Exp.No: 4

Create User Defined Function (UDF) in Apache Pig and execute it in MapReduce

AIM:

To create User Define Function in Apache Pig and execute it on map reduce.

PROCEDURE:

Step-1: Go to https://pig.apache.org/releases.html and copy the path of the latest version of pig that you want to install. Run the following comment to download Apache Pig in Ubuntu:

wget https://dlcdn.apache.org/pig/pig-0.16.0/pig-0.16.0.tar.gz

Step-2: To untar pig-0.16.0.tar.gz file run the following command:

tar xvzf pig-0.16.0.tar.gz

Step 3: To create a pig folder and move pig-0.16.0 to the pig folder, execute the following command:

sudo mv /home/hdoop/pig-0.16.0 /home/hdoop/pig

Step 4: Now open the .bashrc file to edit the path and variables/settings for pig. Run the following command:

sudo nano .bashrc

Add the below given to .bashrc file at the end and save the file.

#PIG settings

export PIG_HOME=/home/hdoop/pig

export PATH=$PATH:$PIG_HOME/bin

export PIG_CLASSPATH=$PIG_HOME/conf:$HADOOP_INSTALL/etc/hadoop/

export PIG_CONF_DIR=$PIG_HOME/conf

export JAVA_HOME=/usr/lib/jvm/java-8-openjdkamd64

export PIG_CLASSPATH=$PIG_CONF_DIR:$PATH

#PIG setting ends

Step 5: Run the following command to make the changes effective in the .bashrc file:

source .bashrc

Step 6: To start all Hadoop daemons, navigate to the hadoop-3.2.1/sbin folder and run the following commands:

./start-dfs.sh

./start-yarn.sh

Step 7: Create a sample text file

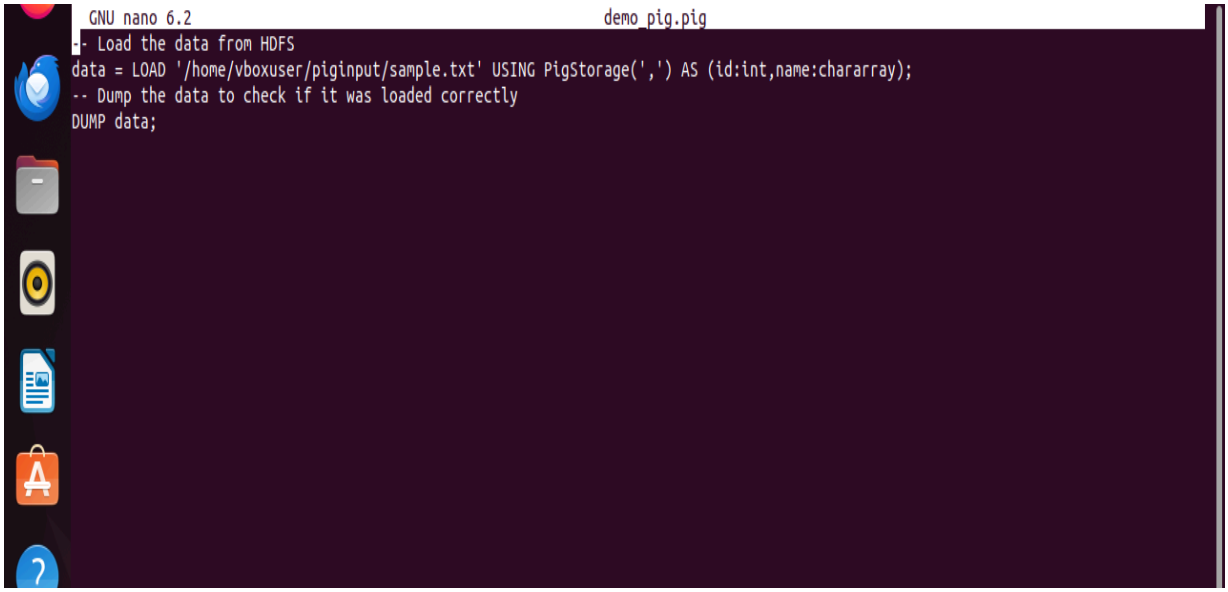
nano sample.txt

Step 8: Add the text file to the Hadoop environment.

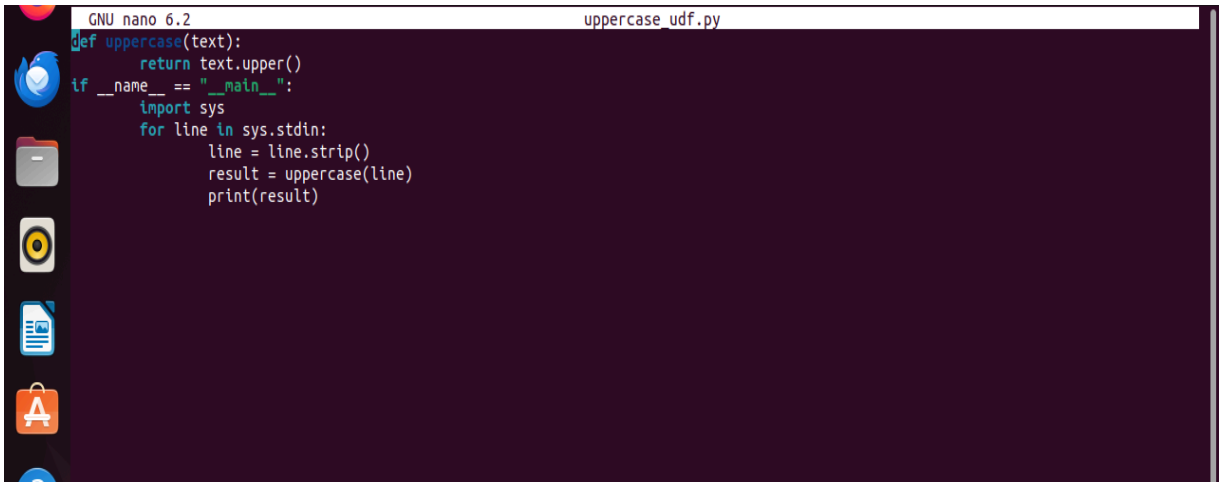
hadoop fs -put sample.txt /home/hadoop/piginput/

Step 9: Create PIG File

nano demo_pig.pig



Step 10: Create udf file and save as uppercase_udf.py



Step 11: Create the udfs folder on hadoop

hadoop fs -mkdir /home/hadoop/udfs

Step 12: Put the upppercase_udf.py in to the above folder

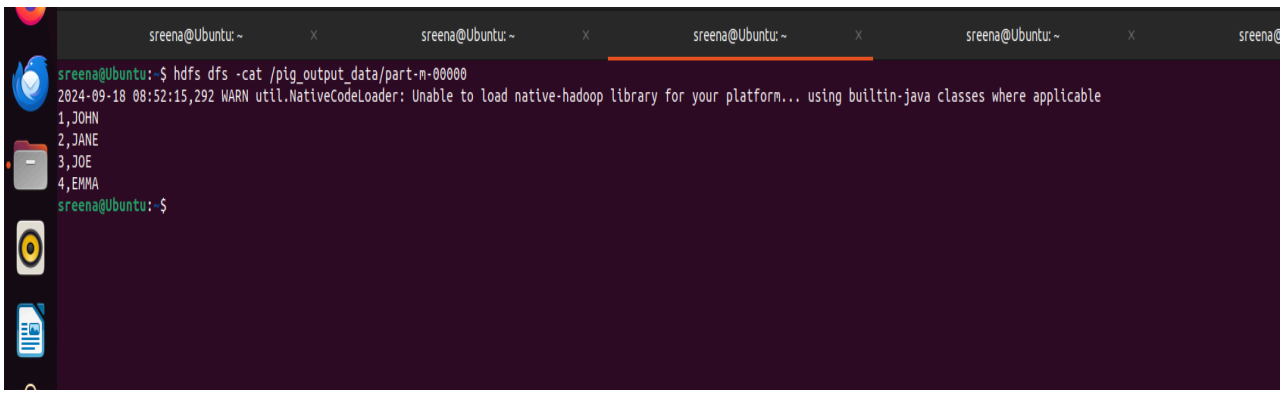
hdfs dfs -put uppercase_udf.py /home/hadoop/udfs/

Step 13: Create a file named udf_example.pig

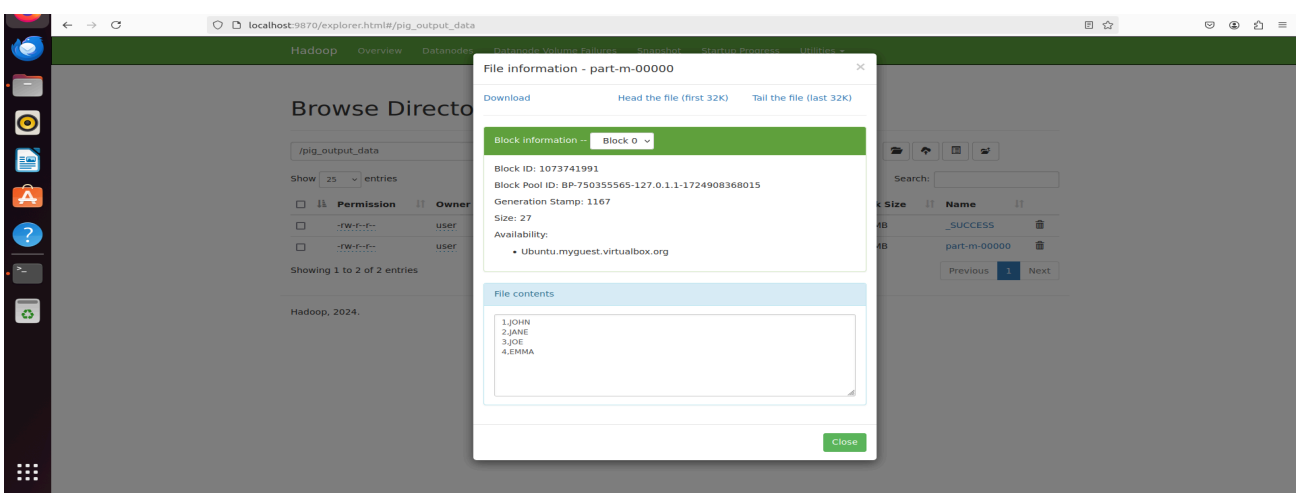
nano udf_example.pig

Step 14: To view the output use the command below

hdfs dfs -cat /home/hadoop/pig_output_data/part-m-00000



Step 15: The result in the Namenode is as follows:



RESULT: Thus the program is executed successfully and output is verified.