Spring 2023 Setup Guide [For Q2]

Getting Started

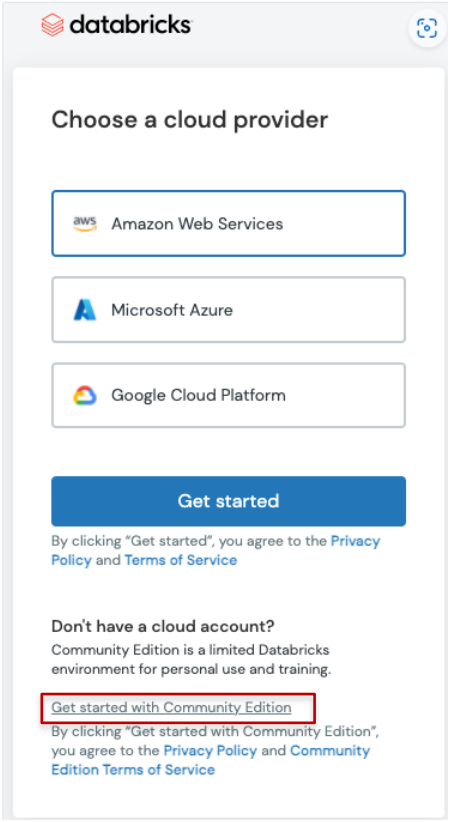
A video tutorial has been created to help walk you through the steps in this document. You can view it here.

NOTE: This setup guide is for reference only and is not meant to serve as an exact step-by-step guide.

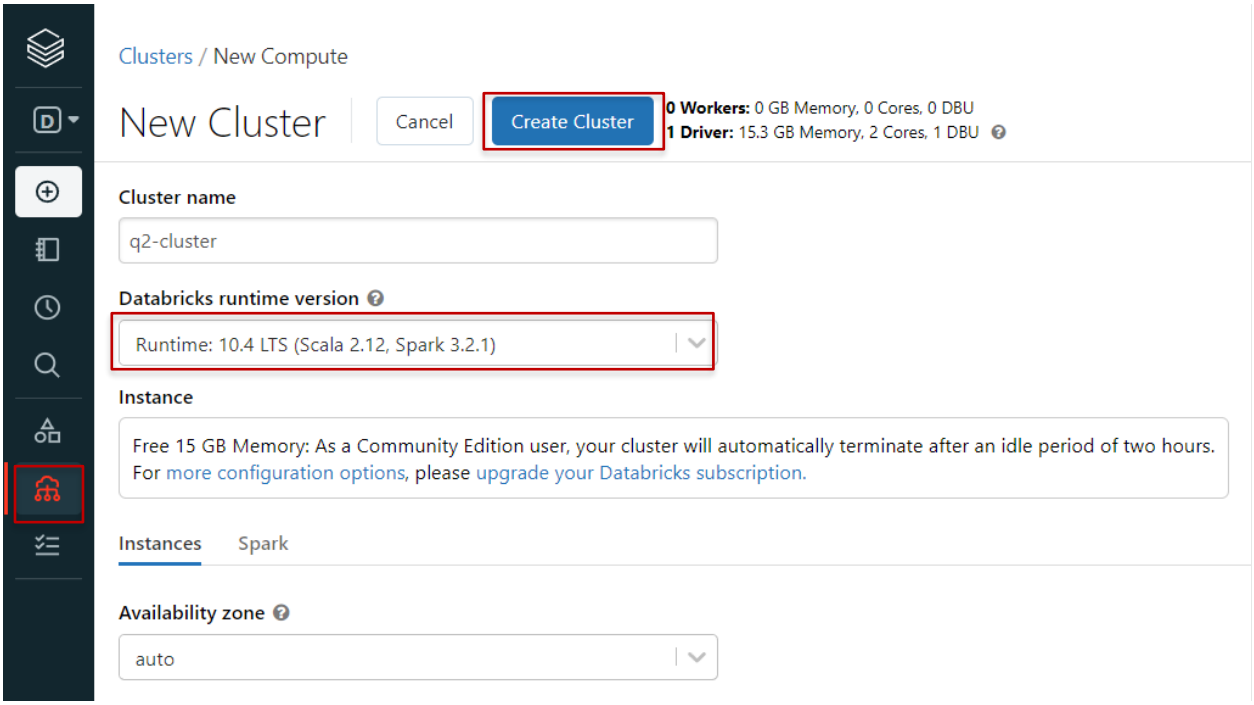
For Q2, we will use the Databricks platform to execute Spark/Scala tasks. Databricks has excellent documentation and we defer to their guidance instead of reproducing it here. Follow these steps to get started:

1. Create a **Community Edition (**https://community.cloud.databricks.com/**)** account on Databricks. Do **NOT** select Databricks Platform - Free Trial; if you do, you will encounter many problems in the subsequent sections. More info: https://docs.databricks.com/getting-started/community-edition.html

   NOTE: select "Get started with community edition" on this page

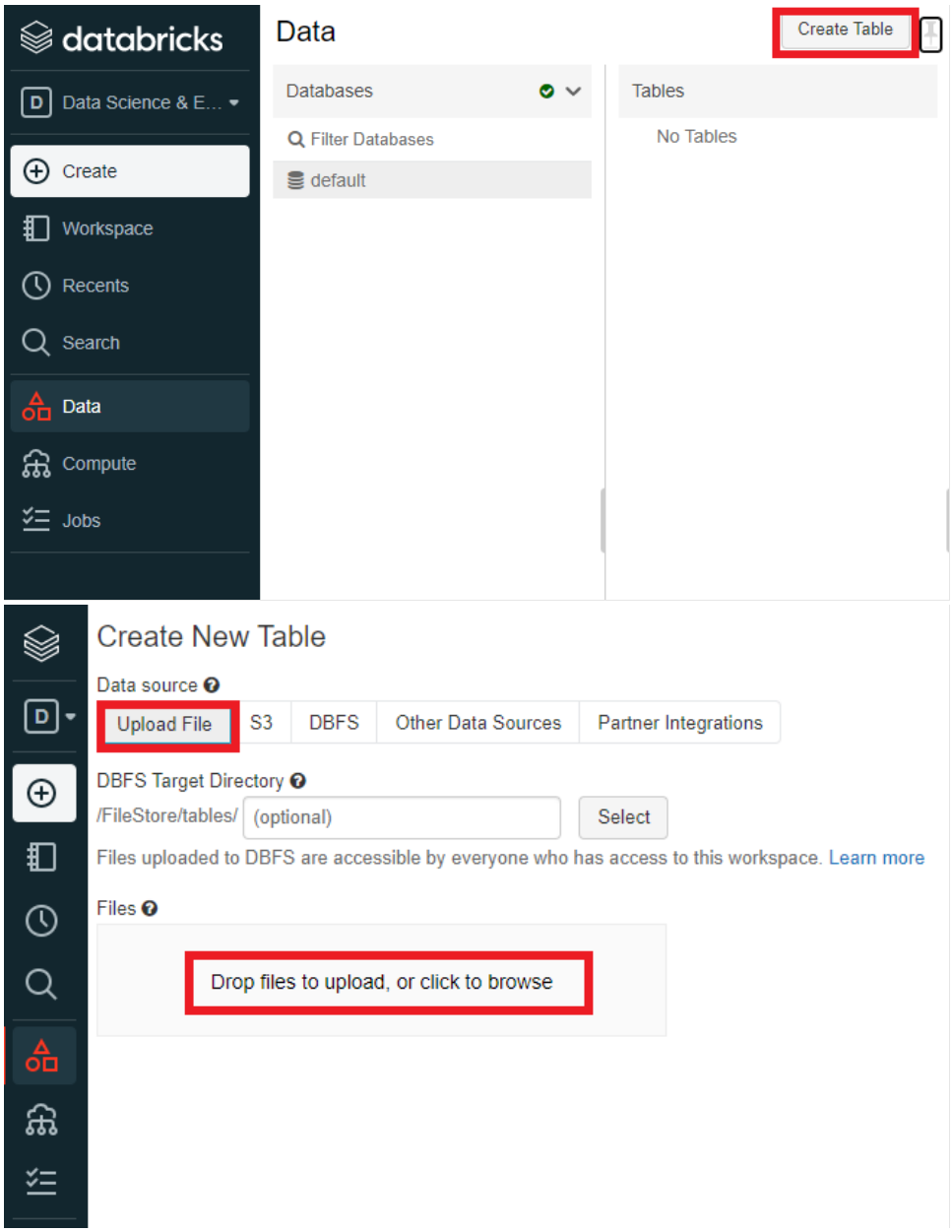


2. After setting up a **Community Edition** account Follow the Quickstart Steps 1-2 to become familiar with the Databricks UI and to create a cluster. For this assignment, select the cluster Databricks Runtime version as '10.4 LTS' (without GPU). This should be the default version in Databricks. Grading will be done using this version of DBR. The Python version does not matter. You do not need to set the "Availability Zone" and can leave it at default value. Give this step a few moments to initialize the cluster.



Note that your cluster will need to be re-created periodically. As a Community Edition user, your cluster will automatically terminate after an idle period of two hours. https://docs.databricks.com/getting-started/quick-start.html

3. Import the data files, i.e., **nyc-tripdata.csv and taxi_zone_lookup.csv** into your workspace in the Data option using Create Table. Record the path of your file when it is uploaded. This path will be used to read the file into your Scala Notebook. Note the path below is: '/FileStore/tables/nyc_tripdata-1.csv'. **You will probably get a different file-path**, which you must copy and use in your code.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Upload File
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DBFS
Other Data Sources
Partner Integrations
DBFS Target Directory
/FileStore/tables/
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Files
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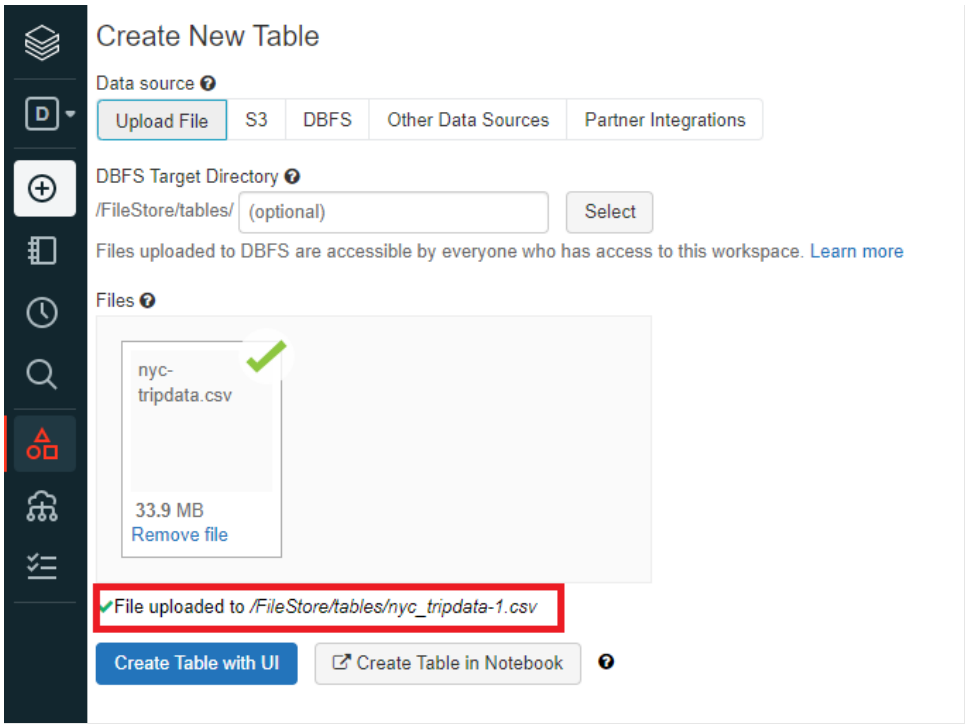
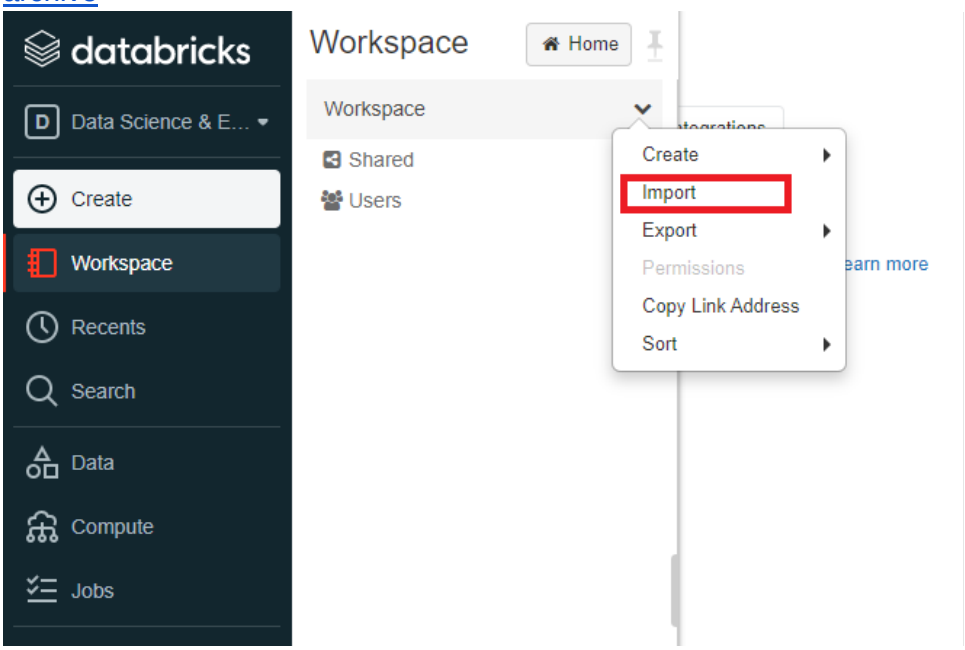


4. Import the template Scala notebook, **q2.dbc** from **hw3-skeleton/q2** into your workspace. This is a template notebook containing Scala code that you can use for Q2. https://docs.databricks.com/user-guide/notebooks/notebook-manage.html#import-an-archive

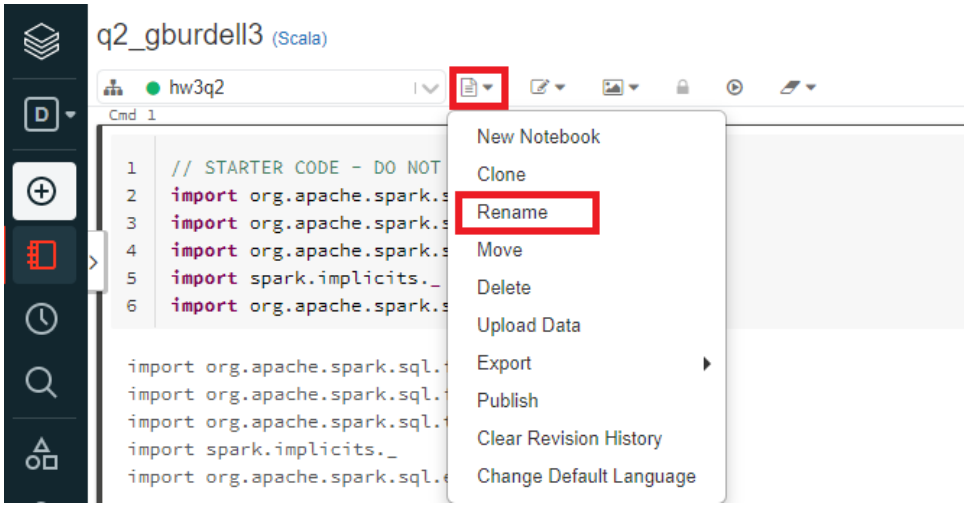


5. Attach your cluster to the imported notebook. https://docs.databricks.com/user-guide/notebooks/notebook-manage.html#attach-a-notebook-to-a-cluster

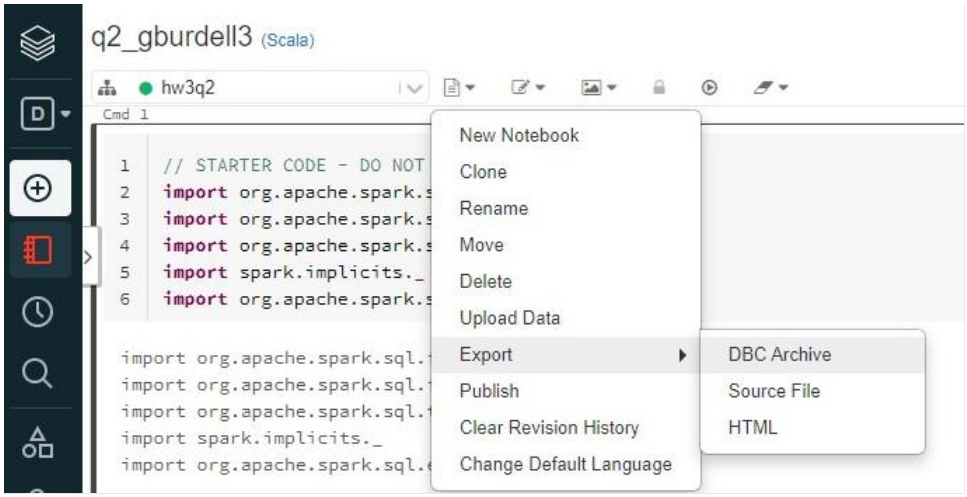
6. Review documentation on developing and using notebooks. https://docs.databricks.com/user-guide/notebooks/notebook-use.html

7. Within your notebook, you can access the uploaded data file **nyc-tripdata.csv and taxi_zone_lookup.csv** by using the Databricks file system utilities. Code snippet to read in the data is already provided in the dbc file present in the hw-3 skeleton. https://docs.databricks.com/user-guide/dbfs-databricks-file-system.html#access-dbfs-with-dbutils.

8. Renaming the files.



9. Creating an exportable archive: Export your solution as **<filename>.dbc**. (see HW instructions on what this file should be named) https://docs.databricks.com/user-guide/notebooks/notebook-manage.html#export-an-archive. In this case, you will select, File -> Export -> DBC Archive.



10. Create an exportable source file: Export your solution as **<filename>.scala** (see HW instructions on what this file should be named) https://docs.databricks.com/user-guide/notebooks/notebook-manage.html#export-a-notebook
    In this case, you will select, File -> Export -> Source File.