

## Implement a MapReduce Program to Process a Weather Dataset

### AIM:

To implement a MapReduce Program to Process a Weather dataset using Hadoop.

### PROCEDURE:

1. Open the terminal and start Hadoop using start-all.sh command
2. Open the browser and go to the URL localhost:9870.
3. In the terminal using the command `hadoop fs -mkdir /user` create a directory called user.
4. Upload the sample\_weather.txt file to hdfs using the command `hadoop fs -put sample_weather.txt /user`.  
Then perform the mapreduce operation using the command  
`hadoop jar /path/to/hadoop-streaming.jar \`  
`-files /path/to/mapper.py, /path/to/reducer.py \ -input /path/to/input \`  
`-output /path/to/output \`  
`-mapper mapper.py \`  
`-reducer reducer.py`
5. Check the output using the command `hadoop fs -cat /user/output/part-00000`.

### OUTPUT:

```
mohamedhussainshahulhameed@Mohameds-Laptop ~ % start-all.sh
WARNING: Attempting to start all Apache Hadoop daemons as mohamedhussainshahulhameed 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 [Mohameds-Laptop.local]
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
Starting resourcemanager
Starting nodemanagers
```

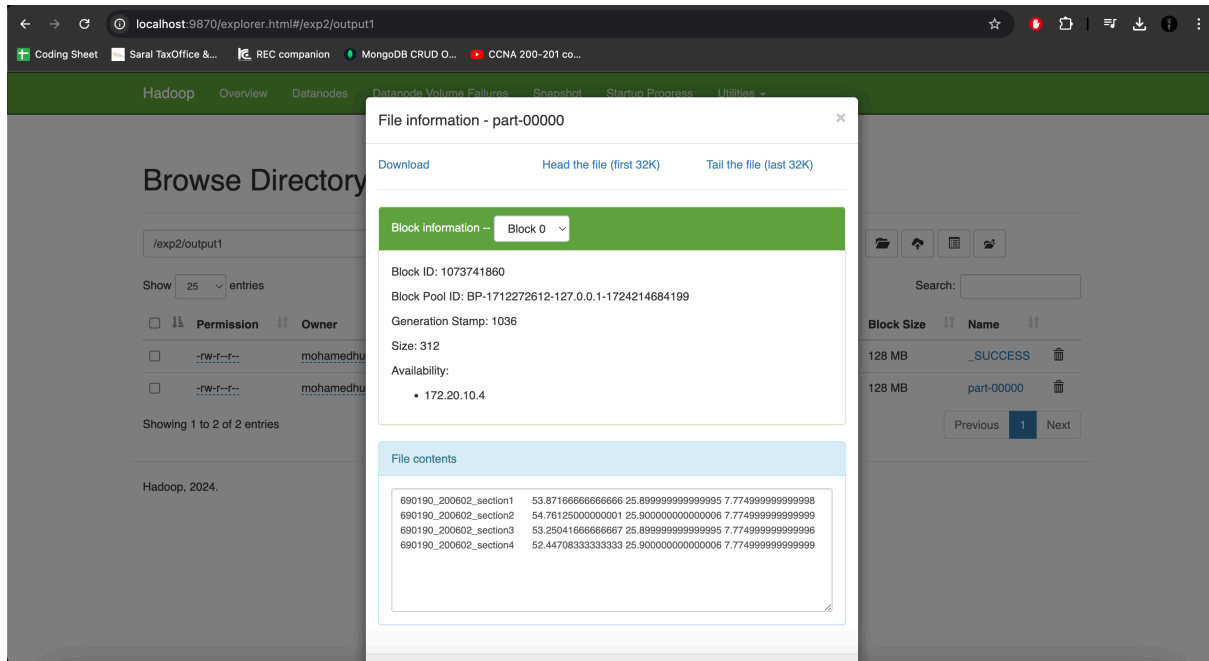
```
mohamedhussainshahulhameed@Mohameds-Laptop ~ % hadoop fs -mkdir /ex3
```

```
mohamedhussainshahulhameed@Mohameds-Laptop ~ % hadoop jar //Users/mohamedhussainshahulhameed/hadoop-3.4.0/share/hadoop/tools/lib/hadoop-streaming-3.4.0.jar \
-files /Users/mohamedhussainshahulhameed/Desktop/DA/ex3/mapper.py, /Users/mohamedhussainshahulhameed/Desktop/DA/ex3/reducer.py
-input /ex1/sample_weather.txt \
-output /ex1/output \
-mapper mapper.py \
-reducer reducer.py
```

```

[mohamedhussainshahulhameed@Mohameds-Laptop ~ % hadoop fs -cat /exp2/output1/part-00000
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
690190_200602_section1 53.87166666666666 25.899999999999995 7.774999999999998
690190_200602_section2 54.76125000000001 25.900000000000006 7.774999999999999
690190_200602_section3 53.25041666666667 25.899999999999995 7.774999999999996
690190_200602_section4 52.44708333333333 25.900000000000006 7.774999999999999
mohamedhussainshahulhameed@Mohameds-Laptop ~ %

```



## RESULT:

Thus the above Implement a MapReduce Program to Process a Weather Dataset has been executed successfully.