Install, configure and run Hadoop and HDFS
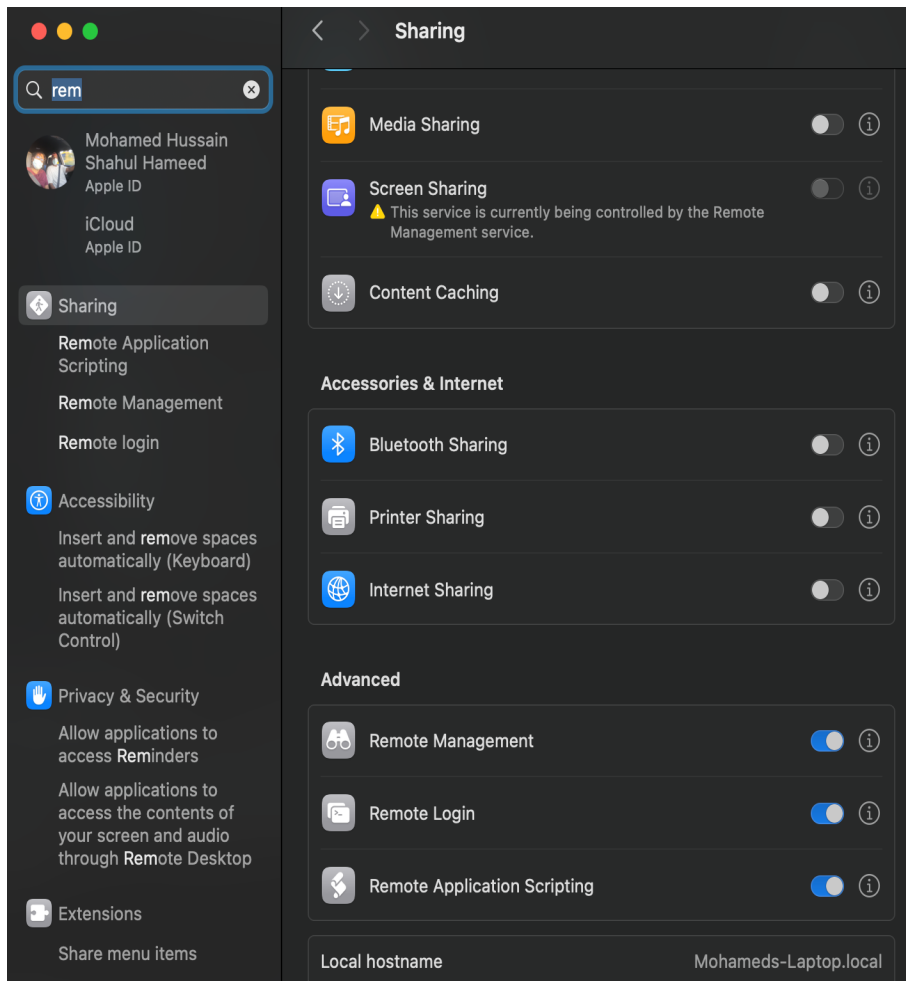
AIM:

         To install, configure and run Hadoop and HDFS on system.

PROCEDURE:

1. InstallJDK8andsetpathintheenvironmentvariables.
2. Enable SSH for Local Host.
3. Download Hadoop and configure the Hadoop-env.sh file.
4. Set the path of Hadoop in the variables for global access.
5. Set the Java Path inside Hadoop.
6. Configure the core-site.xml, mapred-site.xml, hdfs-site.xml, yarn- site.xml
7. StartHadoopusingstart-all.sh command.
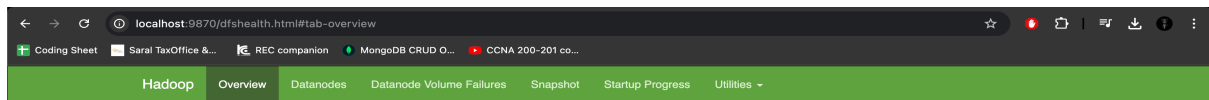8. Open the browser and go to the URL localhost:9870 and verify that Hadoop has been installed correctly.

OUTPUT:

```
[mohamedhussainshahulhameed@Mohameds-Laptop ~ % echo $JAVA_HOME
/Library/Java/JavaVirtualMachines/jdk1.8.0_202.jdk/Contents/Home
mohamedhussainshahulhameed@Mohameds-Laptop ~ %
```

```
[mohamedhussainshahulhameed@Mohameds-Laptop ~ % ssh-keygen -t rsa -P '' -f ~/.ssh/id_rsa
Generating public/private rsa key pair.
/Users/mohamedhussainshahulhameed/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Your identification has been saved in /Users/mohamedhussainshahulhameed/.ssh/id_rsa
Your public key has been saved in /Users/mohamedhussainshahulhameed/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:DQuoib4aqa9qUaMHQRzztUj39rVL2JgLjjhSmHcNE+s mohamedhussainshahulhameed@Mohameds-Laptop.local
The key's randomart image is:
+---[RSA 3072]----+
|o+.. +           |
| o+ +.=          |
|  .o.=.o.  .      |
|  oo=. =..+* .    |
|.o*o.E oS=.+      |
|.+o.o o . o .     |
|oooo . . . .      |
|.oo .            |
|O+.              |
+----[SHA256]-----+
```

```
[mohamedhussainshahulhameed@Mohameds-Laptop ~ % jps
79619 Jps
75348 ResourceManager
75526 NodeManager
75014 DataNode
75151 SecondaryNameNode
74831 NameNode
52430 RunJar
```

Overview 'localhost:9000' (✔active)

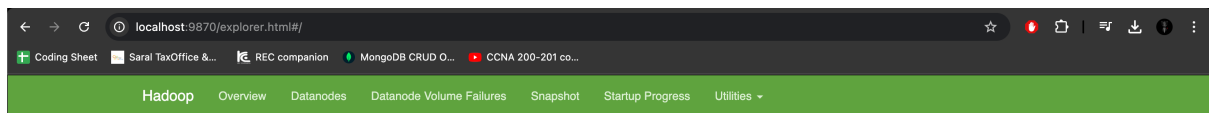|	
Started:	Thu Aug 29 10:51:58 +0530 2024
Version:	3.4.0, rbd8b77f398f626bb7791783192ee7a5dfaeec760
Compiled:	Mon Mar 04 11:59:00 +0530 2024 by root from (HEAD detached at release-3.4.0-RC3)
Cluster ID:	CID-aa13366c-b686-407a-bee0-b52a8feaf571
Block Pool ID:	BP-1712272612-127.0.0.1-1724214684199

Summary

Security is off.

Safemode is off.

69 files and directories, 29 blocks (29 replicated blocks, 0 erasure coded block groups) = 98 total filesystem object(s).

Heap Memory used 56.19 MB of 490 MB Heap Memory. Max Heap Memory is 1.78 GB.

Non Heap Memory used 81.89 MB of 84.06 MB Commited Non Heap Memory. Max Non Heap Memory is <unbounded>.

Configured Capacity:	228.27 GB
Configured Remote Capacity:	0 B

Browse Directory

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name	
drwxr-xr-x	mohamedhussainshahulhameed	supergroup	0 B	Aug 27 10:43	0	0 B	ex-1	🗑
drwxr-xr-x	mohamedhussainshahulhameed	supergroup	0 B	Aug 27 14:06	0	0 B	exp2	🗑
drwxr-xr-x	mohamedhussainshahulhameed	supergroup	0 B	Aug 28 09:50	0	0 B	exp3	🗑
drwxr-xr-x	mohamedhussainshahulhameed	supergroup	0 B	Aug 29 10:42	0	0 B	tmp	🗑
drwxr-xr-x	mohamedhussainshahulhameed	supergroup	0 B	Aug 29 13:29	0	0 B	user	🗑

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Hadoop, 2024.

RESULT:

Thus to Install, configure and run Hadoop and HDFS has been successfully completed.