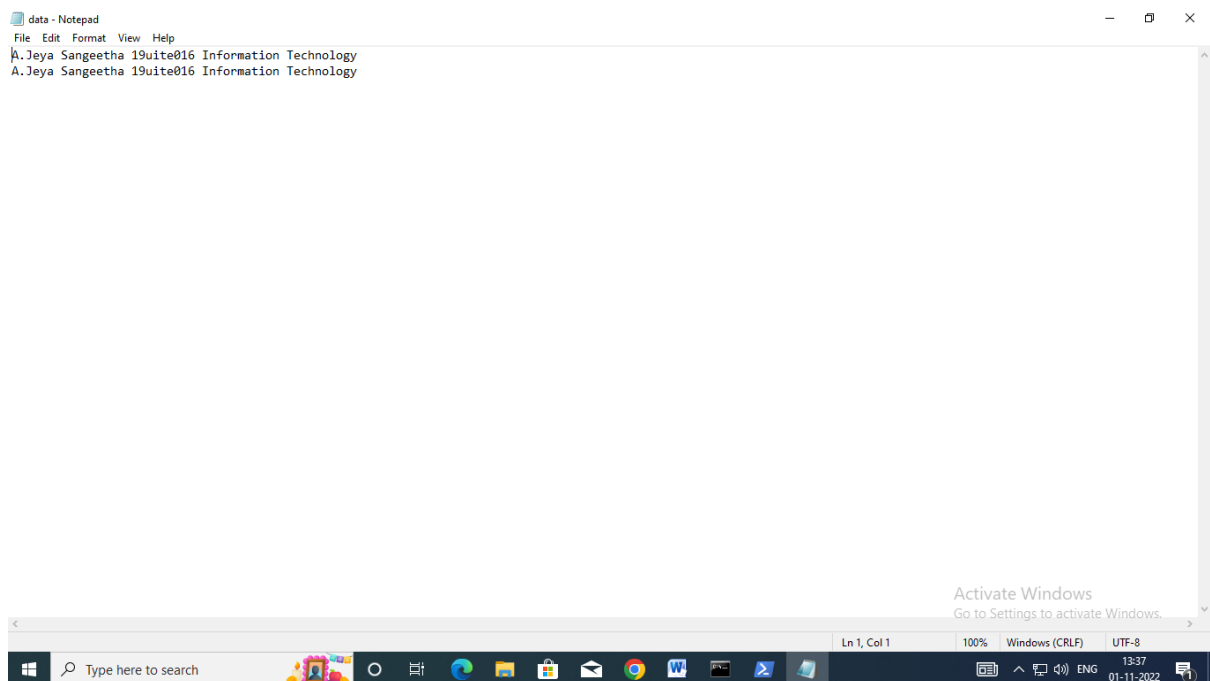
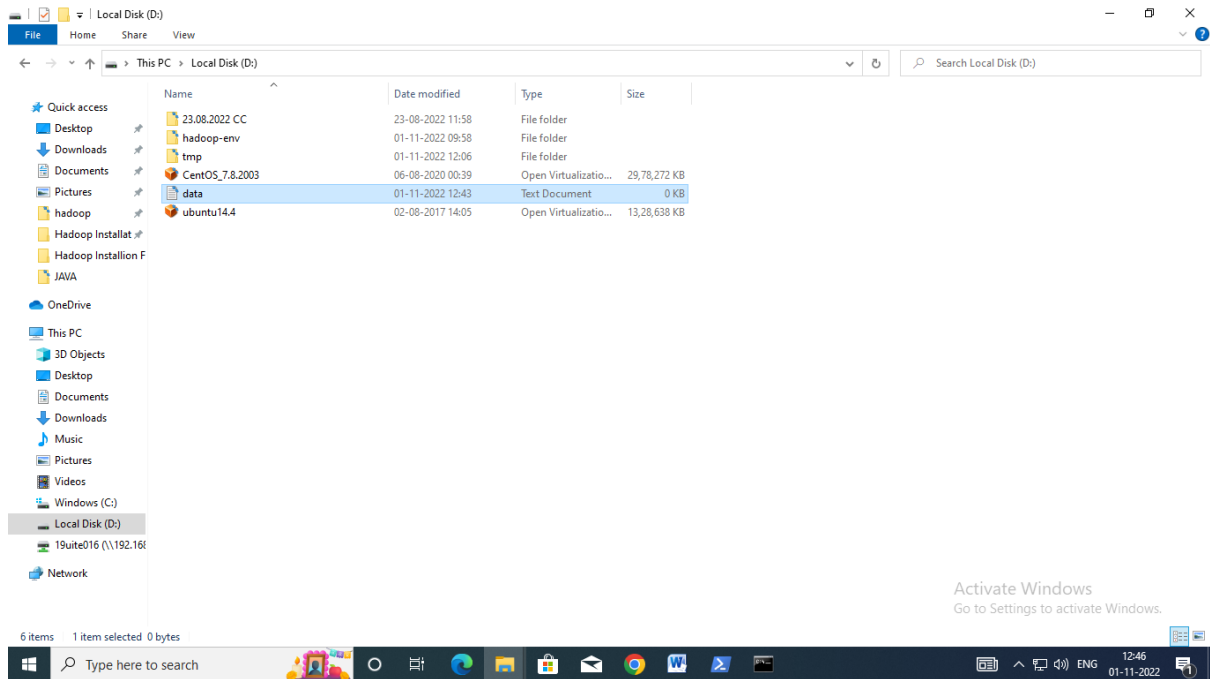


ROLL NUMBER: 19UITE027

NAME: GOKULA INDIRA

EXERCISE NO: 10



```
Windows PowerShell (x86)
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

PS Z:\> hadoop -version
java version "1.8.0_333"
Java(TM) SE Runtime Environment (build 1.8.0_333-b02)
Java HotSpot(TM) 64-Bit Server VM (build 25.333-b02, mixed mode)
PS Z:\> cd D:\hadoop-env\hadoop-3.2.2\sbin
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -mkdir /user
mkdir: /user/: File exists
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -put D:\data.txt /user
put: /user/data.txt: File exists
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -ls /user/
Found 1 items
-rw-r--r-- 1 19uite016 supergroup          0 2022-11-01 12:46 /user/data.txt
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -cat /user/data.txt
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -ls /users/
Found 1 items
-rw-r--r-- 1 19uite016 supergroup          49 2022-11-01 13:18 /users/data.txt
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -cat /users/data.txt
A.Jeya Sangeetha 19uite016 Information Technology
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -mkdir /user1
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -put D:\data.txt /user1
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -ls /user1/
Found 1 items
-rw-r--r-- 1 19uite016 supergroup        100 2022-11-01 13:33 /user1/data.txt
PS D:\hadoop-env\hadoop-3.2.2\sbin> hdfs dfs -cat /user1/data.txt
A.Jeya Sangeetha 19uite016 Information Technology
A.Jeya Sangeetha 19uite016 Information Technology
PS D:\hadoop-env\hadoop-3.2.2\sbin> hadoop jar D:\hadoop-env\hadoop-3.2.2\share\hadoop\mapreduce\hadoop-mapreduce-examples-3.2.2.jar wordcount /user1 /out
2022-11-01 13:34:25,104 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
org.apache.hadoop.mapred.FileAlreadyExistsException: Output directory hdfs://localhost:8020/out already exists
    at org.apache.hadoop.mapreduce.lib.output.FileOutputFormat.checkOutputSpecs(FileOutputFormat.java:164)
    at org.apache.hadoop.mapreduce.JobSubmitter.checkSpecs(JobSubmitter.java:277)
    at org.apache.hadoop.mapreduce.JobSubmitter.submitJobInternal(JobSubmitter.java:143)
    at org.apache.hadoop.mapreduce.Job$11.run(Job.java:1565)
    at org.apache.hadoop.mapreduce.Job$11.run(Job.java:1562)
    at java.security.AccessController.doPrivileged(Native Method)
    at javax.security.auth.Subject.doAs(Subject.java:422)
    at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1762)
    at org.apache.hadoop.mapreduce.Job.submit(Job.java:1562)
    at org.apache.hadoop.mapreduce.Job.waitForCompletion(Job.java:1583)
    at org.apache.hadoop.examples.WordCount.main(WordCount.java:87)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke(Method.java:498)
    at org.apache.hadoop.util.ProgramDriver$ProgramDescription.invoke(ProgramDriver.java:71)
    at org.apache.hadoop.util.ProgramDriver$ProgramDescription.invoke(ProgramDriver.java:71)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(Native Method)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:62)
    at java.lang.reflect.Method.invoke(Method.java:498)
    at org.apache.hadoop.util.RunJar.run(RunJar.java:323)
    at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
PS D:\hadoop-env\hadoop-3.2.2\sbin> hadoop jar D:\hadoop-env\hadoop-3.2.2\share\hadoop\mapreduce\hadoop-mapreduce-examples-3.2.2.jar wordcount /user1 /out1
2022-11-01 13:34:50,803 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
2022-11-01 13:34:50,917 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/19uite016/.staging/job_1667284611980_0002
2022-11-01 13:34:51,313 INFO input.FileInputFormat: Total input files to process : 1
2022-11-01 13:34:51,594 INFO mapreduce.JobSubmitter: number of splits:1
2022-11-01 13:34:51,885 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1667284611980_0002
2022-11-01 13:34:51,888 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-11-01 13:34:52,132 INFO conf.Configuration: resource-types.xml not found
2022-11-01 13:34:52,133 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2022-11-01 13:34:52,227 INFO impl.YarnClientImpl: Submitted application application_1667284611980_0002
2022-11-01 13:34:52,285 INFO mapreduce.Job: Running job: job_1667284611980_0002
2022-11-01 13:35:06,612 INFO mapreduce.Job: Job job_1667284611980_0002 running in uber mode : false
2022-11-01 13:35:06,616 INFO mapreduce.Job: map 0% reduce 0%
2022-11-01 13:35:12,767 INFO mapreduce.Job: map 100% reduce 0%
2022-11-01 13:35:19,885 INFO mapreduce.Job: map 100% reduce 100%
2022-11-01 13:35:24,986 INFO mapreduce.Job: Job job_1667284611980_0002 completed successfully
2022-11-01 13:35:25,111 INFO mapreduce.Job: Counters: 54
File System Counters
  FILE: Number of bytes read=86
  FILE: Number of bytes written=471525
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=201
  HDFS: Number of bytes written=60
  HDFS: Number of read operations=0
  HDFS: Number of large read operations=0
  HDFS: Number of write operations=2
  HDFS: Number of bytes read erasure-coded=0
Job Counters
  Launched map tasks=1
  Launched reduce tasks=1
  Data-local map tasks=1
  Total time spent by all maps in occupied slots (ms)=3948
  Total time spent by all map tasks (ms)=3948
  Total time spent by all reduce tasks (ms)=4259
  Total vcore-milliseconds taken by all map tasks=3948
  Total vcore-milliseconds taken by all reduce tasks=4259
  Total megabyte-milliseconds taken by all map tasks=4042732
  Total megabyte-milliseconds taken by all reduce tasks=4361216
Map-Reduce Framework
```

```
Windows PowerShell (x86)
at org.apache.hadoop.examples.ExampleDriver.main(ExampleDriver.java:74)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.apache.hadoop.util.RunJar.run(RunJar.java:323)
at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
PS D:\hadoop-env\hadoop-3.2.2\sbin> hadoop jar D:\hadoop-env\hadoop-3.2.2\share\hadoop\mapreduce\hadoop-mapreduce-examples-3.2.2.jar wordcount /user1 /out1
2022-11-01 13:34:50,803 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
2022-11-01 13:34:50,917 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/19uite016/.staging/job_1667284611980_0002
2022-11-01 13:34:51,313 INFO input.FileInputFormat: Total input files to process : 1
2022-11-01 13:34:51,594 INFO mapreduce.JobSubmitter: number of splits:1
2022-11-01 13:34:51,885 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1667284611980_0002
2022-11-01 13:34:51,888 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-11-01 13:34:52,132 INFO conf.Configuration: resource-types.xml not found
2022-11-01 13:34:52,133 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2022-11-01 13:34:52,227 INFO impl.YarnClientImpl: Submitted application application_1667284611980_0002
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2022-11-01 13:35:06,612 INFO mapreduce.Job: Job job_1667284611980_0002 running in uber mode : false
2022-11-01 13:35:06,616 INFO mapreduce.Job: map 0% reduce 0%
2022-11-01 13:35:12,767 INFO mapreduce.Job: map 100% reduce 0%
2022-11-01 13:35:19,885 INFO mapreduce.Job: map 100% reduce 100%
2022-11-01 13:35:24,986 INFO mapreduce.Job: Job job_1667284611980_0002 completed successfully
2022-11-01 13:35:25,111 INFO mapreduce.Job: Counters: 54
File System Counters
  FILE: Number of bytes read=86
  FILE: Number of bytes written=471525
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=201
  HDFS: Number of bytes written=60
  HDFS: Number of read operations=0
  HDFS: Number of large read operations=0
  HDFS: Number of write operations=2
  HDFS: Number of bytes read erasure-coded=0
Job Counters
  Launched map tasks=1
  Launched reduce tasks=1
  Data-local map tasks=1
  Total time spent by all maps in occupied slots (ms)=3948
  Total time spent by all map tasks (ms)=3948
  Total time spent by all reduce tasks (ms)=4259
  Total vcore-milliseconds taken by all map tasks=3948
  Total vcore-milliseconds taken by all reduce tasks=4259
  Total megabyte-milliseconds taken by all map tasks=4042732
  Total megabyte-milliseconds taken by all reduce tasks=4361216
Map-Reduce Framework
```

```
Windows PowerShell (x86)
Launched reduce tasks=1
Data-local map tasks=1
Total time spent by all maps in occupied slots (ms)=3948
Total time spent by all reduces in occupied slots (ms)=4259
Total time spent by all map tasks (ms)=3948
Total time spent by all reduce tasks (ms)=4259
Total vcore-milliseconds taken by all map tasks=3948
Total vcore-milliseconds taken by all reduce tasks=4259
Total megabyte-milliseconds taken by all map tasks=4042752
Total megabyte-milliseconds taken by all reduce tasks=4361216

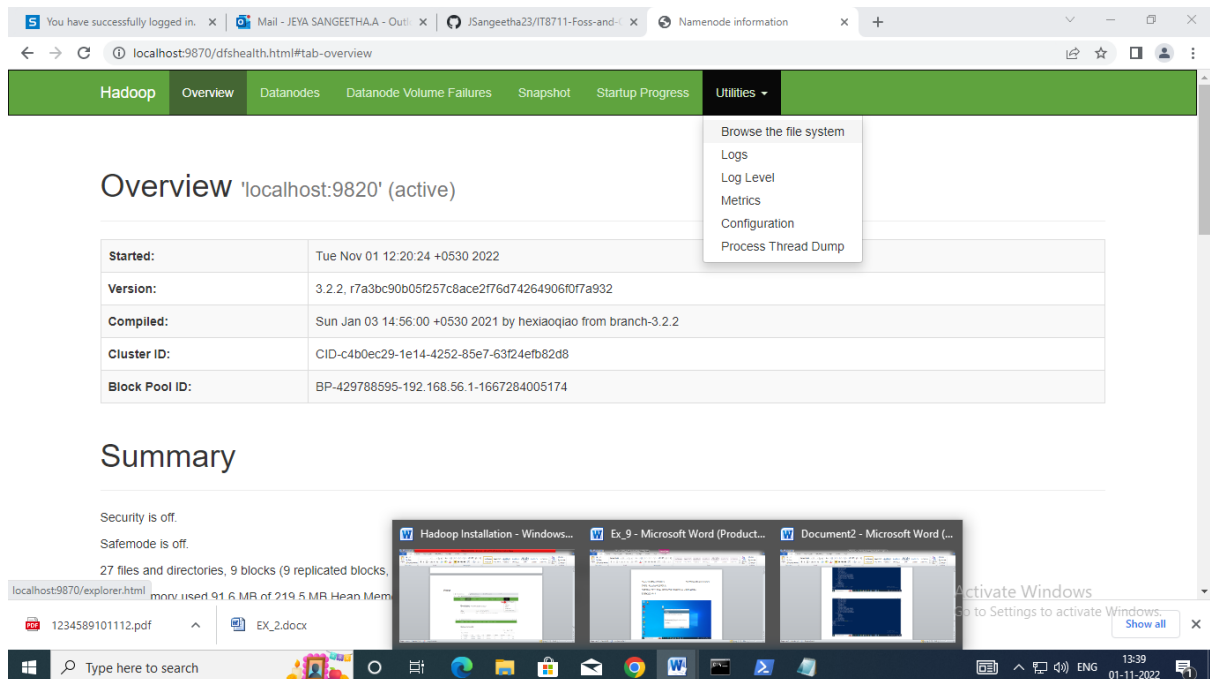
Map-Reduce Framework
Map input records=2
Map output records=10
Map output bytes=140
Map output materialized bytes=86
Input split bytes=101
Combine input records=10
Combine output records=5
Reduce input groups=5
Reduce shuffle bytes=86
Reduce input records=5
Reduce output records=5
Spilled Records=10
Shuffled Maps =1
Failed Shuffles=0
Merged Map outputs=1
GC time elapsed (ms)=130
CPU time spent (ms)=1481
Physical memory (bytes) snapshot=504229888
Virtual memory (bytes) snapshot=733290496
Total committed heap usage (bytes)=361234432
Peak Map Physical memory (bytes)=302813184
Peak Map Virtual memory (bytes)=418492416
Peak Reduce Physical memory (bytes)=201416704
Peak Reduce Virtual memory (bytes)=314798080

Shuffle Errors
BAD_ID=0
CONNECTION=0
IO_ERROR=0
WRONG_LENGTH=0
WRONG_MAP=0
WRONG_REDUCE=0
File Input Format Counters
Bytes Read=100
File Output Format Counters
Bytes Written=60
PS D:\hadoop-env\hadoop-3.2.2\sbin> hadoop fs -cat /out1/*
19uite016      2
A.Jeya      2
Information    2
Information    2
PS D:\hadoop-env\hadoop-3.2.2\sbin>
```

```
Windows PowerShell (x86)
Input split bytes=101
Combine input records=10
Combine output records=5
Reduce input groups=5
Reduce shuffle bytes=86
Reduce input records=5
Reduce output records=5
Spilled Records=10
Shuffled Maps =1
Failed Shuffles=0
Merged Map outputs=1
GC time elapsed (ms)=130
CPU time spent (ms)=1481
Physical memory (bytes) snapshot=504229888
Virtual memory (bytes) snapshot=733290496
Total committed heap usage (bytes)=361234432
Peak Map Physical memory (bytes)=302813184
Peak Map Virtual memory (bytes)=418492416
Peak Reduce Physical memory (bytes)=201416704
Peak Reduce Virtual memory (bytes)=314798080

Shuffle Errors
BAD_ID=0
CONNECTION=0
IO_ERROR=0
WRONG_LENGTH=0
WRONG_MAP=0
WRONG_REDUCE=0
File Input Format Counters
Bytes Read=100
File Output Format Counters
Bytes Written=60
PS D:\hadoop-env\hadoop-3.2.2\sbin> hadoop fs -cat /out1/*
19uite016      2
A.Jeya      2
Information    2
Sangeetha     2
Technology     2
PS D:\hadoop-env\hadoop-3.2.2\sbin>
```

## OUTPUT:



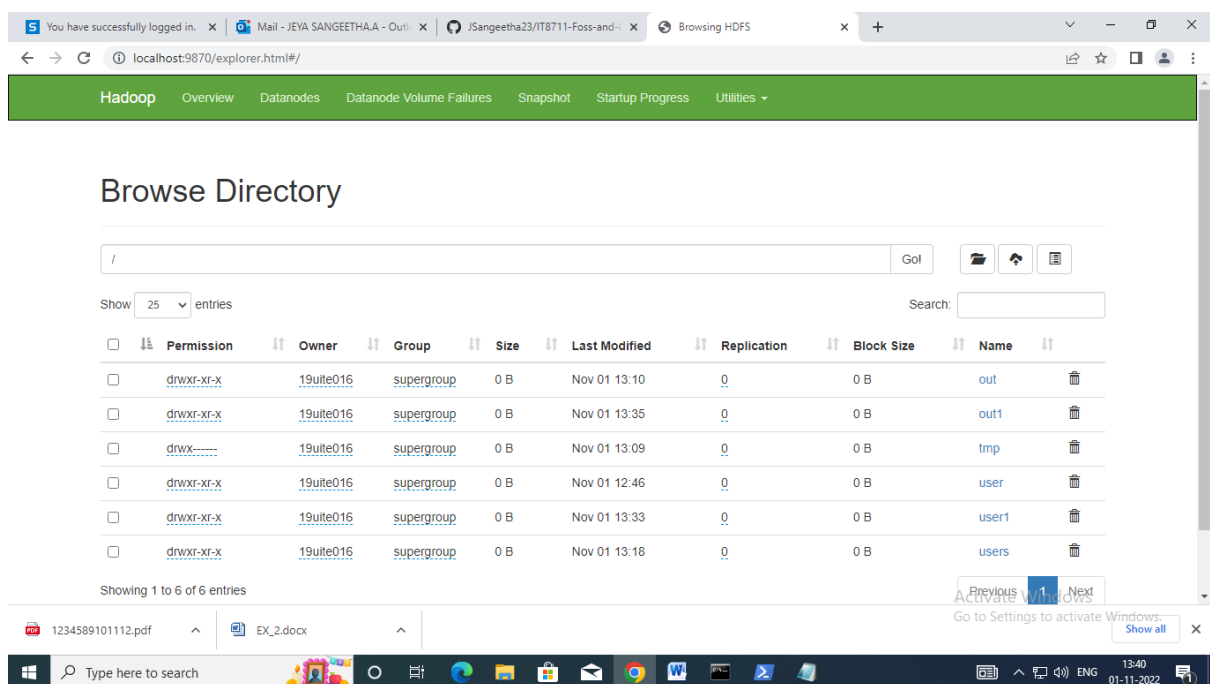
The screenshot shows the Hadoop Overview page for 'localhost:9820' (active). The page has a green header with navigation tabs: Hadoop, Overview, Datanodes, Datanode Volume Failures, Snapshot, Startup Progress, and Utilities. The Utilities dropdown menu is open, showing options: Browse the file system, Logs, Log Level, Metrics, Configuration, and Process Thread Dump. The main content area displays the Overview for 'localhost:9820' (active) with a table of system information.

Property	Value
Started:	Tue Nov 01 12:20:24 +0530 2022
Version:	3.2.2, r7a3bc90b05f257c8ace2f76d74264906f0f7a932
Compiled:	Sun Jan 03 14:56:00 +0530 2021 by hexiaoqiao from branch-3.2.2
Cluster ID:	CID-c4b0ec29-1e14-4252-85e7-63f24efb82d8
Block Pool ID:	BP-429788595-192.168.56.1-1667284005174

Below the table is a Summary section with the following text:

- Security is off.
- Safemode is off.
- 27 files and directories, 9 blocks (9 replicated blocks).
- localhost:9870/explorer.html
- memory used 91.6 MB of 219.5 MB Heap Mem

The Windows taskbar at the bottom shows several open applications: Hadoop Installation - Windows..., Ex\_9 - Microsoft Word (Product...), and Document2 - Microsoft Word (...). The system tray shows the date and time as 13:39 on 01-11-2022.



The screenshot shows the Hadoop Browse Directory page for 'localhost:9870/explorer.html/#/'. The page has a green header with navigation tabs: Hadoop, Overview, Datanodes, Datanode Volume Failures, Snapshot, Startup Progress, and Utilities. The main content area displays the Browse Directory page with a search bar and a table of files and directories.

Search: / Go! [Icons: Home, Up, Down]

Show 25 entries Search: [Search Box]

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
drwxr-xr-x	19uite016	supergroup	0 B	Nov 01 13:10	0	0 B	out
drwxr-xr-x	19uite016	supergroup	0 B	Nov 01 13:35	0	0 B	out1
drwx-----	19uite016	supergroup	0 B	Nov 01 13:09	0	0 B	tmp
drwxr-xr-x	19uite016	supergroup	0 B	Nov 01 12:46	0	0 B	user
drwxr-xr-x	19uite016	supergroup	0 B	Nov 01 13:33	0	0 B	user1
drwxr-xr-x	19uite016	supergroup	0 B	Nov 01 13:18	0	0 B	users

Showing 1 to 6 of 6 entries

Windows taskbar at the bottom shows the same applications as the first screenshot. The system tray shows the date and time as 13:40 on 01-11-2022.

