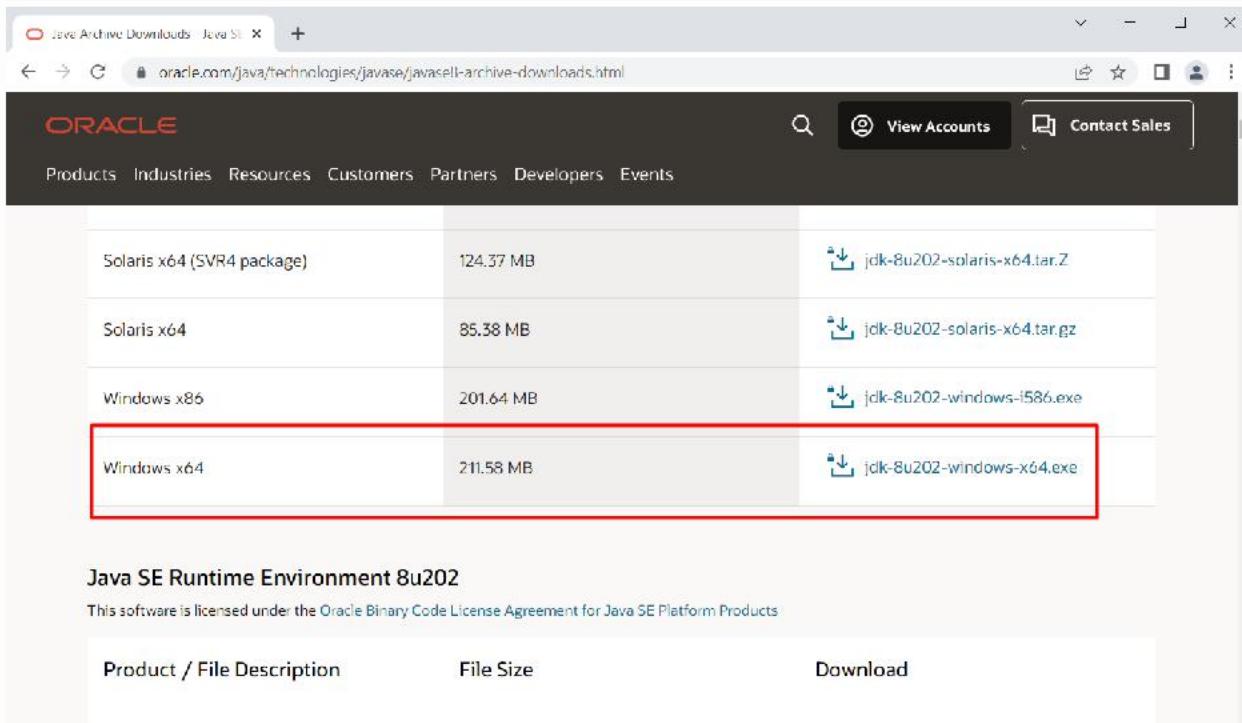


Hướng dẫn cài đặt Hadoop 3.3.0 trên Windows

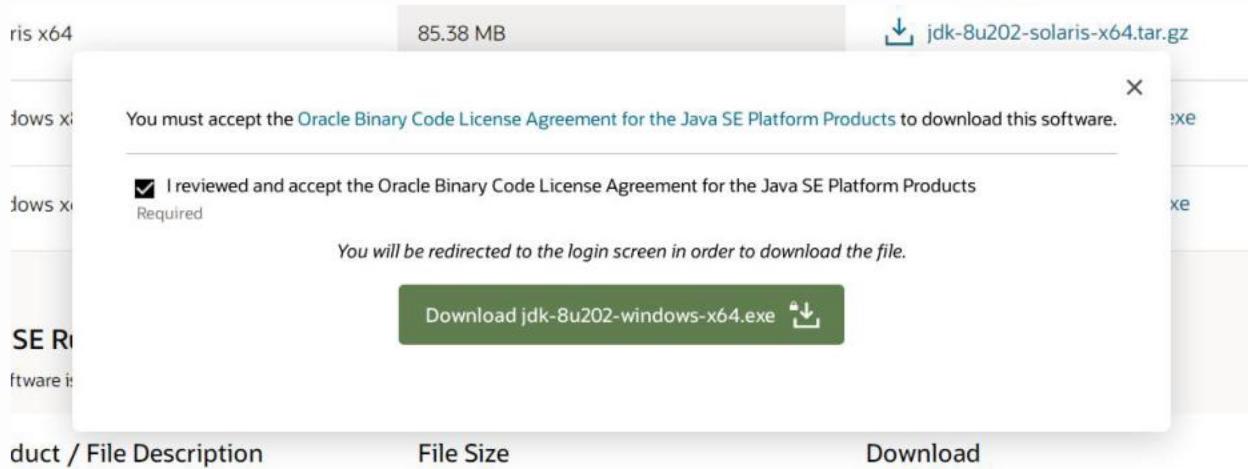
Cài đặt JDK bản 1.8 (bắt buộc)

Bước 1: Tải bộ cài

- Link: <https://www.oracle.com/java/technologies/javase/javase8-archive-downloads.html>. Chọn phiên bản dành cho **Windows x64**.

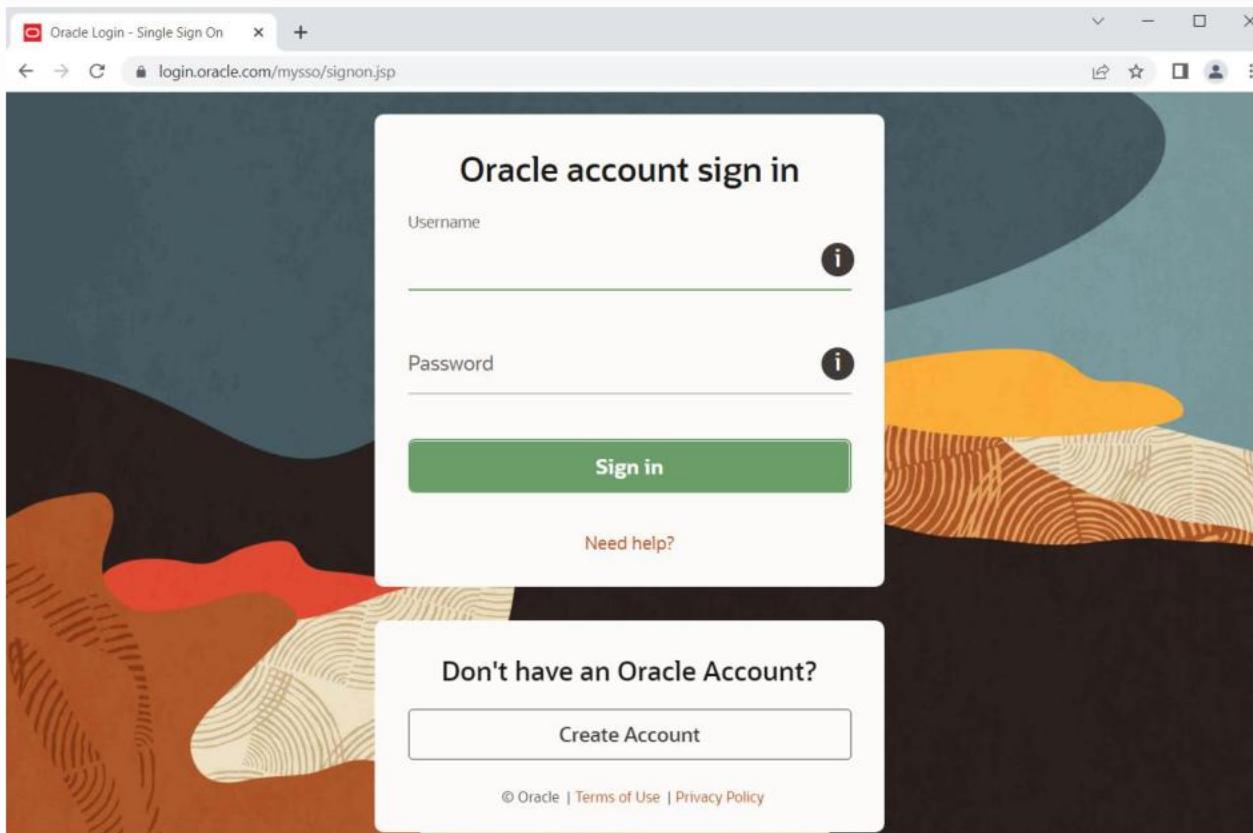


- Tick vào checkbox và bấm nút **Download**



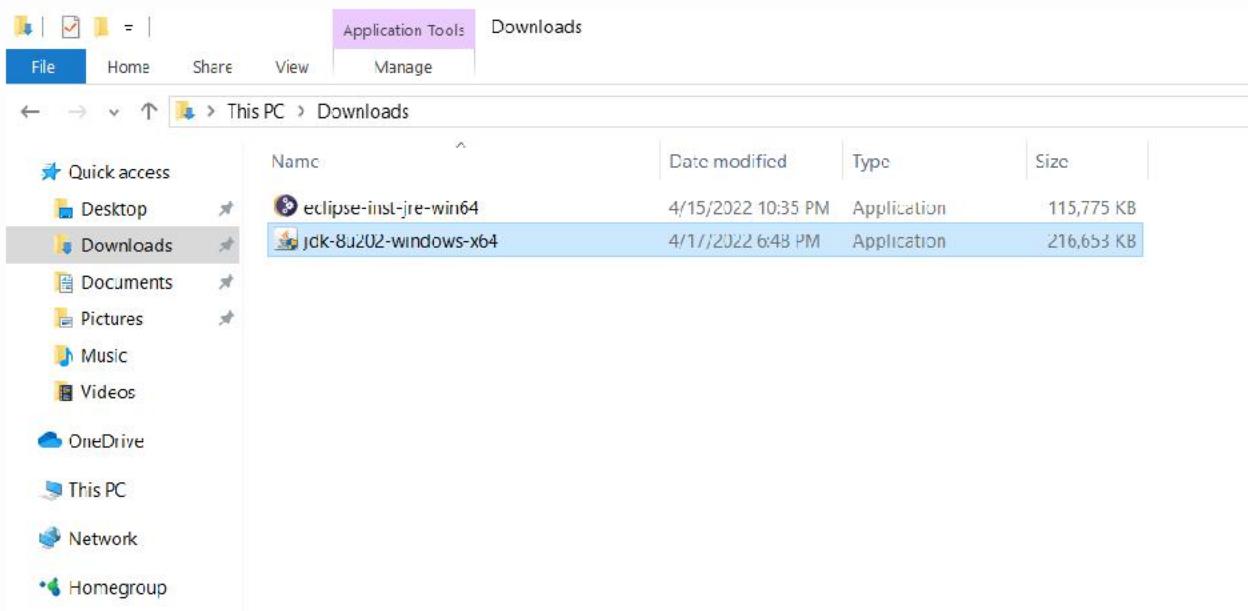
duct / File Description File Size Download

- Cần thực hiện đăng nhập tài khoản trước khi tải xuống, nếu chưa có tài khoản bấm nút **Create Account** để tạo. Sau khi đăng nhập thành công, bộ cài sẽ tự động được tải xuống.

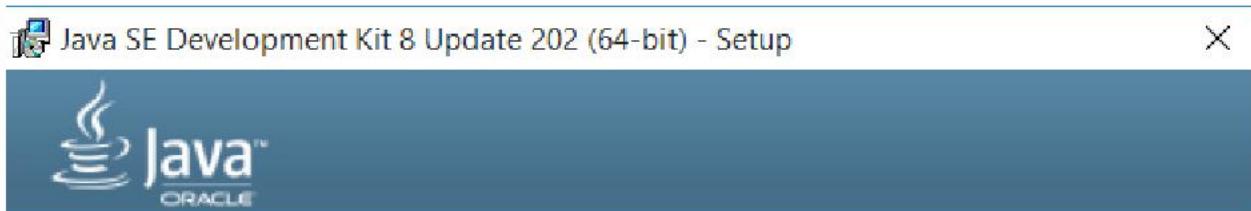


Bước 2: Cài đặt

- Double click vào file cài đặt vừa tải xuống.



- **Bấm Next**

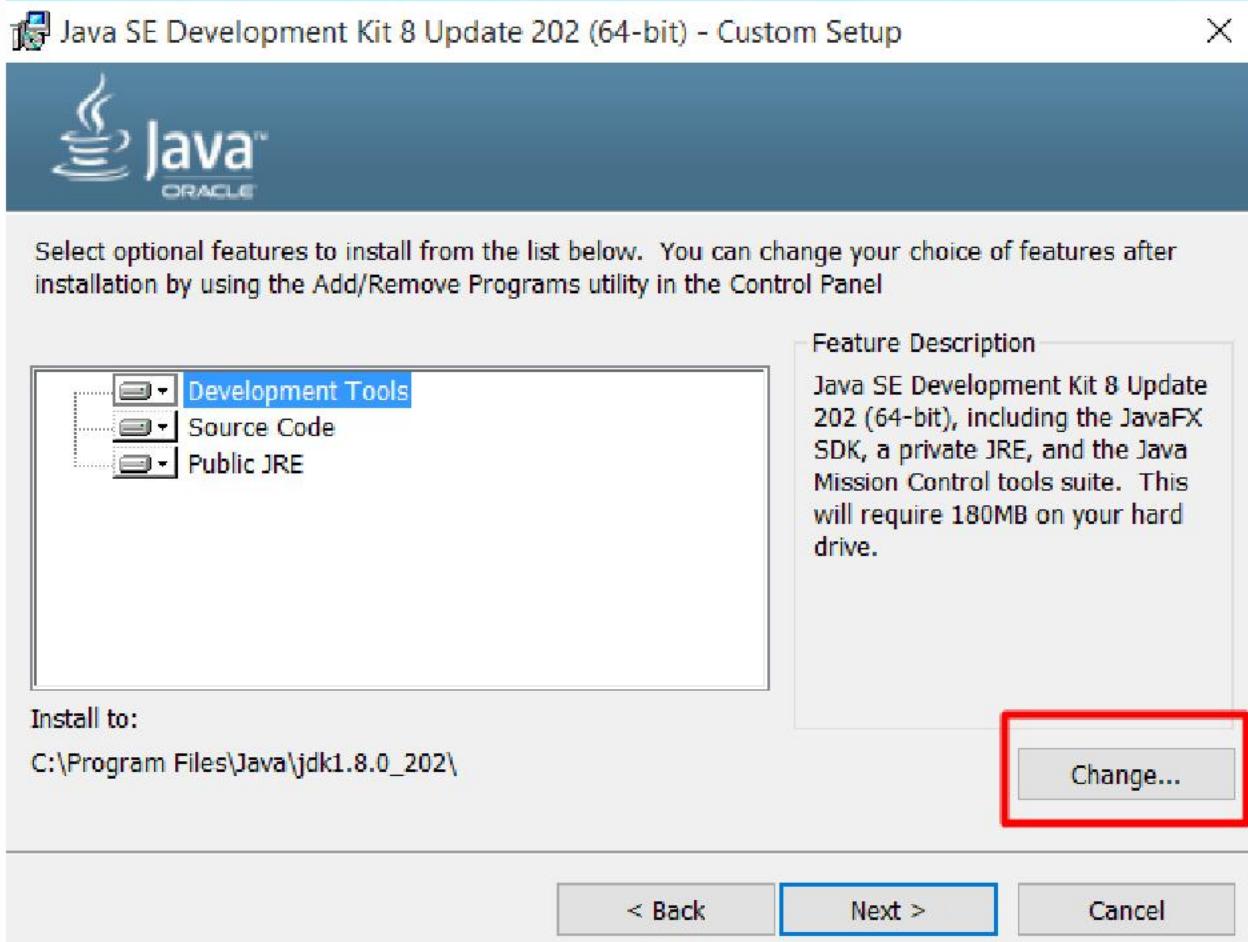


This wizard will guide you through the installation process for the Java SE Development Kit 8 Update 202.

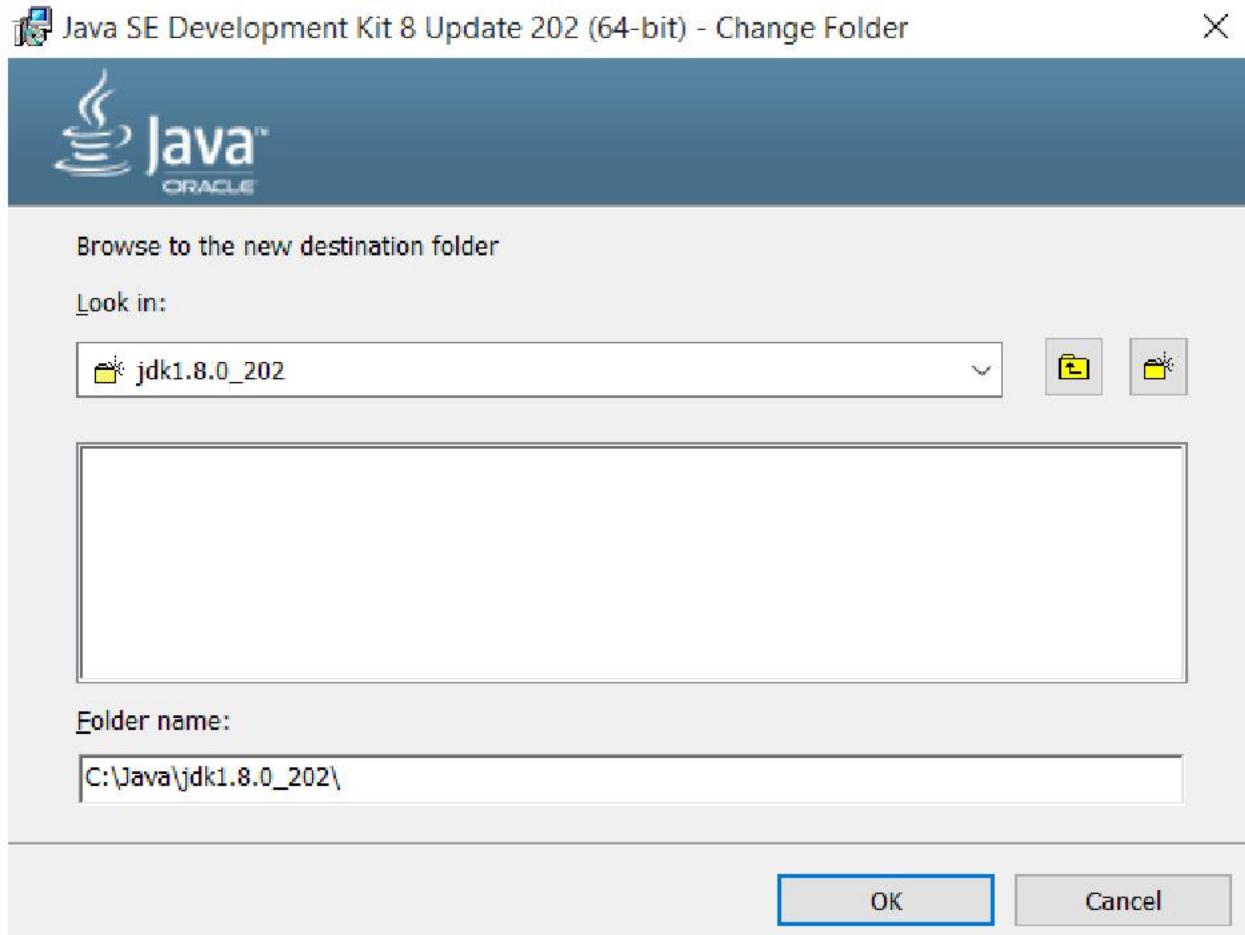
The Java Mission Control profiling and diagnostics tools suite is now available as part of the JDK.



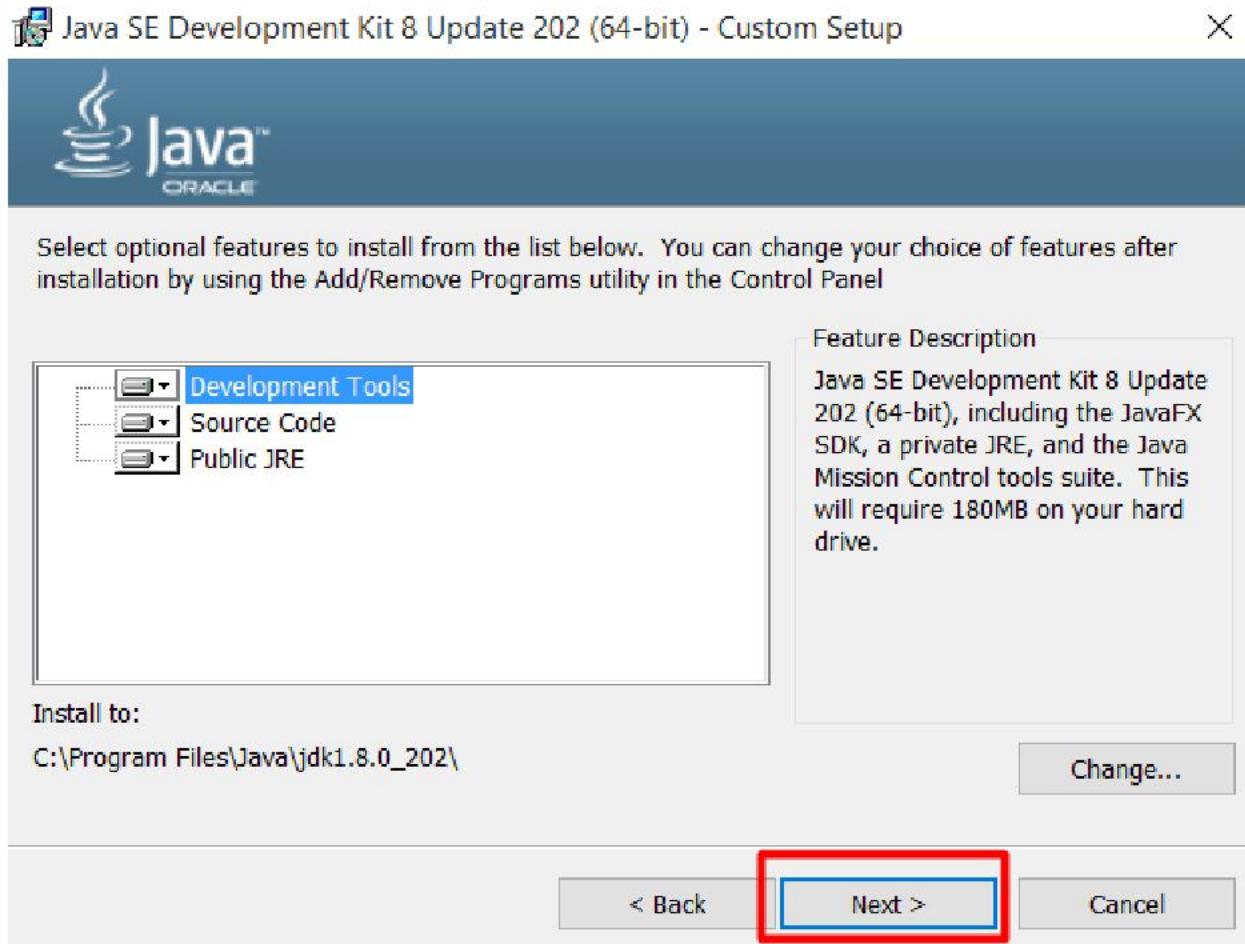
- Bấm **Change** để thay đổi đường dẫn lưu.



- Chọn thư mục để lưu JDK. **Lưu ý: đường dẫn không có dấu và không có khoảng trắng.**



- Tiếp tục bấm **Next**.



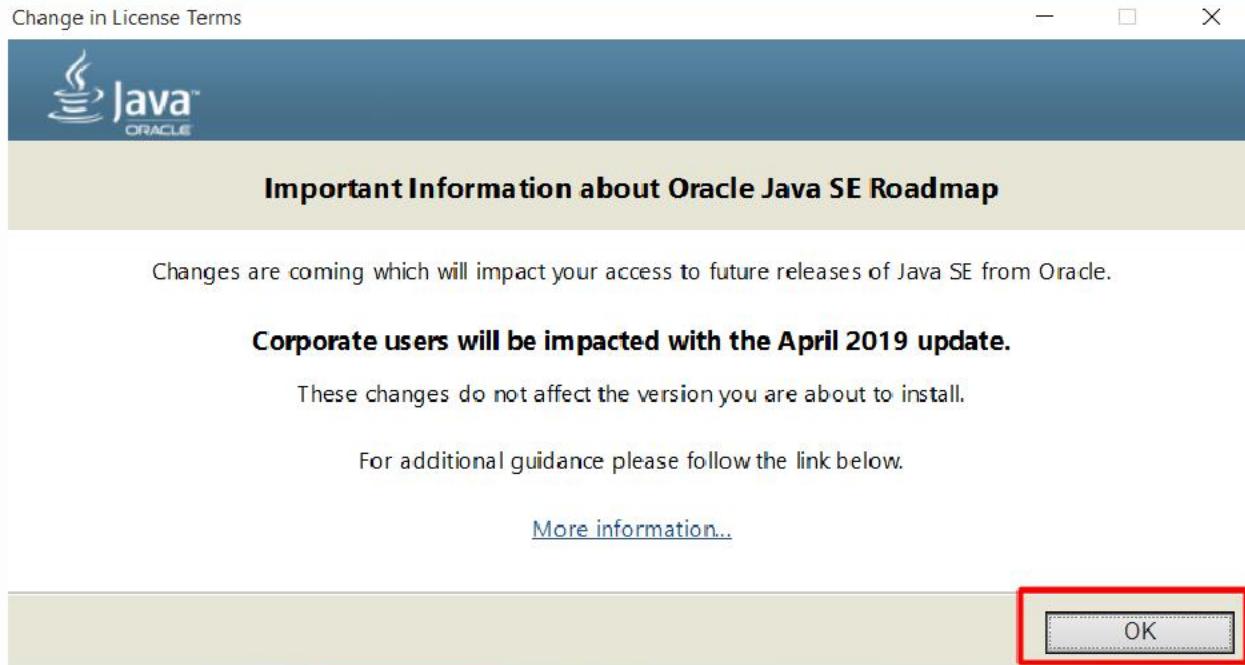
Java SE Development Kit 8 Update 202 (64-bit) - Progress



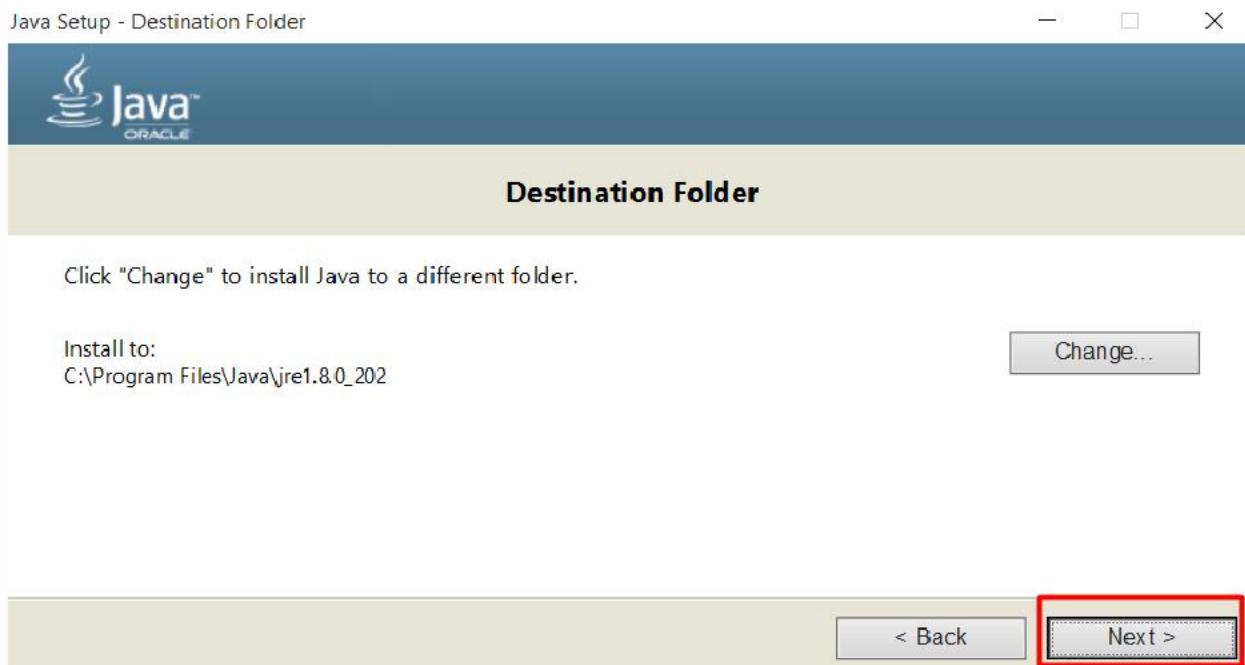
Status: Updating component registration



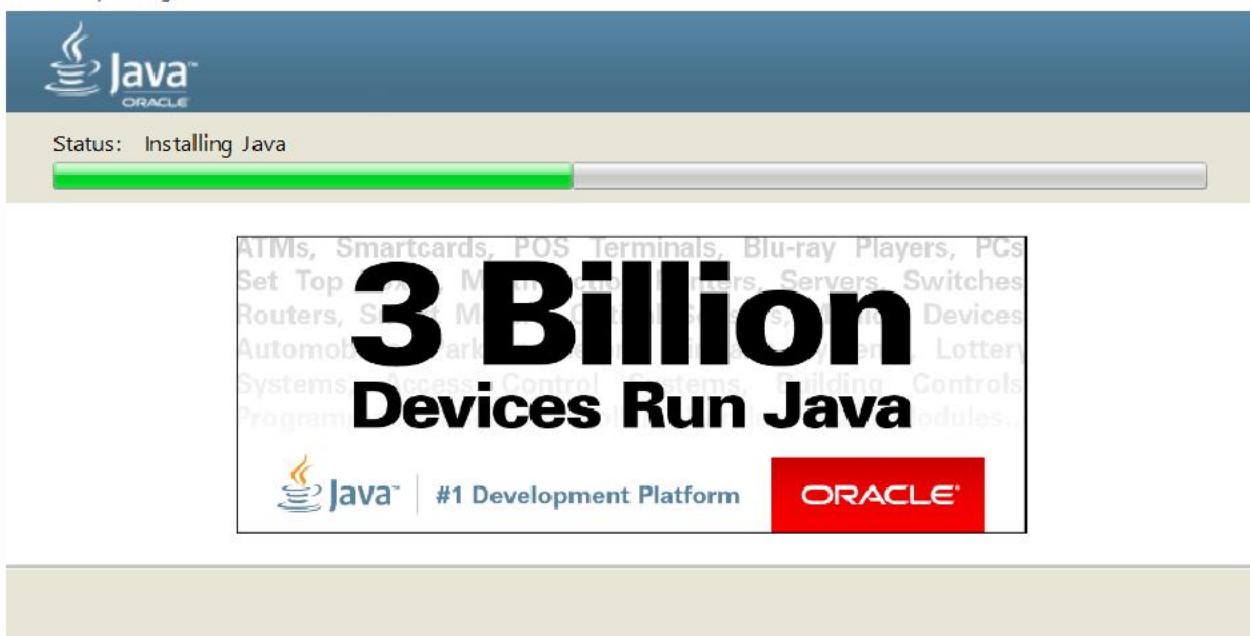
- **Bấm OK.**



- **Bấm Next.**



Java Setup - Progress



- Hoàn tất cài đặt JDK 1.8, bấm **Cancel** để thoát.

 Java SE Development Kit 8 Update 202 (64-bit) - Complete

X



Java SE Development Kit 8 Update 202 (64-bit) Successfully Installed

Click **Next Steps** to access tutorials, API documentation, developer guides, release notes and more to help you get started with the JDK.

Next Steps

Close

Bước 3: Thiết lập biến môi trường JDK

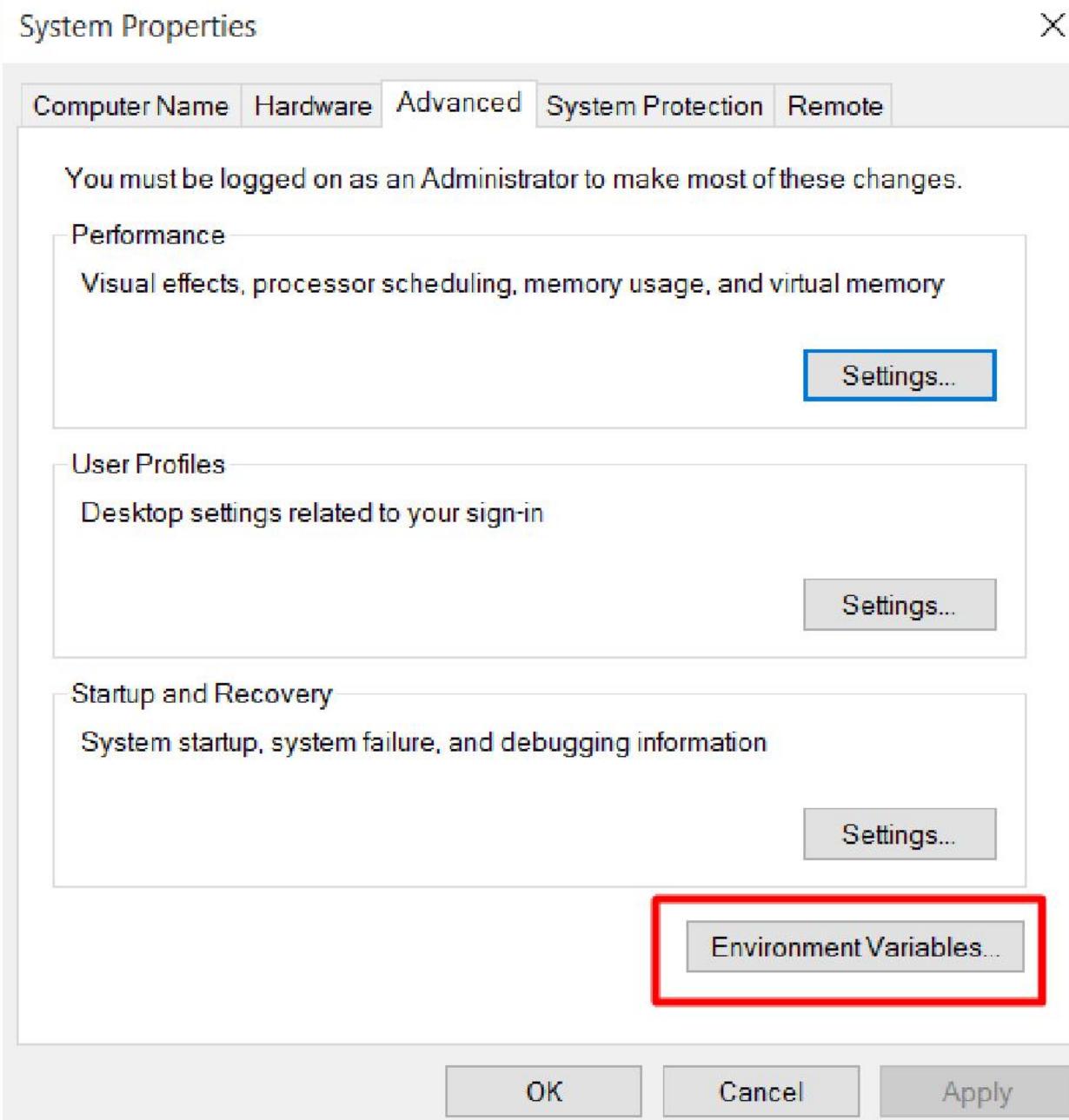
- Search từ khóa **environment** ở thanh Taskbar, chọn mục **Edit environment variables for your account**.

A screenshot of a Windows Start menu search interface. The search bar at the top contains the text "environment". Below the search bar, a list of results is displayed. At the top of the list is a result with a blue icon of a computer monitor with a checkmark, labeled "Edit the system **environment** variables" and "Control panel". This result is highlighted with a red rectangular border. Below this, under the heading "Settings", is another result with a blue gear icon and the text "Edit **environment** variables for your account". The main body of the search results is titled "Web" and lists several search suggestions, each preceded by a magnifying glass icon: "environment", "environmental", "environment variable", "environmental science", "environmental issues", "environment synonym", "environmental justice", and "environmental protection agency". At the bottom of the screen, the Windows taskbar is visible, featuring the "My stuff" button, the search bar with the word "environment" highlighted with a red border, and the "Web" search button.

-  Edit the system **environment** variables
Control panel
-  Settings
 -  Edit **environment** variables for your account
-  Web
 -  **environment**
 -  **environmental**
 -  **environment variable**
 -  **environmental science**
 -  **environmental issues**
 -  **environment synonym**
 -  **environmental justice**
 -  **environmental protection agency**
-  My stuff
-  Web

 environment

- Bấm **Environment Variables...**



- Bấm **New**.

Environment Variables

X

User variables for dachi	
Variable	Value
OneDrive	C:\Users\dachi\OneDrive
TEMP	%USERPROFILE%\AppData\Local\Temp
TMP	%USERPROFILE%\AppData\Local\Temp

New...

Edit..

Delete

System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
NUMBER_OF_PR...	2
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\...

New...

Edit...

Delete

OK

[Cancel](#)

- Nhập **Variable Name: JAVA_HOME** và **Variable Value** là đường dẫn lưu folder JDK **C:\Java\jdk1.8.0_202**

New User Variable

X

Variable name:

JAVA_HOME

Variable value:

C:\Java\jdk1.8.0_202

OK

Cancel

- Tiếp tục làm tương tự với **System Variables**.

Environment Variables

X

User variables for dachi

Variable	Value
JAVA_HOME	C:\Java\jdk1.8.0_202
OneDrive	C:\Users\dachi\OneDrive
TEMP	%USERPROFILE%\AppData\Local\Temp
TMP	%USERPROFILE%\AppData\Local\Temp

New...

Edit...

Delete

System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
NUMBER_OF_PR...	2
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\...

New...

Edit...

Delete

OK

Cancel

New System Variable

X

Variable name:

JAVA_HOME

Variable value:

C:\Java\jdk1.8.0_202

OK

Cancel

- Chọn **Path** và bấm **Edit** của phần **User Variables**

Environment Variables

X

User variables for dachi

Variable	Value
JAVA_HOME	C:\Java\jdk1.8.0_202
OneDrive	C:\Users\dachi\OneDrive
OneDriveConsumer	C:\Users\dachi\OneDrive
Path	C:\Ruby31-x64\bin;C:\Users\dachi\AppData\Local\Microsoft\... .COM;EXE;BAT;CMD;VBS;VBE;JS;JSE;WSF;WSH;MSC;RB;RB...
PATHEXT	.COM;EXE;BAT;CMD;VBS;VBE;JS;JSE;WSF;WSH;MSC;RB;RB...
TEMP	C:\Users\dachi\AppData\Local\Temp
TMP	C:\Users\dachi\AppData\Local\Temp

New...

Edit...

Delete

System variables

Variable	Value
JAVA_HOME	C:\Java\jdk1.8.0_202
lib	C:\Program Files\SQLXML 4.0\bin\
M2_HOME	C:\Program Files\apache-maven-3.8.5
NUMBER_OF_PROCESSORS	12
OS	Windows_NT
Path	C:\Program Files (x86)\VMware\VMware Workstation\bin;%J... .COM;EXE;BAT;CMD;VBS;VBE;JS;JSE;WSF;WSH;MSC
PATHEXT	.COM;EXE;BAT;CMD;VBS;VBE;JS;JSE;WSF;WSH;MSC
PROCESSOR_ARCHITECTURE	AMD64

New...

Edit...

Delete

OK

Cancel

- Bấm New và nhập %JAVA_HOME%\bin

Edit environment variable

X

```
C:\Ruby31-x64\bin  
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps  
C:\Users\dachi\AppData\Local\Programs\Microsoft VS Code\bin  
C:\Users\dachi\AppData\Roaming\npm  
C:\Program Files\Azure Data Studio\bin  
C:\Users\dachi\AppData\Local\Programs\Azure Data Studio\bin  
C:\Users\dachi\AppData\Local\Android\Sdk\platform-tools  
C:\Users\dachi\Documents\flutter\bin  
C:\Users\dachi\AppData\Roaming\Composer\vendor\bin  
%USERPROFILE%\dotnet\tools  
C:\Users\dachi\anaconda3\Library\bin  
C:\Users\dachi\anaconda3\Scripts  
C:\Users\dachi\anaconda3\condabin  
%IntelliJ IDEA Community Edition%  
%JAVA_HOME%\bin
```

New

Edit

Browse...

Delete

Move Up

Move Down

Edit text...

OK

Cancel

- Làm tương tự với **System Variables**.

Environment Variables

X

User variables for dachi

Variable	Value
IntelliJ IDEA Community E...	C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 20...
JAVA_HOME	C:\Java\jdk1.8.0_202
OneDrive	C:\Users\dachi\OneDrive
OneDriveConsumer	C:\Users\dachi\OneDrive
Path	C:\Ruby31-x64\bin;C:\Users\dachi\AppData\Local\Microsoft\...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.RB;.RB...
TEMP	C:\Users\dachi\AppData\Local\Temp
TMP	C:\Users\dachi\AppData\Local\Temp

[New...](#)[Edit...](#)[Delete](#)System variables

Variable	Value
JAVA_HOME	C:\Java\jdk1.8.0_202
lib	C:\Program Files\SQLXML 4.0\bin\
M2_HOME	C:\Program Files\apache-maven-3.8.5
NUMBER_OF_PROCESSORS	12
OS	Windows_NT
Path	C:\Program Files (x86)\VMware\VMware Workstation\bin;%J...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

[New...](#)[Edit...](#)[Delete](#)[OK](#)[Cancel](#)

Edit environment variable

X

C:\Program Files\Git\cmd
C:\Program Files\nodejs\
C:\Program Files (x86)\Microsoft SQL Server\150\DTS\Binn\
C:\Program Files\Azure Data Studio\bin
C:\Program Files (x86)\Microsoft SQL Server\150\Tools\Binn\
C:\Program Files\Microsoft SQL Server\150\Tools\Binn\
C:\Program Files\Microsoft SQL Server\150\DTS\Binn\
C:\Program Files (x86)\Microsoft SQL Server\80\Tools\Binn\
C:\Program Files (x86)\Microsoft SQL Server\90\Tools\Binn\
C:\Program Files (x86)\Microsoft SQL Server\90\Tools\binn\
C:\Program Files (x86)\Microsoft SQL Server\90\Tools\Binn\V...
C:\Program Files (x86)\Microsoft Visual Studio 8\Common7\I...
C:\xampp\php
C:\ProgramData\ComposerSetup\bin
C:\Program Files\TortoiseSVN\bin
C:\Program Files\dotnet\
C:\Program Files\Microsoft SQL Server\130\Tools\Binn\
C:\Program Files\Docker\Docker\resources\bin
C:\ProgramData\DockerDesktop\version-bin
%M2_HOME%\bin
%JAVA_HOME%\bin\

New

Edit

Browse...

Delete

Move Up

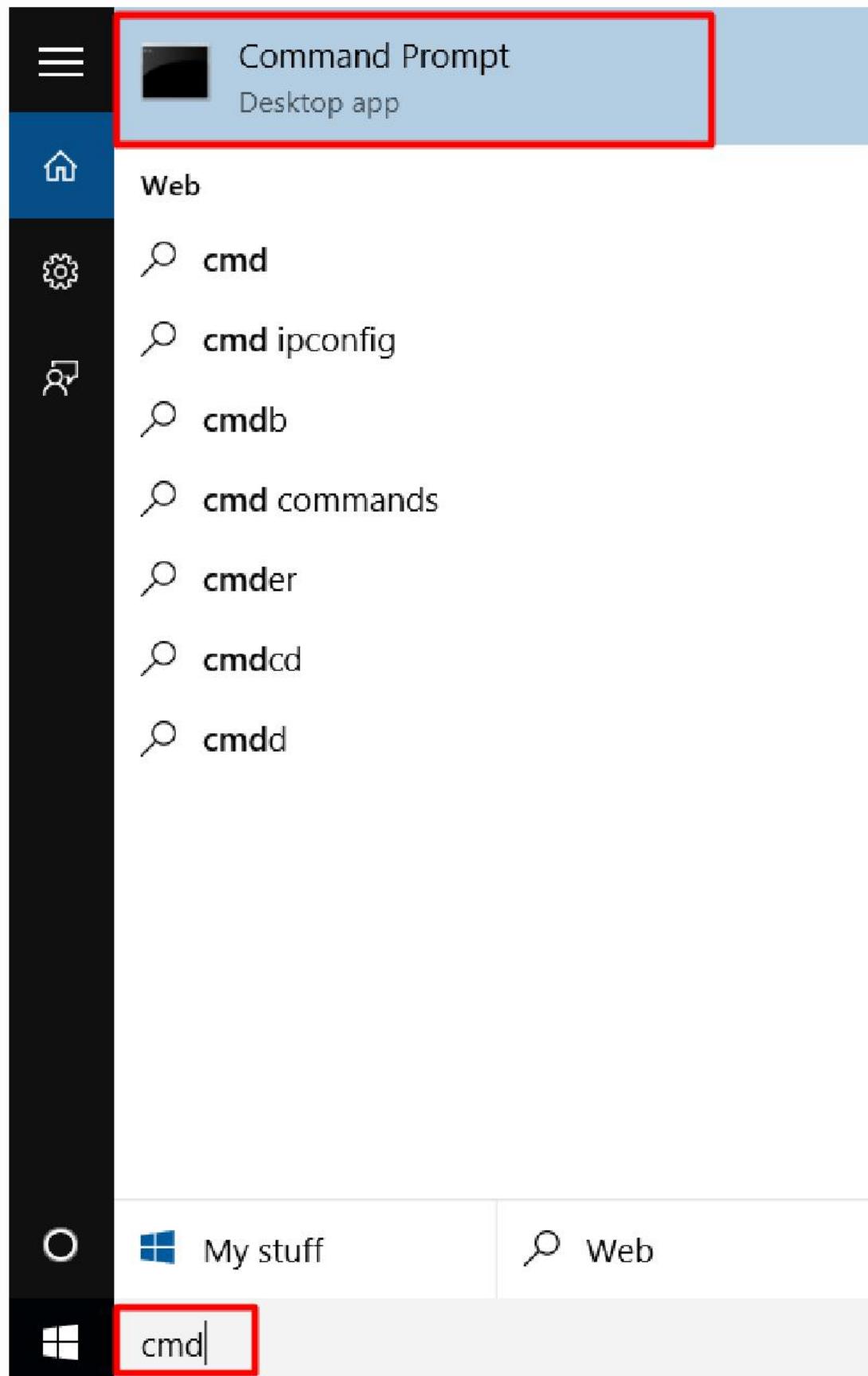
Move Down

Edit text...

OK

Cancel

- Vào cmd gõ **java -version**, nếu kết quả trả về như ảnh thì quá trình thiết lập môi trường thành công.



Command Prompt

```
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

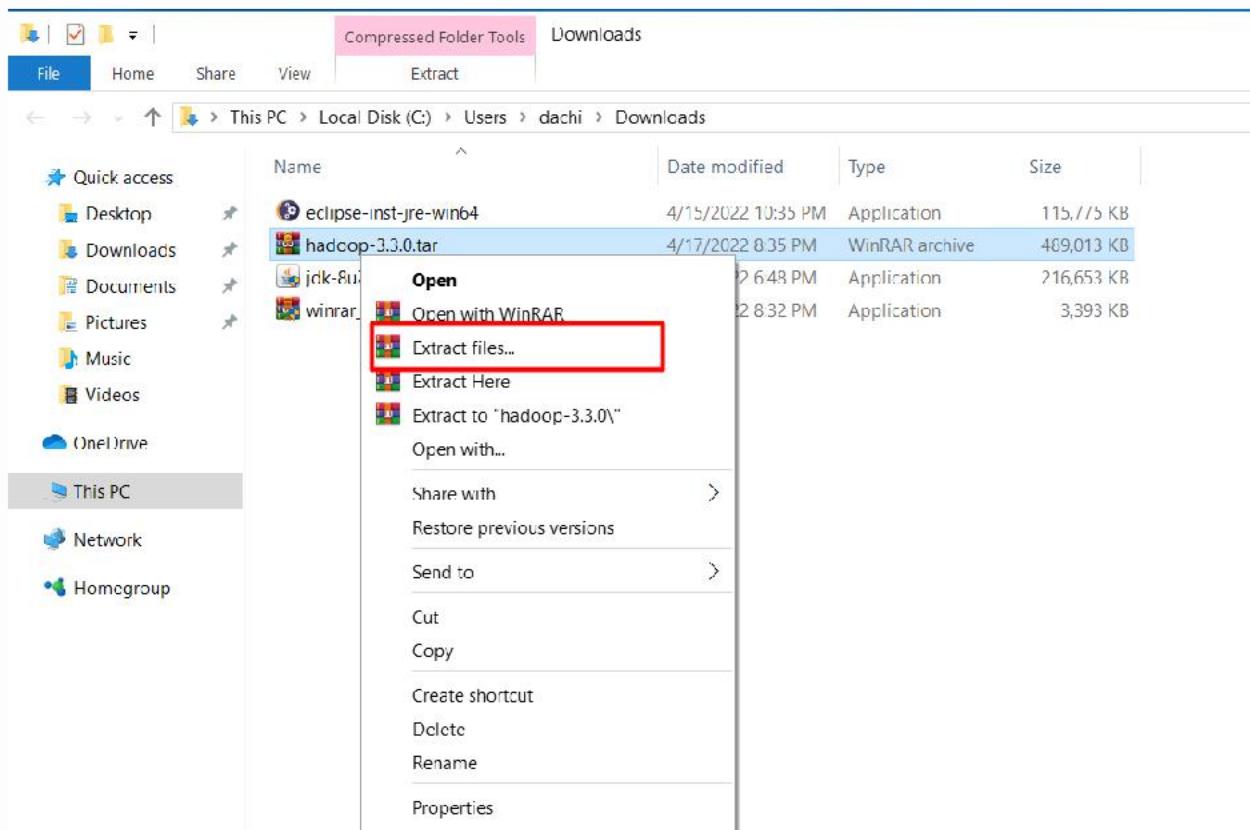
C:\Users\dachi>java -version
java version "1.8.0_202"
Java(TM) SE Runtime Environment (build 1.8.0_202-b08)
Java HotSpot(TM) 64-Bit Server VM (build 25.202-b08, mixed mode)

C:\Users\dachi>
```

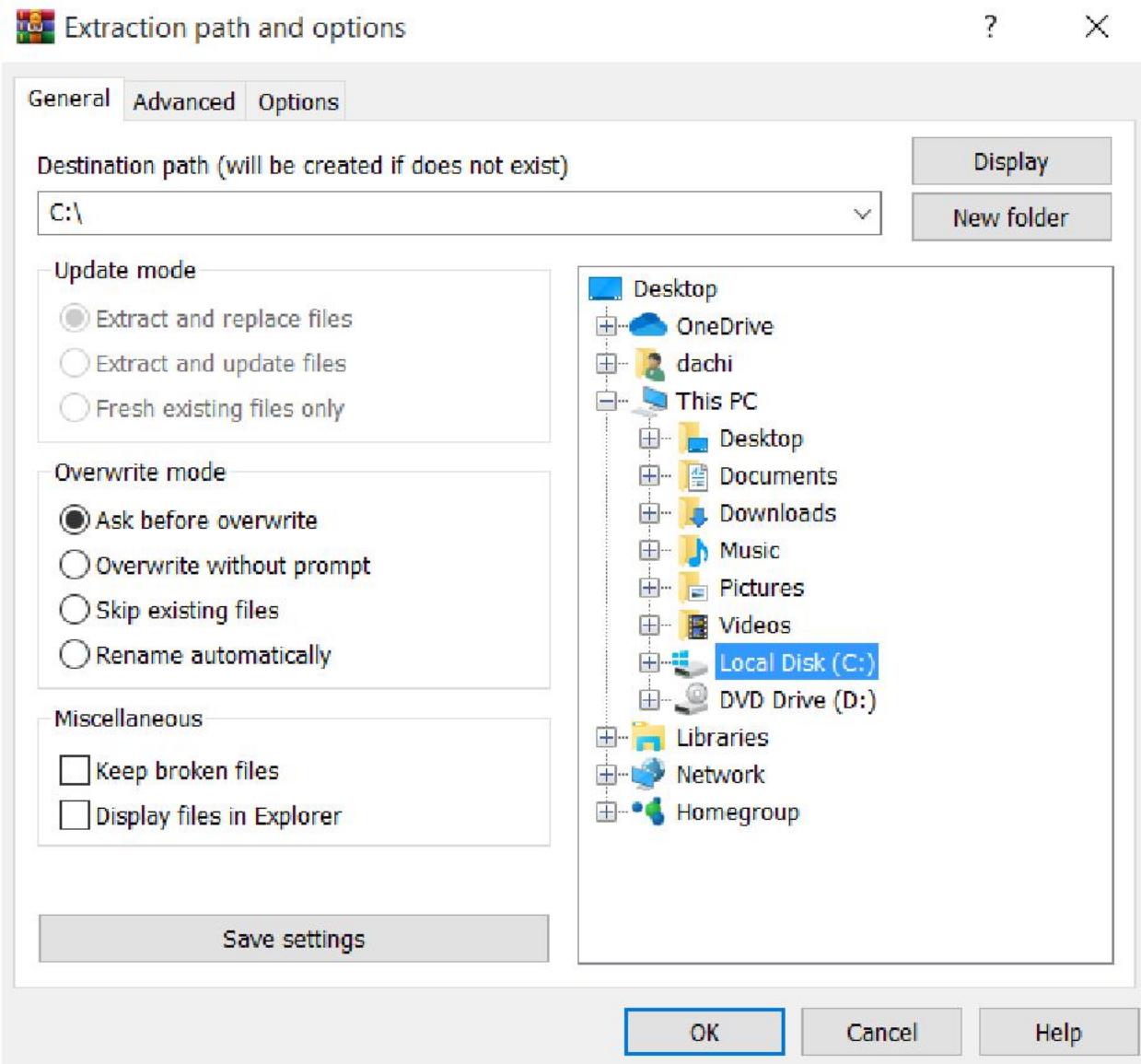
Cài đặt Hadoop

Bước 1: Tải Hadoop 3.3.0

- Truy cập link <https://archive.apache.org/dist/hadoop/common/hadoop-3.3.0/hadoop-3.3.0.tar.gz> file nén Hadoop 3.3.0 sẽ tự động được tải xuống
- Bấm chuột phải vào file **hadoop-3.3.0.taz.gz** và bấm **Extract files...**



- Chọn ô **C** và bấm **OK**



- Mở ổ C sẽ thấy thư mục **hadoop-3.3.0**

The screenshot shows a Windows File Explorer window with the title bar 'hadoop-3.3.0'. The left sidebar shows 'Quick access' with links to Desktop, Downloads, Documents, Pictures, Music, Videos, OneDrive, This PC (which is selected), Network, and Homegroup. The main area displays a list of files and folders in the 'hadoop-3.3.0' directory. The columns are Name, Date modified, Type, and Size. The contents include:

Name	Date modified	Type	Size
bin	4/17/2022 8:54 PM	File folder	
etc	4/17/2022 8:55 PM	File folder	
include	4/17/2022 8:54 PM	File folder	
lib	4/17/2022 8:55 PM	File folder	
libexec	4/17/2022 8:54 PM	File folder	
licenses-binary	4/17/2022 8:54 PM	File folder	
sbin	4/17/2022 8:54 PM	File folder	
share	4/17/2022 8:54 PM	File folder	
LICENSE	3/25/2020 12:23 AM	Text Document	16 KB
LICENSE-binary	7/5/2020 12:29 AM	File	23 KB
NOTICE	3/25/2020 12:23 AM	Text Document	2 KB
NOTICE-binary	3/25/2020 12:23 AM	File	27 KB
README	3/25/2020 12:23 AM	Text Document	1 KB

Bước 2: Thiết lập biến môi trường cho Hadoop

- Làm tương tự thiết lập biến môi trường cho JDK. Với **Variable Name: HADOOP_HOME** và **Variable Value** là đường dẫn lưu folder Hadoop **C:\hadoop-3.3.0**

Environment Variables

X

User variables for dachi

Variable	Value
HADOOP_HOME	C:\hadoop-3.3.0
JAVA_HOME	C:\Java\jdk1.8.0_202
OneDrive	C:\Users\dachi\OneDrive
Path	C:\Java\jdk1.8.0_202
...

New...

Edit...

Delete

System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
HADOOP_HOME	C:\hadoop-3.3.0
JAVA_HOME	C:\Java\jdk1.8.0_202
NUMBER_OF_PR...	2
...

New...

Edit...

Delete

OK

Cancel

- Thêm 2 giá trị **%HADOOP_HOME%\bin** và **%HADOOP_HOME%\sbin** vào biến **Path** của phần **User Variables**

Environment Variables

X

User variables for dachi

New...

[Edit...](#)

Delete

System variables

Variable	Value
JAVA_HOME	C:\Java\jdk1.8.0_202
lib	C:\Program Files\SQLXML 4.0\bin\
M2_HOME	C:\Program Files\apache-maven-3.8.5
NUMBER_OF_PROCESSORS	12
OS	Windows_NT
Path	C:\Program Files (x86)\VMware\VMware Workstation\bin\;%J...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC

New

Edit

[Delete](#)

ok

[Cancel](#)

Edit environment variable

X

```
C:\Ruby31-x64\bin  
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps  
C:\Users\dachi\AppData\Local\Programs\Microsoft VS Code\bin  
C:\Users\dachi\AppData\Roaming\npm  
C:\Program Files\Azure Data Studio\bin  
C:\Users\dachi\AppData\Local\Programs\Azure Data Studio\bin  
C:\Users\dachi\AppData\Local\Android\Sdk\platform-tools  
C:\Users\dachi\Documents\flutter\bin  
C:\Users\dachi\AppData\Roaming\Composer\vendor\bin  
%USERPROFILE%\dotnet\tools  
C:\Users\dachi\anaconda3\Library\bin  
C:\Users\dachi\anaconda3\Scripts  
C:\Users\dachi\anaconda3\condabin  
%JAVA_HOME%\bin  
%HADOOP_HOME%\bin  
%HADOOP_HOME%\sbin  
%IntelliJ IDEA Community Edition%
```

New

Edit

Browse...

Delete

Move Up

Move Down

Edit text...

OK

Cancel

- Tương tự thêm vào biến **Path** của phần **System Variables**

Environment Variables

X

User variables for dachi

Variable	Value
IntelliJ IDEA Community E...	C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 20...
JAVA_HOME	C:\Java\jdk1.8.0_202
OneDrive	C:\Users\dachi\OneDrive
OneDriveConsumer	C:\Users\dachi\OneDrive
Path	C:\Ruby31-x64\bin;C:\Users\dachi\AppData\Local\Microsoft\...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.RB;.RB...
TEMP	C:\Users\dachi\AppData\Local\Temp
TMP	C:\Users\dachi\AppData\Local\Temp

[New...](#)[Edit...](#)[Delete](#)System variables

Variable	Value
JAVA_HOME	C:\Java\jdk1.8.0_202
lib	C:\Program Files\SQLXML 4.0\bin\
M2_HOME	C:\Program Files\apache-maven-3.8.5
NUMBER_OF_PROCESSORS	12
OS	Windows_NT
Path	C:\Program Files (x86)\VMware\VMware Workstation\bin;%J...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ABBREVIATION	AMD64

[New...](#)[Edit...](#)[Delete](#)[OK](#)[Cancel](#)

Edit environment variable

X

```
C:\Ruby31-x64\bin  
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps  
C:\Users\dachi\AppData\Local\Programs\Microsoft VS Code\bin  
C:\Users\dachi\AppData\Roaming\npm  
C:\Program Files\Azure Data Studio\bin  
C:\Users\dachi\AppData\Local\Programs\Azure Data Studio\bin  
C:\Users\dachi\AppData\Local\Android\Sdk\platform-tools  
C:\Users\dachi\Documents\flutter\bin  
C:\Users\dachi\AppData\Roaming\Composer\vendor\bin  
%USERPROFILE%\dotnet\tools  
C:\Users\dachi\anaconda3\Library\bin  
C:\Users\dachi\anaconda3\Scripts  
C:\Users\dachi\anaconda3\condabin  
%JAVA_HOME%\bin  
%HADOOP_HOME%\bin  
%HADOOP_HOME%\sbin  
%IntelliJ IDEA Community Edition%
```

New

Edit

Browse...

Delete

Move Up

Move Down

Edit text...

OK

Cancel

- Vào **cmd** gõ **hadoop version**, nếu kết quả trả về như ảnh thì quá trình thiết lập môi trường thành công.

```
Command Prompt
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\dachi>hadoop version
Hadoop 3.3.0
Source code repository https://gitbox.apache.org/repos/asf/hadoop.git -r aa96f1871bfd858f9bac59cf2a81ec470da549af
Compiled by brahma on 2020-07-06 18:44Z
Compiled with protoc 3.7.1
From source with checksum 5dc29b802d6cccd77b262ef9d04d19c4
This command was run using /C:/hadoop 3.3.0/share/hadoop/common/hadoop-common-3.3.0.jar

C:\Users\dachi>
```

Bước 3: Cấu hình các tập tin cho Hadoop

- Truy cập thư mục **C:\hadoop-3.3.0\etc\hadoop**
- Cấu hình core-site.xml như dưới đây:

```
<configuration>
<property>
  <name>fs.defaultFS</name>
  <value>hdfs://localhost:9000</value>
</property>
</configuration>
```

- Cấu hình mapred-site.xml như dưới đây:

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

- Tạo thư mục **data** trong **C:\hadoop-3.3.0**
- Tạo thư mục con **datanode** trong **C:\hadoop-3.3.0\data**
- Tạo thư mục con **namenode** trong **C:\hadoop-3.3.0\data**
- Sau đó cấu hình hdfs-site.xml như sau:

```
<configuration>
<property>
  <name>dfs.replication</name>
  <value>1</value>
</property>
<property>
  <name>dfs.namenode.name.dir</name>
  <value>/hadoop-3.3.0/data/namenode</value>
</property>
```

```

<property>
  <name>dfs.datanode.data.dir</name>
  <value>/hadoop-3.3.0/data/datanode</value>
</property>
</configuration>

```

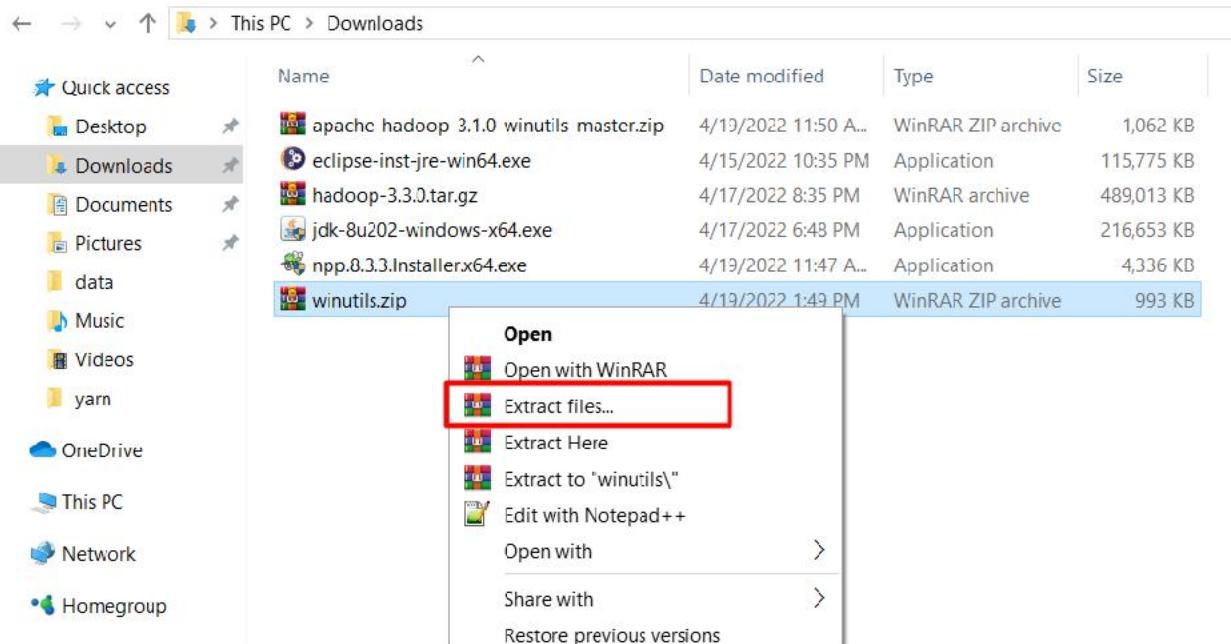
- Cấu hình yarn-site.xml như dưới đây:

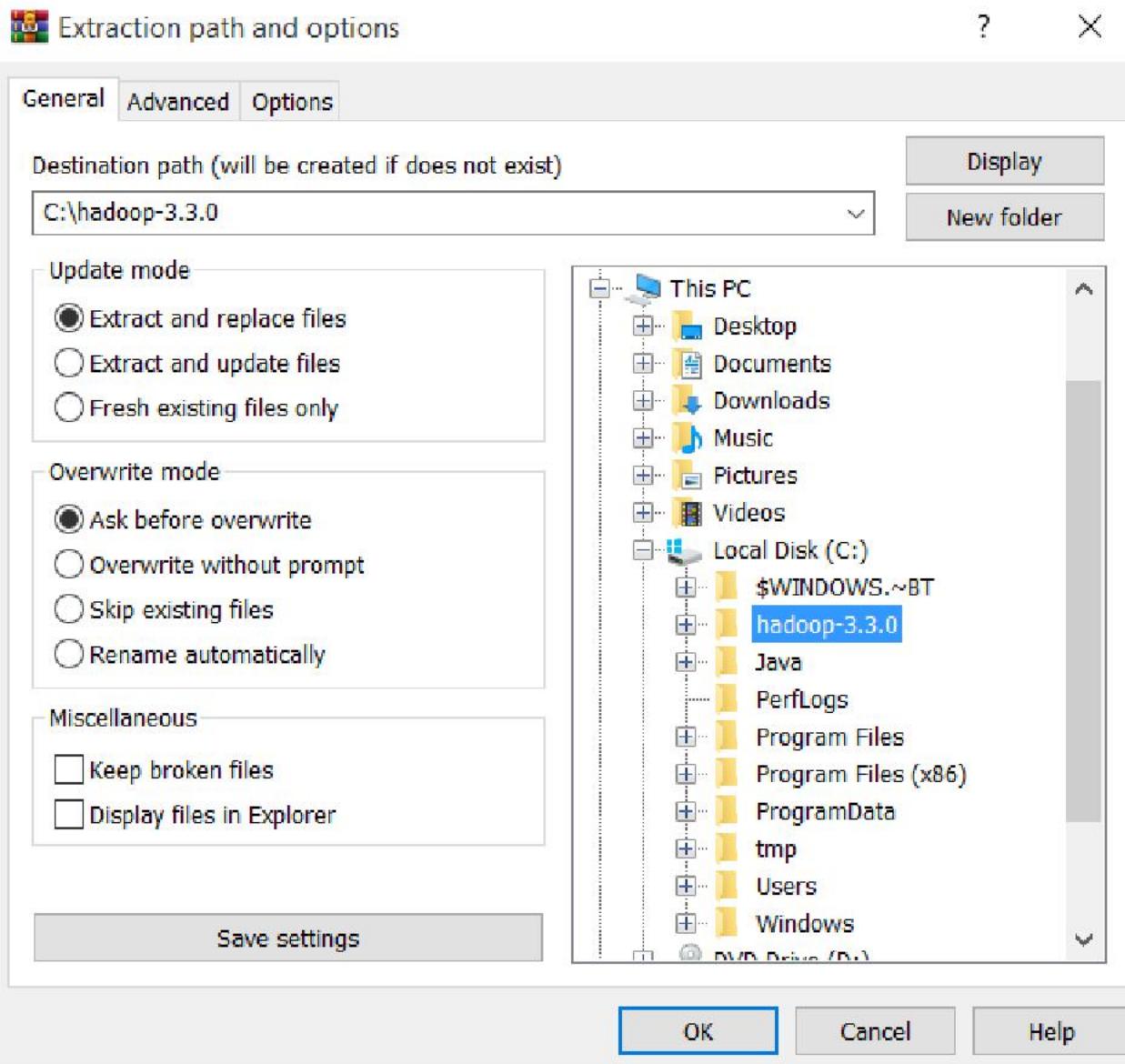
```

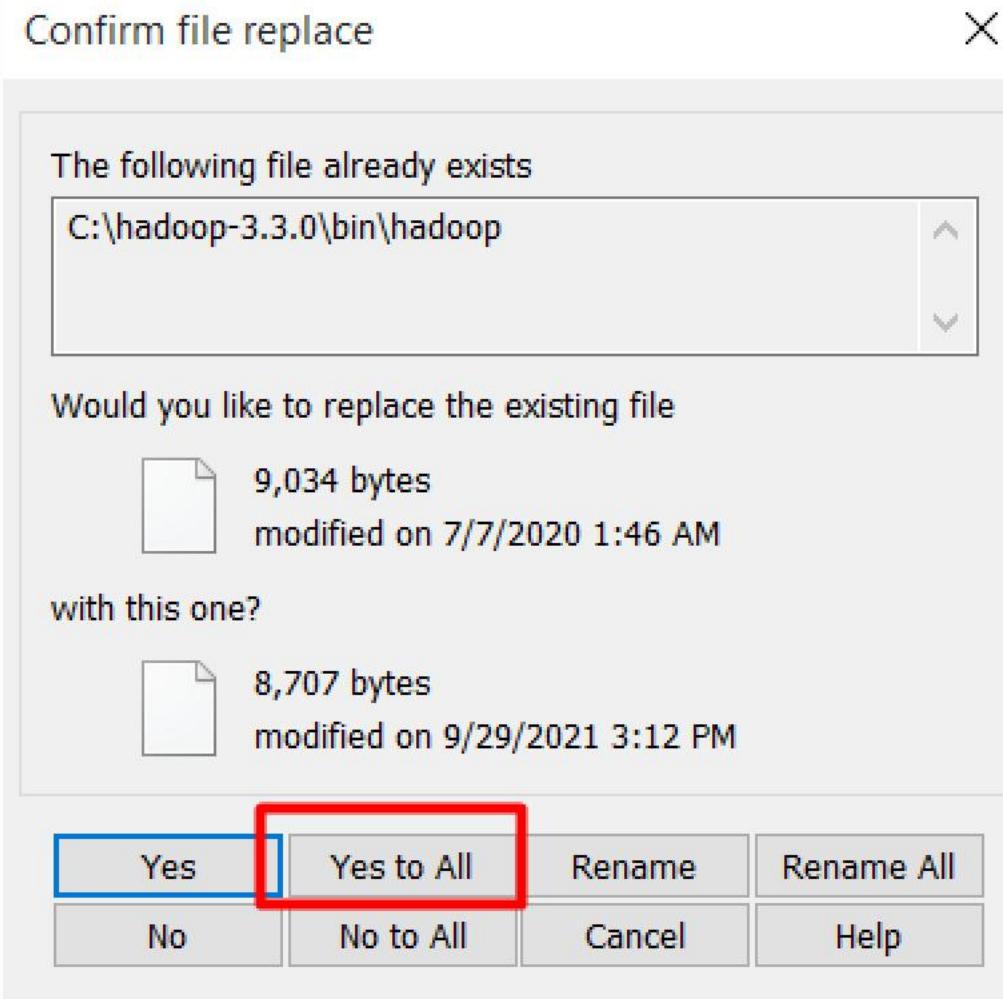
<configuration>
  <property>
    <name>yarn.nodemanager.aux-services</name>
    <value>mapreduce_shuffle</value>
  </property>
  <property>
    <name>yarn.nodemanager.auxservices.mapreduce.shuffle.class</name>
    <value>org.apache.hadoop.mapred.ShuffleHandler</value>
  </property>
</configuration>

```

- Tải [apache-hadoop-winutils](#)
- Giải nén sẽ thấy thư mục **bin** bên trong. Chép đè thư mục bin này vào thư mục **C:\hadoop-3.3.0\bin**







- Sau đó format lại namenode và datanode, mở command line lên, gõ 2 lệnh sau (Bước format này chỉ cần làm 1 lần):

```
hdfs namenode -format  
hdfs datanode -format
```

- Tiếp theo sao chép file: **C:\hadoop-3.3.0\share\hadoop\yarn\timelineservice\ hadoop-yarn-server-timelineservice-3.3.0.jar** vào **C:\hadoop-3.3.0\share\hadoop\yarn\hadoop-yarn-server-timelineservice-3.3.0.jar**
- Quá trình cài đặt Hadoop đã hoàn tất, để chạy Hadoop di chuyển tới thư mục **C:\hadoop-3.3.0\sbin**. Gõ lệnh:

```
start-all
```

- 4 ứng dụng sẽ được chạy và phải đảm bảo các ứng dụng không bị kết thúc:

```

[1] Apache Hadoop Distribution - hadoop_namenode
[2] Apache Hadoop Distribution - hadoop_datanode
[1-16] Apache Hadoop Distribution - C:\hadoop-3.3.0\bin\yarn_resourcemanager
[2021-04-17 20:41:18] Apache Hadoop Distribution - C:\hadoop-3.3.0\bin\yarn_nodemanager
[2021-04-17 20:41:18] [INFO] com.sun.jersey.server.impl.application.WebApplicationImpl: initiate
for [1-16] INFO: Initiating Jersey application, version 'Jersey: 1.19 02/11/2015 03:25 AM'
[2021-04-17 20:41:18] [INFO] com.sun.jersey.spi.container.GuiceComponentProviderFactory: getComponentProvider
[2021-04-17 20:41:18] [INFO] Binding org.apache.hadoop.yarn.server.nodemanager.webapp.JAXBContextResolver to GuiceManagedComponentProvider with
The scope "Singleton"
[2021-04-17 20:41:18] [INFO] com.sun.jersey.spi.container.GuiceComponentProviderFactory: getComponentProvider
[2021-04-17 20:41:18] [INFO] Binding org.apache.hadoop.yarn.webapp.GenericExceptionHandler to GuiceManagedComponentProvider with the scope "Singe
[2021-04-17 20:41:18] [INFO] com.sun.jersey.spi.container.GuiceComponentProviderFactory: getComponentProvider
[2021-04-17 20:41:18] [INFO] Binding org.apache.hadoop.yarn.server.nodemanager.webapp.NMWebServices to GuiceManagedComponentProvider with the s
[2021-04-17 20:41:18] [INFO] com.sun.jersey.spi.container.GuiceComponentProviderFactory: getComponentProvider
[2021-04-17 21:19:57,646] INFO handler.ContextHandler: Started o.e.j.w.WebAppContext@1e80a7a7{node/,file:///C:/Users/dachieu/AppData/Local/Temp/jetty_0_0_0_8042_/_any_1040902350353260733.dir/webapp/,AVAILABLE}{jar:file:/C:/hadoop-3.3.0/shard/hadoop-yarn-common-3.3.0.jar!/webapps/node}
[2021-04-17 21:19:57,661] INFO server.AbstractConnector: Started ServerConnector@3a4e343{HTTP/1.1,[http/1.1]}{0.0.0.0:8042}
[2021-04-17 21:19:57,661] INFO server.Server: Started @13358ms
[2021-04-17 21:19:57,662] INFO webapp.WebApps: Web app node started at 8042
[2021-04-17 21:19:57,664] INFO nodemanager.NodeStatusUpdaterImpl: Node ID assigned is : dachieu:52304
[2021-04-17 21:19:57,666] INFO util.JvmPauseMonitor: Starting JVM pause monitor
[2021-04-17 21:19:57,677] INFO client.DefaultHARMFailoverProxyProvider: Connecting to ResourceManager at /0.0.0.0:8031
[2021-04-17 21:19:57,761] INFO nodemanager.NodeStatusUpdaterImpl: Sending out 0 NM container statuses: []
[2021-04-17 21:19:57,775] INFO nodemanager.NodeStatusUpdaterImpl: Registering with RM using containers :[]
[2021-04-17 21:19:57,963] INFO security.NMContainerTokenSecretManager: Rolling master-key for container-tokens, got key with id
[2021-04-17 21:19:57,964] INFO security.NMTokenSecretManagerInNM: Rolling master-key for container-tokens, got key with id
[2021-04-17 21:19:57,965] INFO nodemanager.NodeStatusUpdaterImpl: Registered with ResourceManager as dachieu:52304 with total resource of <memory:8192, vCores:8>

```

NOTE: Trường hợp bị lỗi hãy chạy lên trên cmd bằng quyền Administrator

- Yarn web page: <http://localhost:8088/>

The screenshot shows the Hadoop YARN web interface at <http://localhost:8088/cluster>. The left sidebar has a tree view with nodes like Cluster, About, Nodes, Node Labels, Applications (with sub-options: NEW, SAVING, SUBMITTED, ACCEPTED, RUNNING, FINISHED, FAILED, KILLED), Scheduler, and Tools.

The main content area displays several metrics tables:

- Cluster Metrics:**

Apps Submitted	Apps Pending	Apps Running	Apps Completed	Containers Running
0	0	0	0	0
- Cluster Nodes Metrics:**

Active Nodes	Decommissioning Nodes	Decommissioned Nodes
1	0	0
- Scheduler Metrics:**

Scheduler Type		Scheduling Resource Type	Metric
Capacity Scheduler		[memory-mb (unit=MB), vcores]	<memory:1024, vCores:8>
- Applications:**

ID	User	Name	Application Type	Application Tags	Queue	Application Priority	StartTime	LaunchTime	FinishTime
Showing 0 to 0 of 0 entries									

- Name node web page: <http://localhost:9870/>

Overview 'localhost:9000' (✓active)

Started:	Tue Apr 19 13:54:45 +0700 2022
Version:	3.3.0, raa98f1871b1d858f9bac58cf2a81ec170da619af
Compiled:	Tue Jul 07 01:44:00 +0700 2020 by brahma from branch-3.3.0
Cluster ID:	CID-032a812d-a224-4ec1-be63-f7066f7884ee
Block Pool ID:	BP-469985238-192.168.23.128-1660361230140

Summary

Security is off.
Safemode is off.
1 files and directories, 0 blocks (0 replicated blocks, 0 erasure coded block groups) = 1 total filesystem object(s).
Heap Memory used 80.19 MB of 191.5 MB Heap Memory. Max Heap Memory is 899 MB.
Non Heap Memory used 49.5 MB of 60.73 MB Committed Non Heap Memory. Max Non Heap Memory is <unbounded>.

- Data node web page: <http://localhost:9864/>

DataNode on DESKTOP-QBKQL72.localdomain:9866

Cluster ID:	CID-032a812d-a224-4ec1-be63-f7066f7884ee
Version:	3.3.0, raa98f1871b1d858f9bac58cf2a81ec170da619af

Block Pools

Namenode Address	Block Pool ID	Actor State	Last Heartbeat	Last Block Report	Last Block Report Size (Max Size)
localhost:9000	BP-469985238-192.168.23.128-1660361230140	RUNNING	1s	a few seconds	0 B (128 MB)

Volume Information

Directory	Storage Type	Capacity Used	Capacity Left	Capacity Reserved	Reserved Space for Replicas	Blocks