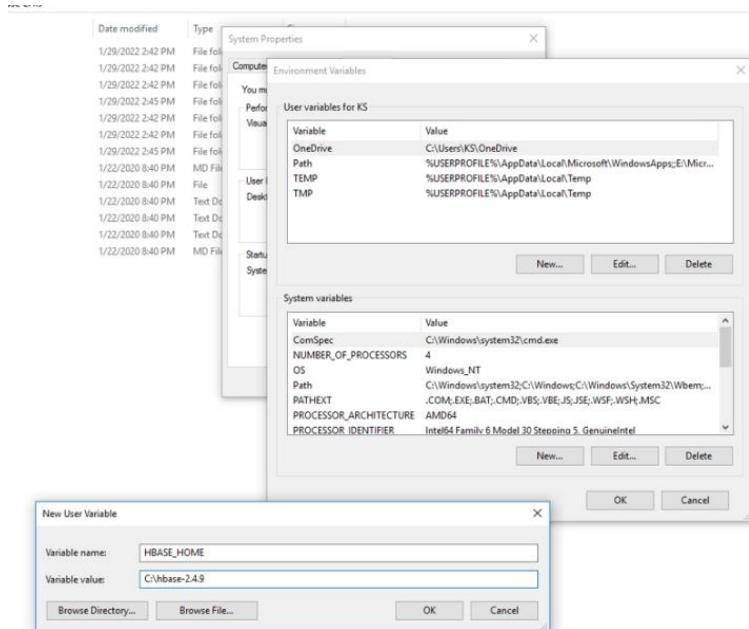
Step7.1:

Edit the environment variables



Step7.2:

set path for hbase in user variable as shown



Now successfully completed set up the environmental variables for Hbase .

Step8:

Open command prompt as admin and check the version by using command “hbase version” as shown

```
C:\Users\psaka\Documents\hbase-2.4.9-bin\bin>hbase version
HBase 2.4.9
Source code repository git://Wintermute.local/Users/andrewpurtell/src/WORK-hbase rev
69286dfccc
Compiled by andrewpurtell on Fri Dec 17 19:02:09 PST 2021
From source with checksum b006a70aa660cae4558822abf4dbfb5488193f6cbc890b912febbf4b9a
5dded902a03615764a3423f629a659d1c8
```

Step9:

Start the hbase by using command as “start-hbase.cmd”

```
C:\WINDOWS\system32>cd ..
C:\Windows>cd ..
C:>>cd \Users\psaka\Documents\hbase-2.4.9-bin\bin
C:\Users\psaka\Documents\hbase-2.4.9-bin\bin>start-hbase.cmd
```

Now the hbase cluster was run run as shown

```

2022-01-25 17:42:50,605 INFO [main] master.HMaster: STARTING service HMaster
2022-01-25 17:42:50,614 INFO [main] util.VersionInfo: HBase 2.4.9
2022-01-25 17:42:50,614 INFO [main] util.VersionInfo: Source code repository git://Winternmute.local/Users/andrewpurtell
/src/WORK-hbase revision=c49f7f63fcfa144765bf7c2da41791769286dfccc
2022-01-25 17:42:50,614 INFO [main] util.VersionInfo: Compiled by andrewpurtell on Fri Dec 17 19:02:09 PST 2021
2022-01-25 17:42:50,614 INFO [main] util.VersionInfo: From source with checksum b006a70aa660cae4558822abf4dbfb548819
cbc890b912febfb4b9a8b264b54a96fa0d32166e4d371964ad25e365dded982a03615764a3423f629a659dc18
2022-01-25 17:42:51,233 WARN [main] util.Shell: Did not find winutils.exe: []
java.io.FileNotFoundException: Hadoop bin directory does not exist: C:\hadoop\bin\bin - see https://wiki.apache.org/hadoop/WindowsProblems
        at org.apache.hadoop.util.Shell.getQualifiedBinInner(Shell.java:594)
        at org.apache.hadoop.util.Shell.getQualifiedBin(Shell.java:578)
        at org.apache.hadoop.util.Shell.<clinit>(Shell.java:675)
        at org.apache.hadoop.util.StringUtils.<clinit>(StringUtils.java:78)
        at org.apache.hadoop.conf.Configuration.getBoolean(Configuration.java:1567)
        at org.apache.hadoop.hbase.HBaseConfiguration.checkDefaultsVersion(HBaseConfiguration.java:70)
        at org.apache.hadoop.hbase.HBaseConfiguration.addHBaseResources(HBaseConfiguration.java:84)
        at org.apache.hadoop.hbase.HBaseConfiguration.create(HBaseConfiguration.java:98)
        at org.apache.hadoop.hbase.util.ServerCommandLine.doMain(ServerCommandLine.java:152)
        at org.apache.hadoop.hbase.master.HMaster.main(HMaster.java:2958)
2022-01-25T17:42:52.341+0530: [GC (Allocation Failure) 2022-01-25T17:42:52.342+0530: [ParNew: 52480K->6249K(59008K),
371511 secs] 52480K->6249K(190080K), 0.0377060 secs] [Times: user=0.00 sys=0.02, real=0.04 secs]
2022-01-25 17:42:52,407 INFO [main] master.HMasterCommandLine: Starting a zookeeper cluster

```

Result:

Thus installation of hbase was installed successfully.

EX NO: 7
DATE :

**PRACTICE IMPORTING AND EXPORTING DATA FROM
VARIOUS DATABASES**

AIM:

To Install the Mongodb on window and execute the commands.

MONGODB:

MongoDB is an open-source document-oriented database that is designed to store a large scale of data and also allows you to work with that data very efficiently. It is categorized under the NoSQL(Not only SQL) database because the storage and retrieval of data in MongoDB are not in the form of tables.

PROCEDURE:

STEP 1: Go to [MongoDB Download Center](#) to download MongoDB Community

Server.

The screenshot shows the MongoDB website's download section. At the top, there are navigation links: mongoDB, Cloud, Software, Pricing, Learn, Solutions, Docs, a search bar, Contact, Sign In, and a Try Free button. Below this, a dropdown menu is open, showing 'MongoDB Enterprise Server' and 'MongoDB Community Server'. The 'MongoDB Community Server' section contains a brief description of the community version and a note about the enterprise version. To the right, a sidebar titled 'Available Downloads' allows users to filter by Version (4.4.3 current), Platform (Windows), and Package (msi). Two large green 'Download' buttons are present: one in the sidebar and one on the main page below the description. A green arrow points from the sidebar's 'Download' button to the main page's 'Download' button.

Here, You can select any version, Windows, and package according to your requirement.
For Windows, we need to choose:

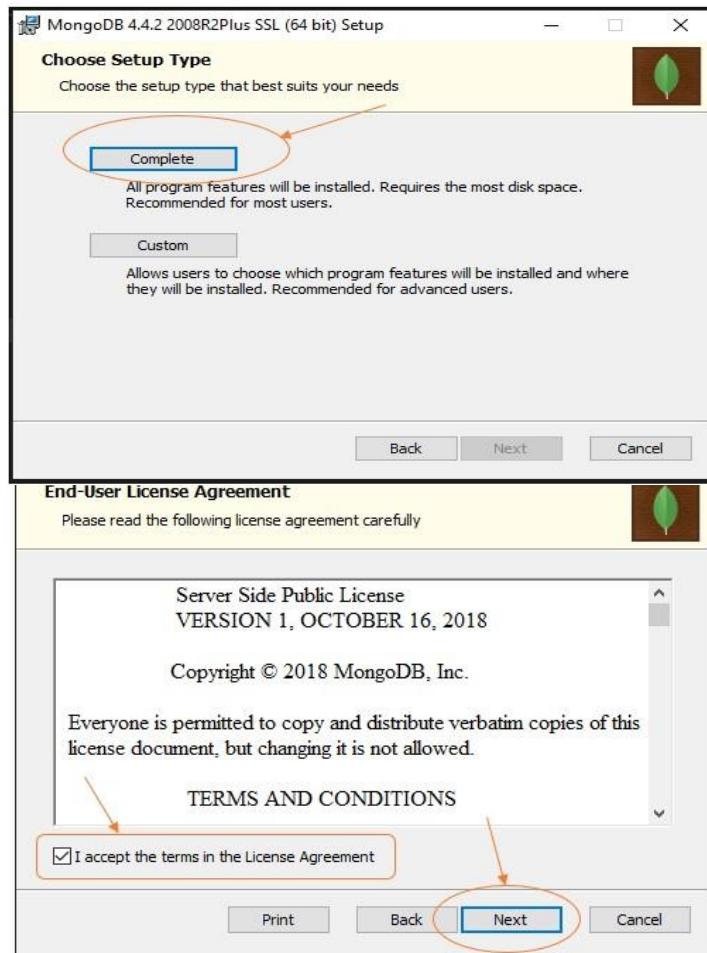
- Version: 4.2.2
- OS: WindowsOS
- Package: msi

STEP 2: When the download is complete open the msi file and click the *next button* in the startup screen:

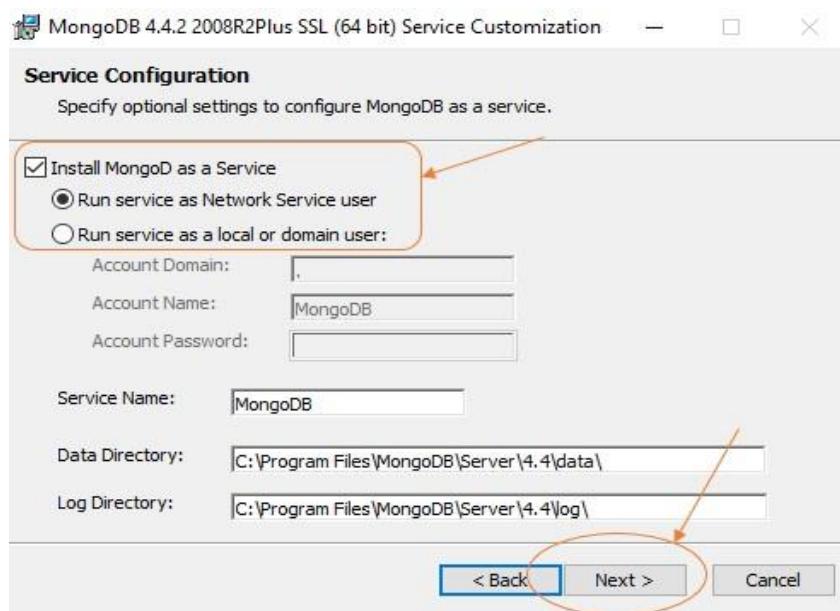


STEP 3: Now accept the End-User License Agreement and click the next button:

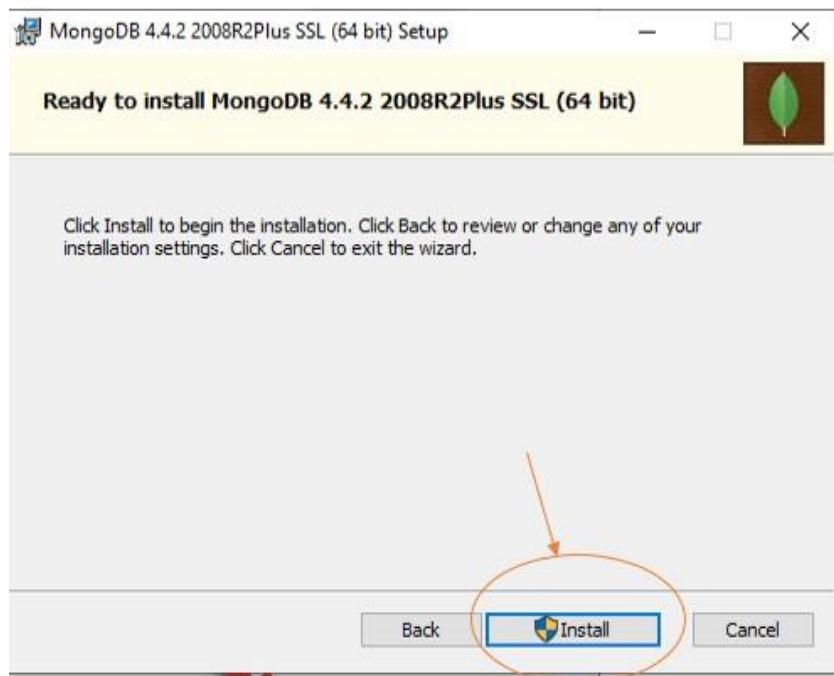
STEP 4: Now select the *complete option* to install all the program features. Here, if you can want to install only selected program features and want to select the location of the installation, then use the *Custom option*:



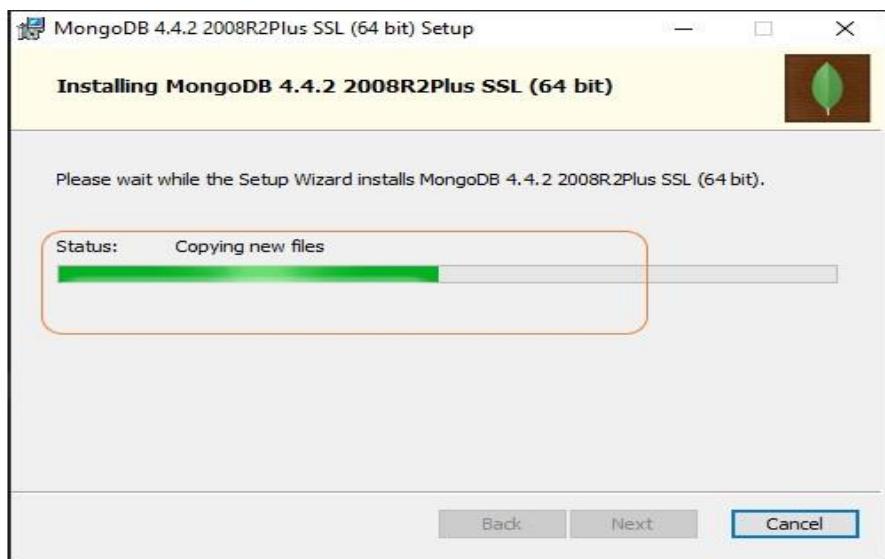
STEP 5 : Select “Run service as Network Service user” and copy the path of the data directory. Click Next:



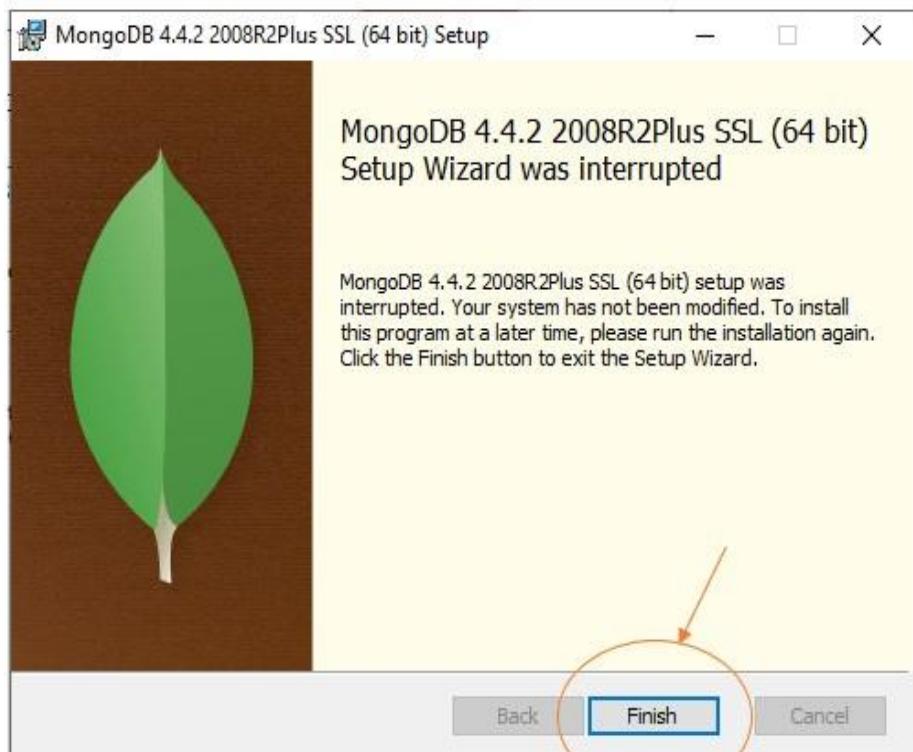
STEP 6 : Click the *Install button* to start the installation process:



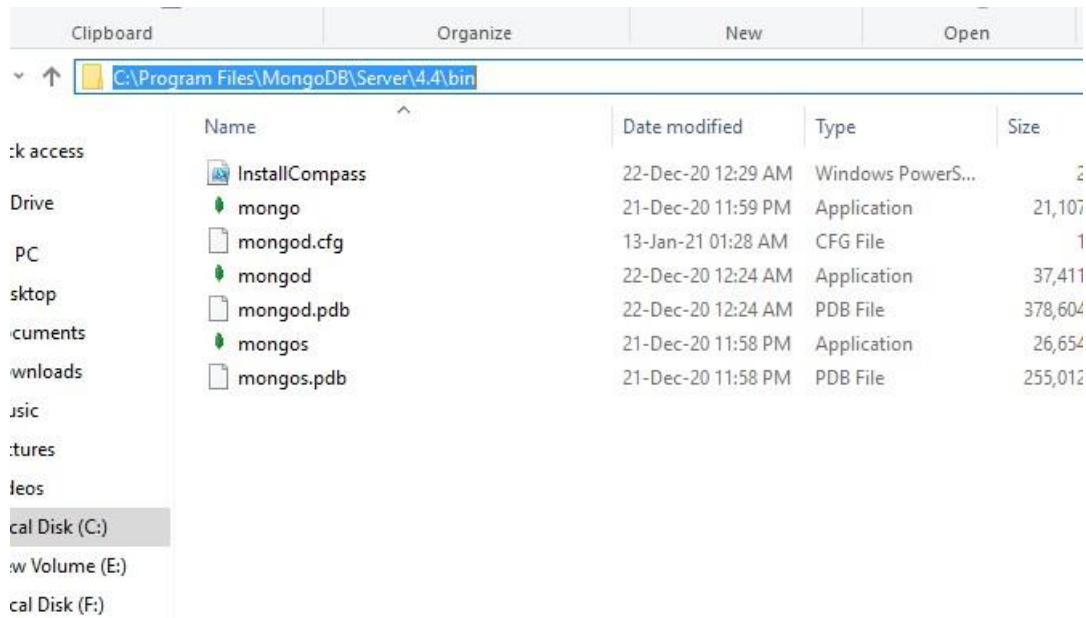
STEP 7 : After clicking on the install button installation of MongoDB begins:



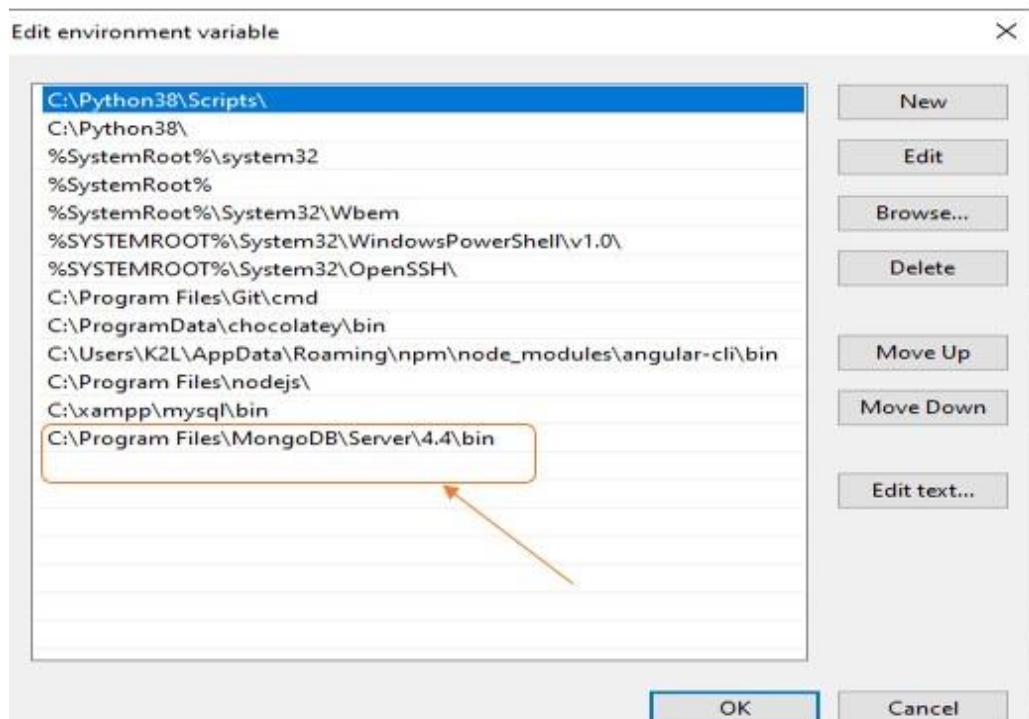
STEP 8: Now click the *Finish button* to complete the installation process:



STEP 9: Now we go to the location where MongoDB installed in step 5 in your system and copy the bin path:



STEP 10 : Now, to create an environment variable open system properties << Environment Variable << System variable << path << Edit Environment variable and paste the copied link to your environment system and click Ok:



STEP 11: After setting the environment variable, we will run the MongoDB server, i.e.

mongod. So, open the command prompt and run the following command: mongod

STEP 12: Now, Open C drive and create a folder named “data” inside this folder create another folder named “db”. After creating these folders. Again open the command prompt and run the following command: mongod

Now, this time the MongoDB server(i.e., mongod) will run successfully.

```
C:\Users\NIkhil Chhipa>mongod
{"t":{"$date":"2021-01-31T00:56:54.081+05:30"},"s":"I", "c":"CONTROL", "id":23285, "ctx"
ify --sslDisabledProtocols 'none'}
 {"t":{"$date":"2021-01-31T00:56:54.087+05:30"},"s":"W", "c":"ASIO", "id":22601, "ctx"
}
 {"t":{"$date":"2021-01-31T00:56:54.088+05:30"},"s":"I", "c":"NETWORK", "id":4648602, "ctx"
}
 {"t":{"$date":"2021-01-31T00:56:54.090+05:30"},"s":"I", "c":"STORAGE", "id":4615611, "ctx"
bPath:"C:/data/db/", "architecture":"64-bit", "host":"DESKTOP-L9MUQ7N"}
 {"t":{"$date":"2021-01-31T00:56:54.090+05:30"},"s":"I", "c":"CONTROL", "id":23398, "ctx"
rgetMinOS:"Windows 7/Windows Server 2008 R2"}
 {"t":{"$date":"2021-01-31T00:56:54.090+05:30"},"s":"I", "c":"CONTROL", "id":23403, "ctx"
gitVersion:"913d6b62acfbb344dde1b116f4161360acd8fd13", "modules":[], "allocator":"tcmalloc", "i
}}
 {"t":{"$date":"2021-01-31T00:56:54.090+05:30"},"s":"I", "c":"CONTROL", "id":51765, "ctx"
ndows 10", "version":"10.0 (build 14393)"}
 {"t":{"$date":"2021-01-31T00:56:54.090+05:30"},"s":"I", "c":"CONTROL", "id":21951, "ctx"
}
 {"t":{"$date":"2021-01-31T00:56:54.157+05:30"},"s":"I", "c":"STORAGE", "id":22270, "ctx"
:{"dbpath":"C:/data/db/", "storageEngine":"wiredTiger"}}
 {"t":{"$date":"2021-01-31T00:56:54.158+05:30"},"s":"I", "c":"STORAGE", "id":22315, "ctx"
ize=1491M, session_max=33000, eviction=(threads_min=4, threads_max=4), config_base=false, statisti
le_manager=(close_idle_time=10000, close_scan_interval=10, close_handle_minimum=250), statisti
ess,"}
 {"t":{"$date":"2021-01-31T00:56:54.395+05:30"},"s":"I", "c":"STORAGE", "id":22430, "ctx"
95788][3708:140713908197088], txn-recover: [WT_VERB_RECOVERY_PROGRESS] Recovering log 20 thr
 {"t":{"$date":"2021-01-31T00:56:54.631+05:30"},"s":"I", "c":"STORAGE", "id":22430, "ctx"
}
```

Run mongo Shell

STEP 13: Now we are going to connect our server (mongod) with the mongo shell. So, keep that mongod window and open a new command prompt window and write **mongo**. Now, our mongo shell will successfully connect to the mongod.

```
C:\Users\NIkhil Chhipa>mongo
MongoDB shell version v4.4.3
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("96cca5da-dc9f-4a40-aabb-73ee37600c0") }
MongoDB server version: 4.4.3
```
The server generated these startup warnings when booting:
 2021-01-28T20:56:52.570+05:30: Access control is not enabled for the database. Read and write access
configuration is unrestricted
```
```
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
```
>
```

Important Point: Please do not close the mongod window if you close this window your server will stop working and it will not be able to connect with the mongo shell.

Result:

Thus the above importing and exporting data from various database can be executed and verified successfully.