

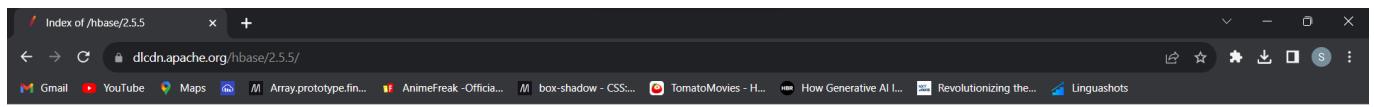
INSTALLATION OF HBASE

AIM : To install Hbase in windows

STEPS :

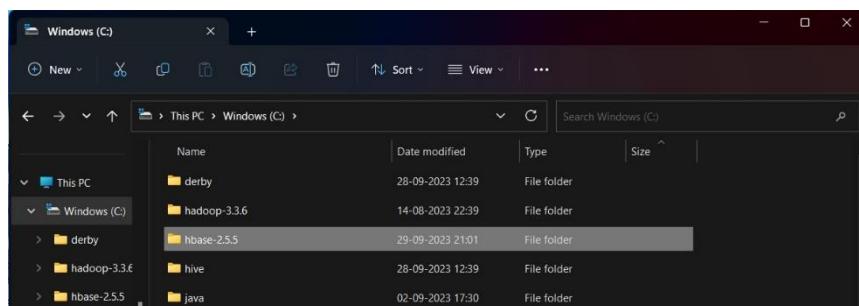
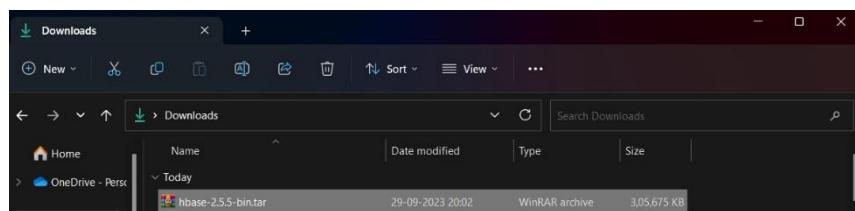
STEP 1 : Install Hbase from the official Apache Hbase website <https://dlcdn.apache.org/hbase/2.5.5/>,

Click on [hbase-2.5.5-bin.tar.gz](#) to download the Hbase

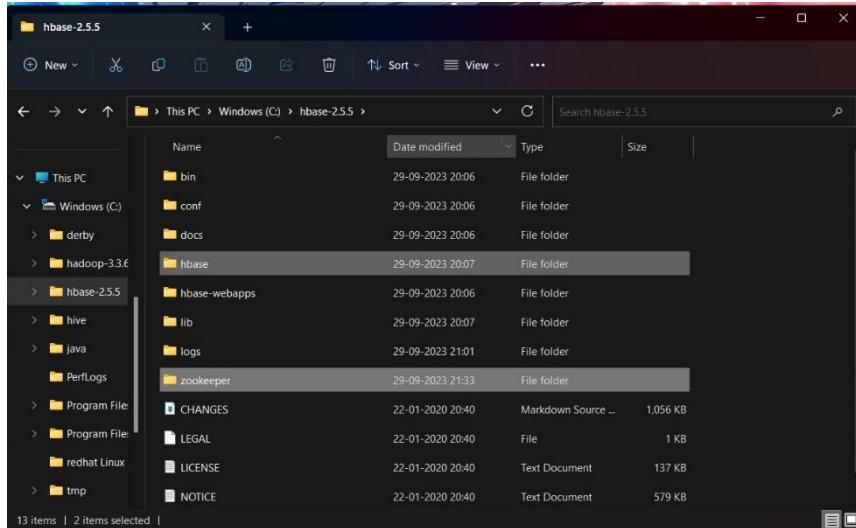


Name	Last_modified	Size	Description
Parent Directory	-		
CHANGES.md	2023-06-02 01:36	1.0M	
RELEASENOTES.md	2023-06-02 01:36	596K	
ansi_compare_2.5.4_to_2.5.5RC0.html	2023-06-02 01:36	15K	hbase: rel/2.5.4 to 2.5.5RC0 compatibility report
hbase-2.5.5-bin.tar.gz	2023-06-02 01:36	299M	
hbase-2.5.5-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-bin.tar.gz.sha512	2023-06-02 01:36	216	
hbase-2.5.5-client-bin.tar.gz	2023-06-02 01:36	287M	
hbase-2.5.5-client-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-client-bin.tar.gz.sha512	2023-06-02 01:36	268	
hbase-2.5.5-hadoop3-bin.tar.gz	2023-06-02 01:36	317M	
hbase-2.5.5-hadoop3-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-hadoop3-bin.tar.gz.sha512	2023-06-02 01:36	272	
hbase-2.5.5-hadoop3-client-bin.tar.gz	2023-06-02 01:36	300M	
hbase-2.5.5-hadoop3-client-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-hadoop3-client-bin.tar.gz.sha512	2023-06-02 01:36	300	
hbase-2.5.5-src.tar.gz	2023-06-02 01:36	36M	
hbase-2.5.5-src.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-src.tar.gz.sha512	2023-06-02 01:36	216	

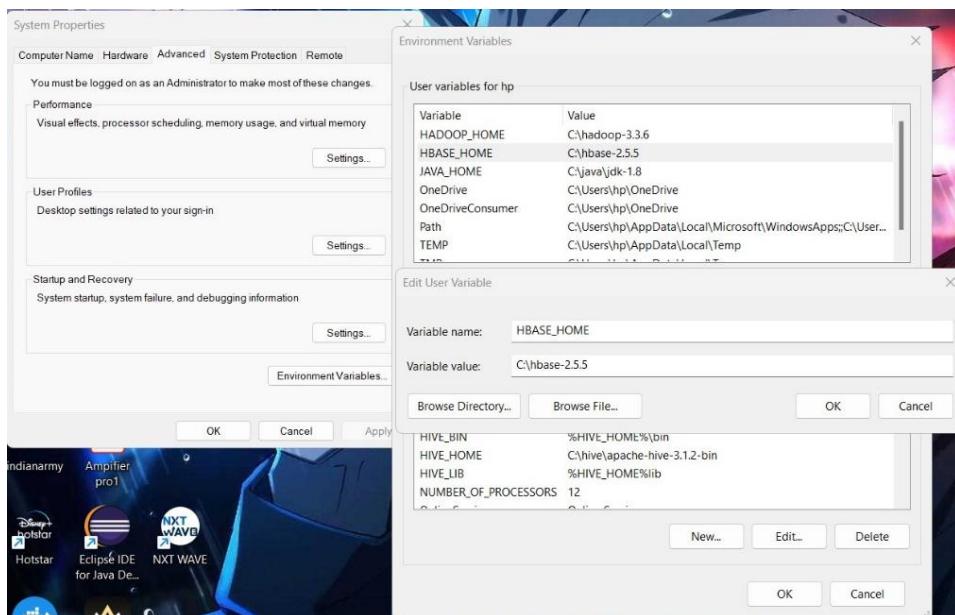
STEP 2 : Extract the downloaded hbase-2.5.5 tar file to the local disk C folder named hbase-2.5.5



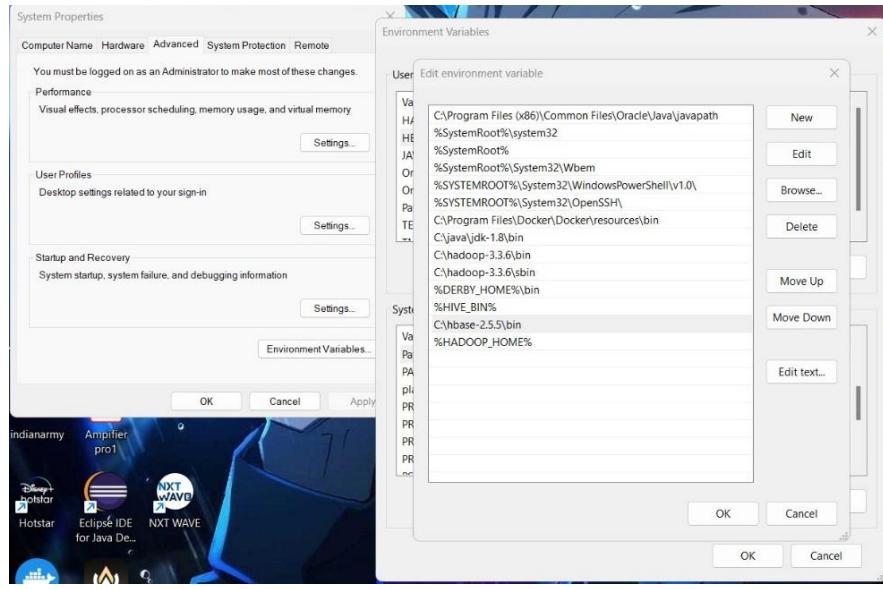
STEP 3 : Create two folders in hbase-2.5.5 named hbase and zookeeper



STEP 4 : Create new variable **HBASE_HOME** in user variables and set path as **C:\hbase-2.5.5**



STEP 5 : Add hbase bin path location in System variables path



STEP 6 : In hbase bin directory, edit java_arguments in hbase windows command with following code

```

36 set HBASE_OPTS=%HBASE_OPTS% -Dhbase.root.logger="%HBASE_ROOT_LOGGER%"
37
38 if defined JAVA_LIBRARY_PATH (
39     set HBASE_OPTS=%HBASE_OPTS% -Djava.library.path="%JAVA_LIBRARY_PATH%"
40 )
41
42 rem Enable security logging on the master and regionserver only
43 if not defined HBASE_SECURITY_LOGGER (
44     set HBASE_SECURITY_LOGGER=INFO,NullAppender
45     if "%hbase-command%"=="master" (
46         set HBASE_SECURITY_LOGGER=INFO,DRFAS
47     )
48     if "%hbase-command%"=="regionserver" (
49         set HBASE_SECURITY_LOGGER=INFO,DRFAS
50     )
51 )
52
53 set HBASE_OPTS=%HBASE_OPTS% -Dhbase.security.logger="%HBASE_SECURITY_LOGGER%"
54
55 set HEAP_SETTINGS=%JAVA_HEAP_MAX% %JAVA_OFFHEAP_MAX%
56 set java_arguments=%HBASE_OPTS% -classpath "%CLASSPATH%" %CLASS% %hbase-command-arguments%
57
58 if defined service_entry (
59     call :makeServiceXml %java_arguments%
60 ) else (
61     call %JAVA% %java_arguments%
62 )
63
64 endlocal
65 goto :eof
66
67 :shell
68 rem find the hbase ruby sources
69 if exist "%HBASE_HOME%\lib\ruby\" (
70     set HBASE_OPTS=%HBASE_OPTS% -Dhbase.ruby.sources="%HBASE_HOME%\lib\ruby"
71 ) else (
72     set HBASE_OPTS=%HBASE_OPTS% -Dhbase.ruby.sources="%HBASE_HOME%\hbase-shell\src\main\ruby"
73 )
74 set HBASE_OPTS=%HBASE_OPTS% %HBASE_SHELL_OPTS%
75
76 set CLASS=org.jruby.Main -X+O %JRuby_OPTS% "%HBASE_HOME%\bin\hirb.rb"
77 goto :eof
78

```

STEP 7 : In hbase conf directory, add following configuration to hbase-env windows command

```

7  /* License*/; you may not use this file except in compliance
8   * with the License. You may obtain a copy of the License at
9    *
10  * http://www.apache.org/licenses/LICENSE-2.0
11  *
12  * Unless required by applicable law or agreed to in writing, software
13  * distributed under the License is distributed on an "AS IS" BASIS,
14  * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
15  * See the License for the specific language governing permissions and
16  * limitations under the License.
17  */
18  *
19  * Set environment variables here.
20  *
21  * The Java implementation to use. Java 1.8+ required.
22  *rem set JAVA_HOME=%JAVA_HOME%
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:gct" "-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_REGIONSERVERS=%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

```

STEP 8 : In hbase conf directory, add following configuration to hbase-site.xml

```

41  -->
42  <!-->
43  <property>
44  <name>hbase.cluster.distributed</name>
45  <value>false</value>
46  </property>
47  <property>
48  <name>hbase.tmp.dir</name>
49  <value>./tmp</value>
50  </property>
51  <property>
52  <name>hbase.unsafe.stream.capability.enforce</name>
53  <value>false</value>
54  </property>
55  <property>
56  <name>hbase.rootdir</name>
57  <value>C:\hbase-2.5.5\hbase</value>
58  </property>
59  //Here you have to set the path where you want HBase to store its built in zookeeper files.
60  <property>
61  <name>hbase.zookeeper.property.dataDir</name>
62  <value>C:\hbase-2.5.5\zookeeper</value>
63  </property>
64  <property>
65  <name>hbase.zookeeper.quorum</name>
66  <value>localhost</value>
67  </property>
68 </configuration>

```

STEP 9 : Start the Hadoop daemons in cmd

```

Administrator: Command Prompt
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

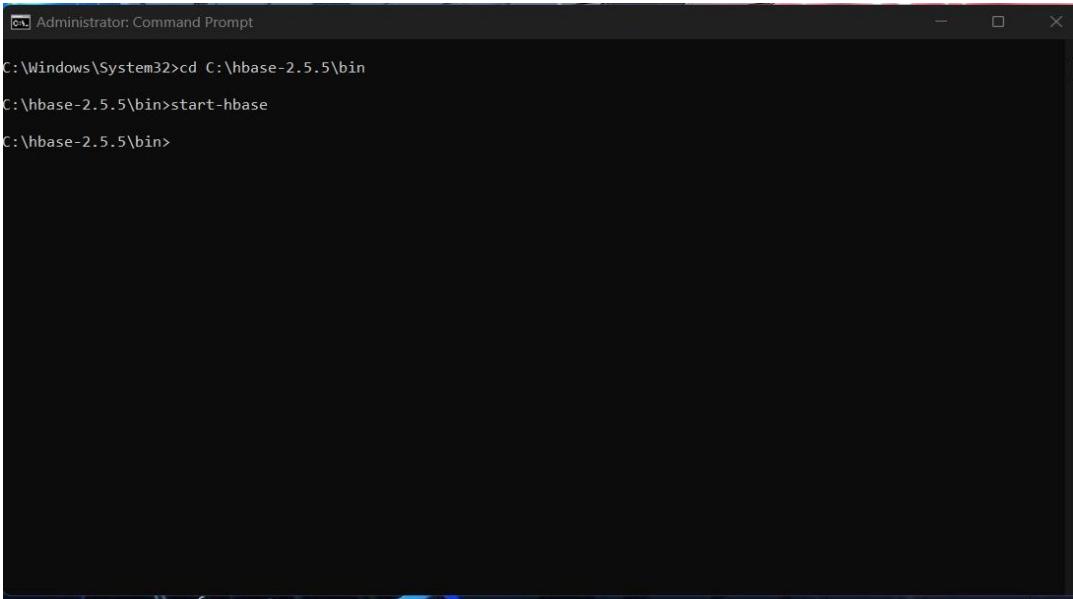
C:\Windows\System32>start-all
This script is Deprecated. Instead use start-dfs.cmd and start-yarn.cmd
starting yarn daemons

C:\Windows\System32>jps
21472 NodeManager
27008 DataNode
8128 NodeManager
1588 ResourceManager
11848 Jps
13288 NetworkServerControl
16936 RunJar
2924 NameNode

C:\Windows\System32>

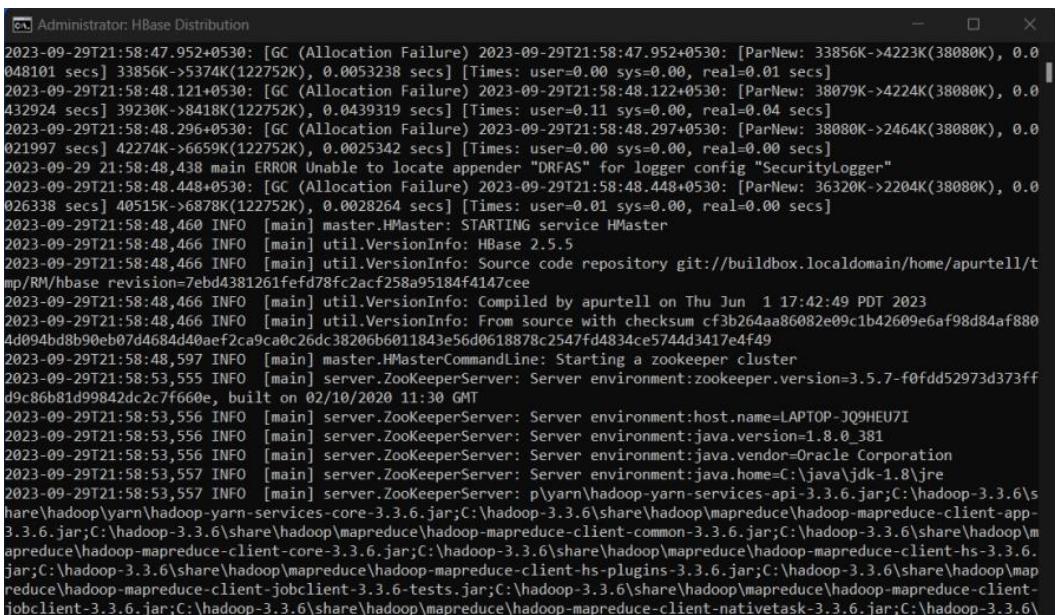
```

STEP 10 : Change directory to hbase bin and run **start-hbase** command



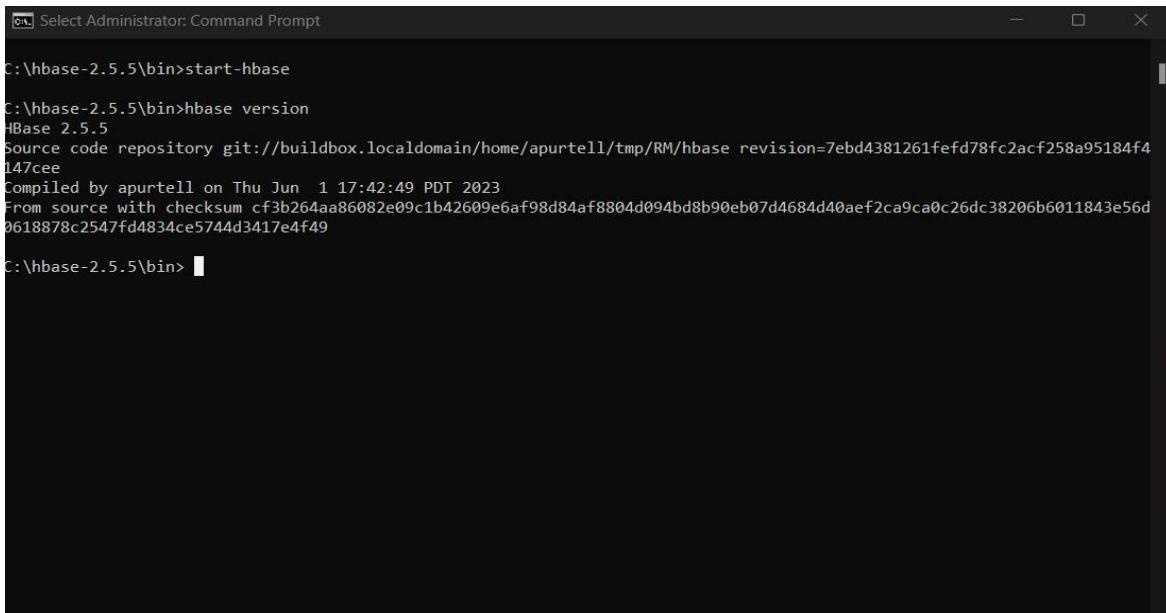
```
C:\Windows\System32>cd C:\hbase-2.5.5\bin
C:\hbase-2.5.5\bin>start-hbase
C:\hbase-2.5.5\bin>
```

STEP 11 : hbase configuration will start running in the windows terminal



```
2023-09-29T21:58:47.952+0530: [GC (Allocation Failure) 2023-09-29T21:58:47.952+0530: [ParNew: 33856K->4223K(38080K), 0.0
048101 secs] 33856K->5374K(122752K), 0.0053238 secs] [Times: user=0.00 sys=0.00, real=0.01 secs]
2023-09-29T21:58:48.121+0530: [GC (Allocation Failure) 2023-09-29T21:58:48.122+0530: [ParNew: 38079K->4224K(38080K), 0.0
432924 secs] 39230K->8418K(122752K), 0.0439319 secs] [Times: user=0.11 sys=0.00, real=0.04 secs]
2023-09-29T21:58:48.296+0530: [GC (Allocation Failure) 2023-09-29T21:58:48.297+0530: [ParNew: 38080K->2464K(38080K), 0.0
021997 secs] 42274K->6659K(122752K), 0.0025342 secs] [Times: user=0.00 sys=0.00, real=0.00 secs]
2023-09-29 21:58:48,438 main ERROR Unable to locate appender "DRFAS" for logger config "SecurityLogger"
2023-09-29T21:58:48.448+0530: [GC (Allocation Failure) 2023-09-29T21:58:48.448+0530: [ParNew: 36320K->2204K(38080K), 0.0
026338 secs] 40515K->6878K(122752K), 0.0028264 secs] [Times: user=0.01 sys=0.00, real=0.00 secs]
2023-09-29T21:58:48,460 INFO [main] master.HMaster: STARTING service HMaster
2023-09-29T21:58:48,466 INFO [main] util.VersionInfo: HBase 2.5.5
2023-09-29T21:58:48,466 INFO [main] util.VersionInfo: Source code repository git://buildbox.localdomain/home/apurtell/t
mp/RM/hbase revision=7ebd4381261feffd78fc2acf258a95184f4147cee
2023-09-29T21:58:48,466 INFO [main] util.VersionInfo: Compiled by apurtell on Thu Jun 1 17:42:49 PDT 2023
2023-09-29T21:58:48,466 INFO [main] util.VersionInfo: From source with checksum cf3b264aa86082e09c1b42609e6af98d84af880
4d994bd8b90eb07d4684d40ae2ca9c9a0c26dc38206b6011843e56d0618878c2547fd4834ce5744d3417e4f49
2023-09-29T21:58:48,597 INFO [main] master.HMasterCommandLine: Starting a zookeeper cluster
2023-09-29T21:58:53,555 INFO [main] server.ZooKeeperServer: Server environment:zookeeper.version=3.5.7-f0fdd52973d373ff
d9c86b81d99842dc2c7f660e, built on 02/10/2020 11:30 GMT
2023-09-29T21:58:53,556 INFO [main] server.ZooKeeperServer: Server environment:host.name=LAPTOP-JQ9HEU7I
2023-09-29T21:58:53,556 INFO [main] server.ZooKeeperServer: Server environment:java.version=1.8.0_381
2023-09-29T21:58:53,556 INFO [main] server.ZooKeeperServer: Server environment:java.vendor=Oracle Corporation
2023-09-29T21:58:53,557 INFO [main] server.ZooKeeperServer: Server environment:java.home=C:\java\jdk-1.8\jre
2023-09-29T21:58:53,557 INFO [main] server.ZooKeeperServer: p\yarn\hadoop-yarn-services-api-3.3.6.jar;C:\hadoop-3.3.6\s
hare\hadoop\yarn\hadoop-yarn-services-core-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-app
-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-common-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\m
apreduce\hadoop-mapreduce-client-core-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-hs-3.3.6.
jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-hs-plugins-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\map
reduce\hadoop-mapreduce-client-jobclient-3.3.6-tests.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-
jobclient-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-nativetask-3.3.6.jar;C:\hadoop-3.3.6\
```

STEP 12 : To check whether we have successfully installed hbase run **hbase version** command in the terminal



```
C:\hbase-2.5.5\bin>start-hbase
C:\hbase-2.5.5\bin>hbase version
HBase 2.5.5
Source code repository git://buildbox.localdomain/home/apurteil/tmp/RM/hbase revision=7ebd4381261fef78fc2acf258a95184f4
147cee
Compiled by apurteil on Thu Jun 1 17:42:49 PDT 2023
From source with checksum cf3b264aa86082e09c1b42609e6af98d84af8804d094bd8b90eb07d4684d40aef2ca9ca0c26dc38206b6011843e56d
0618878c2547fd4834ce5744d3417e4f49
C:\hbase-2.5.5\bin>
```

RESULT : Thus the program to install and setup hbase has been successfully completed.