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How to install Hadoop

A. Install Hadoop on Windows Machine:

Install Java machine:

using command line type**: java -version**

Install Java 8 if it's not been installed. You can use the following link to install Java SE kit 8

https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html

```
C:\Users\babakea>java -version
java version "1.8.0_181"
Java(TM) SE Runtime Environment (build 1.8.0_181-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.181-b13, mixed mode)
```

Install Apache Spark:

1) Download the apache Spark from : https://spark.apache.org/downloads.html
    a. http://us.mirrors.quenda.co/apache/spark/spark-3.0.0-preview2/spark-3.0.0-preview2-bin-hadoop3.2.tgz
2) Unzip the file to the spark folder in your local computer (D:\apache_spark\spark-3.0.0-preview2-bin-hadoop3.2)
3) Install winutls.exe to setup Hadoop using the following link:
    a. https://github.com/BabakEA/Install_Apache_SPARK_Hadoop_on_Windows_Machine/blob/master/winutils.exe
    b. Create a Hadoop folder
    c. Create bin folder and copy the winutils.exe in the (D:\Hadoop\bin\)
    d. Go to Control Panel\System and Security\System and click on advanced system setting

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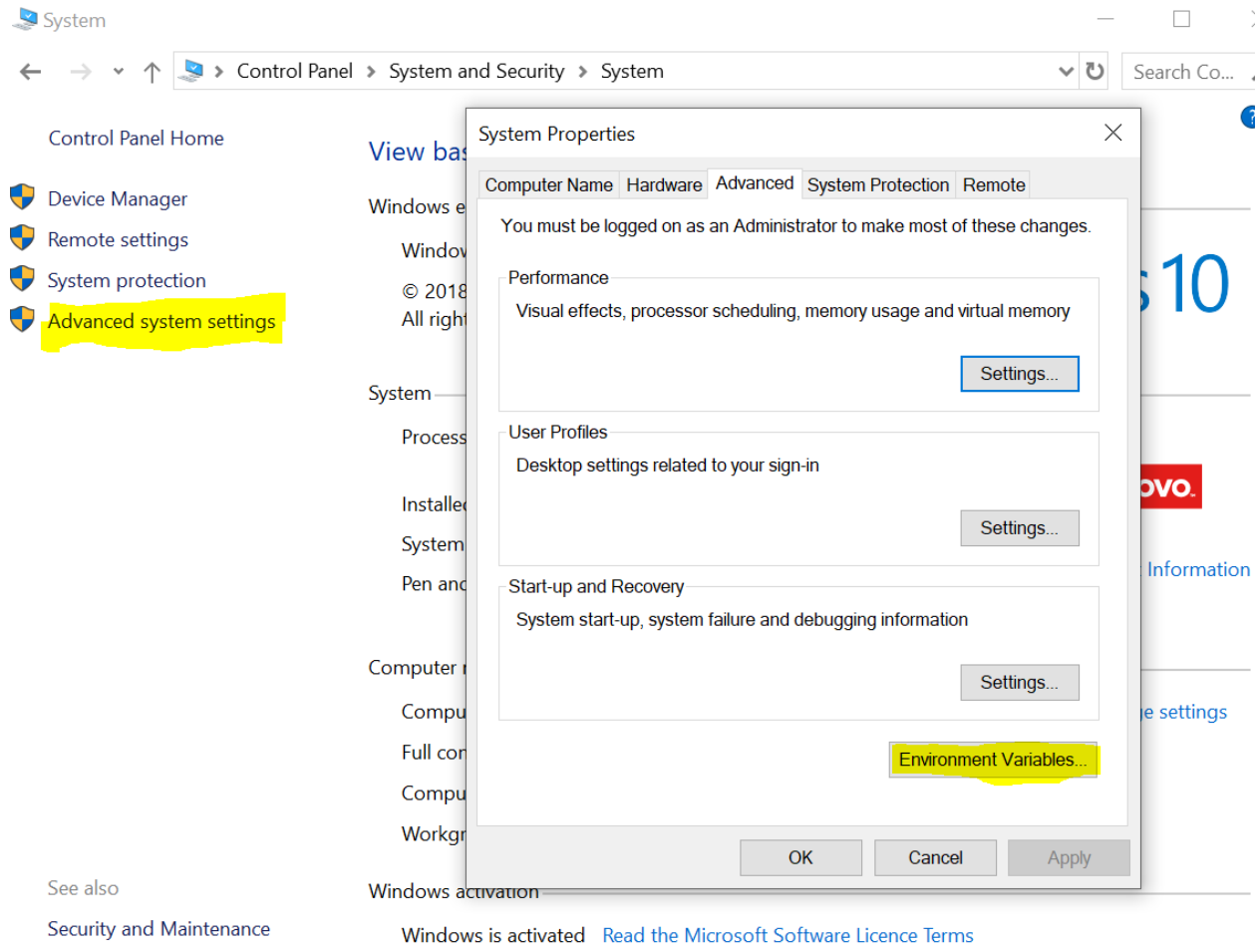

e. Got to Environment variables, create HADOOP_HOME and SAPRK_HOME
    i. HADOOP:
        1. Variable Name: HADOOP_HOME
        2. Variable value: D:\hadoop
    ii. SPARK:
        1. Variable Name: SPARK_HOME
        2. Variable value: D:\apache_spark\spark-3.0.0-preview2-bin-hadoop3.2

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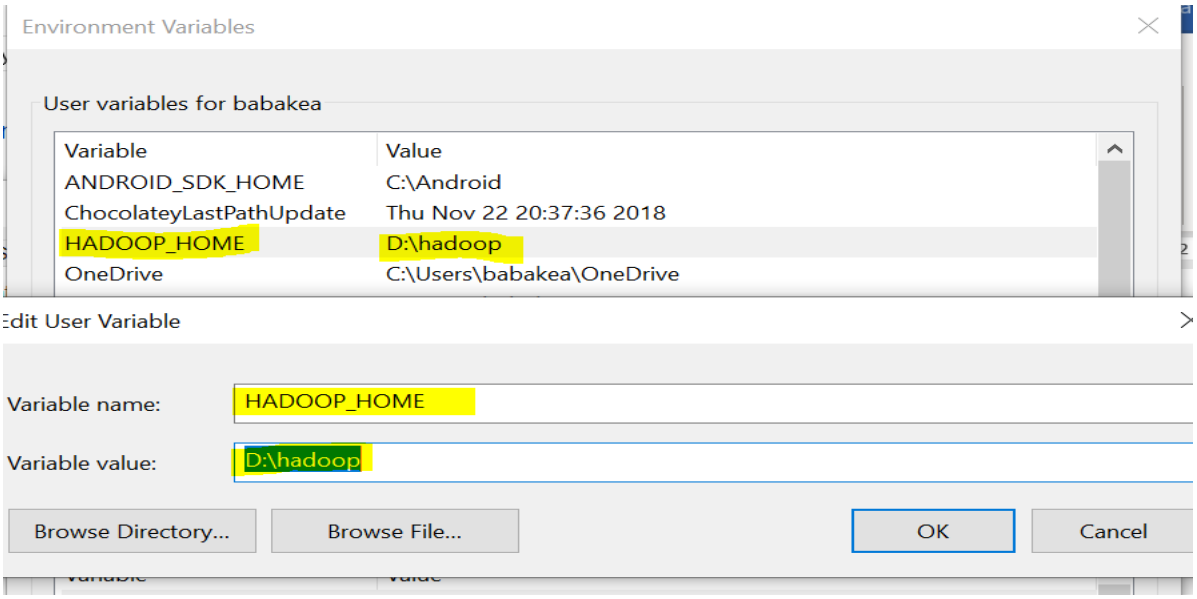
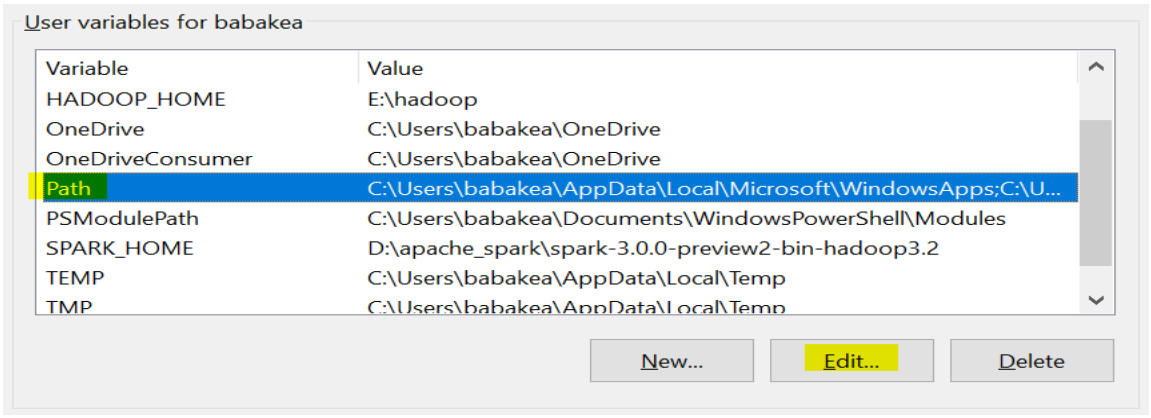


f. Add Hadoop and Spark Binary to the path: go to the User Variables for … and edit the path



g. Add Hadoop and spark home to the path:
   i. %HADOOP_HOME%\bin
   ii. %SPARK_HOME%\bin

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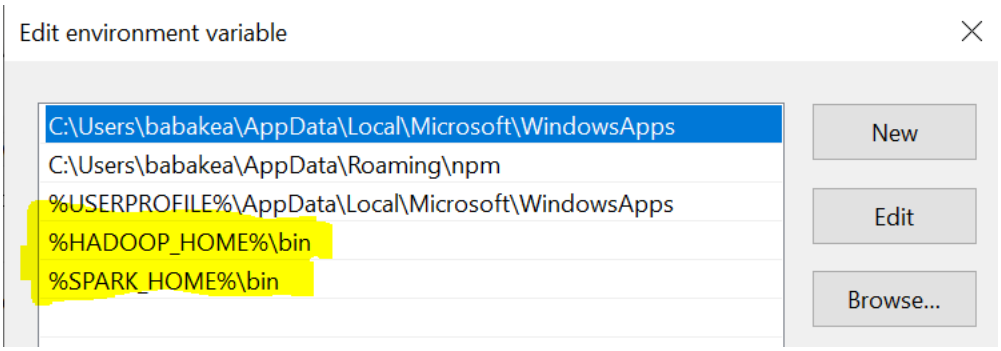

h. Create a new folder name tem. Inside the tem folder create new folder name hive. Change hive permission to accessible for all users by writhing:
   i. d:\hadoop\bin\winutils chmod 777 d:\tem\hive

i. change the Spark log, from info to error: go to the following address
j. D:\apache_spark\spark-3.0.0-preview2-bin-hadoop3.2\conf
   i. Make a copy of (log4j.properties.template) and rename it to log4j.properties
   ii. Go to # Set everything to be logged to the console
   iii. log4j.rootCategory=INFO, console
   and change it to (ERROR), log4j.rootCategory=ERROR, console

Setup Jupyter notebook for Pyspark:

1) Install findspark lib using:
   a. python -m pip install findspark
2) initialise pyspark using this lib using:
   a. `import findspark`
   b. `findspark.init()`