EXP NO: 4   **CREATE UDF IN PIG**

$start-all.sh

```
                                                                        hadoop@kali:~
File  Actions  Edit  View  Help
  ┌──(hadoop㉿kali)-[~]
  └─$ start-all.sh
WARNING: Attempting to start all Apache Hadoop daemons as hadoop in 10 seconds.
WARNING: This is not a recommended production deployment configuration.
WARNING: Use CTRL-C to abort.
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [kali]
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-11 04:59:16,429 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform ... using builtin-java classes where applicable
Starting resourcemanager
Starting nodemanagers
```

$ jps

```
  ┌──(hadoop㉿kali)-[~]
  └─$ jps
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
14436 NodeManager
16772 Jps
13830 SecondaryNameNode
14311 ResourceManager
13597 DataNode
13471 NameNode
```

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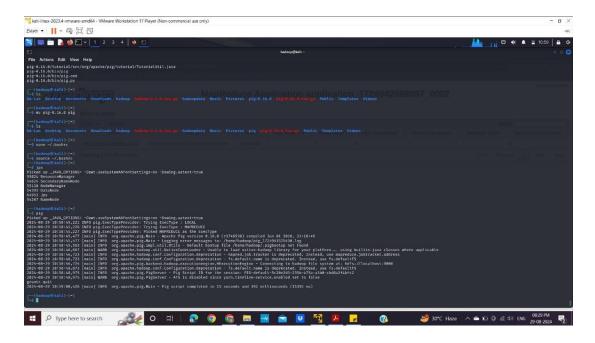
$ tar xvzf pig-0.16.0.tar.gz

$nano ~/.bashrc

```
#PIG settings
export PIG_HOME=/home/hadoop/pig
export PATH=$PATH:$PIG_HOME/bin
export PIG_CLASSPATH=$PIG_HOME/conf:$HADOOP_HOME/etc/hadoop/
export PIG_CONF_DIR=$PIG_HOME/conf
#export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64
export PIG_CLASSPATH=$PIG_CONF_DIR:$PATH
#PIG setting ends
```

$mv pig-0.16.0 pig $pig

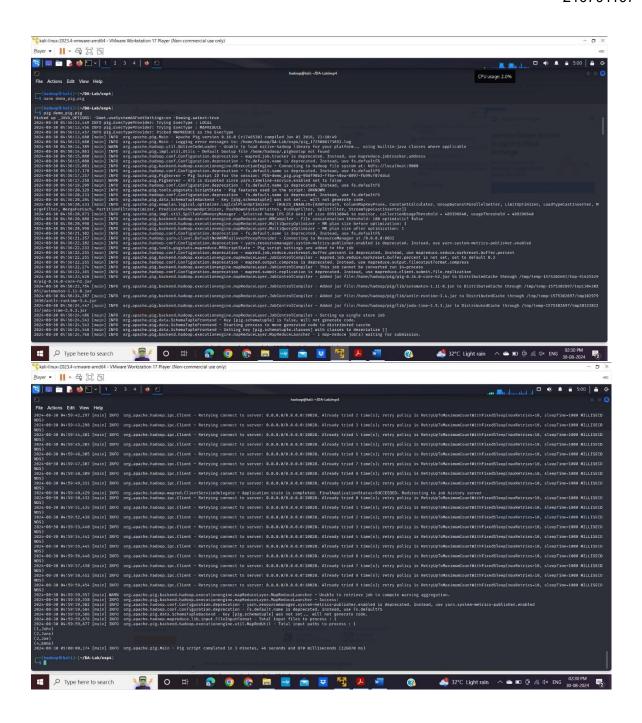**$cd DA-Lab $mkdir exp4 $cd exp4 $nano sample.txt**

$nano demo_pig.pig

$hdfs dfs -mkdir /exp4 $hdfs dfs -copyFromLocal ~/DA-Lab/exp4/sample.txt /exp4
$pig demo_pig.pig

$nano uppercase_udf.py


```
GNU nano 7.2                                                              uppercase_udf.py
def uppercase(text):
        return text.upper()
if __name__ == "__main__":
        import sys
        for line in sys.stdin:
                line = line.strip()
                result = uppercase(line)
                print(result)
```

$hdfs dfs -copyFromLocal ~/DA-Lab/exp4/uppercase_udf.py /exp4

```
┌──(hadoop㉿kali)-[~/hadoop/bin]
└─$ ./hdfs dfs -ls /exp4
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-21 00:26:01,736 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
Found 3 items
drwxr-xr-x   - hadoop supergroup          0 2024-08-30 05:07 /exp4/output
-rw-r--r--   1 hadoop supergroup         27 2024-08-30 04:43 /exp4/sample.txt
-rw-r--r--   1 hadoop supergroup        172 2024-08-30 05:02 /exp4/uppercase_udf.py
```

$nano udf_example.pig

```
GNU nano 7.2                                                                    udf_example.pig
-- Register the Python UDF script
REGISTER 'hdfs:///exp4/uppercase_udf.py' USING jython AS udf;
-- Load some data
data = LOAD 'hdfs:///exp4/sample.txt' AS (text:chararray);
-- Use the Python UDF
uppercased_data = FOREACH data GENERATE udf.uppercase(text) AS uppercase_text;
-- Store the result
STORE uppercased_data INTO 'hdfs:///exp4/output';
```
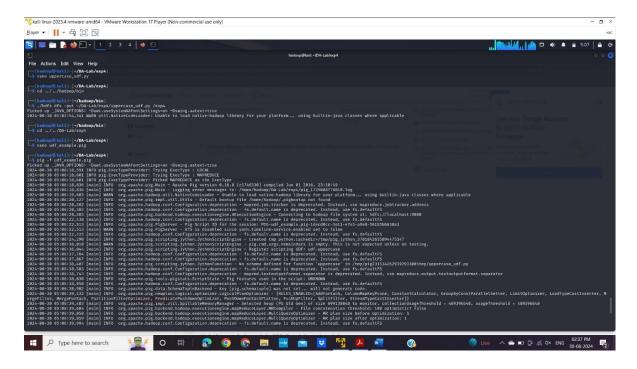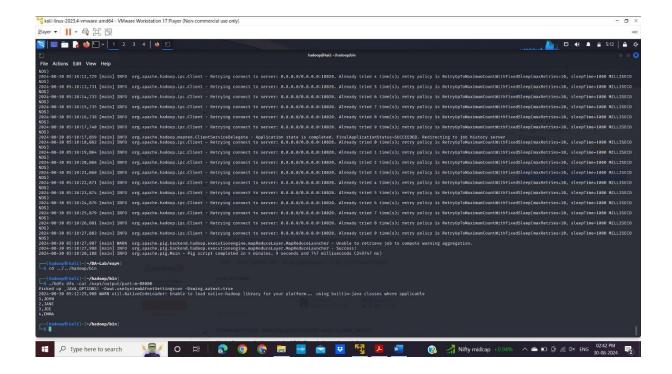
$pig -f udf_example.pig

$hdfs dfs -cat /exp4/output/*