EXERCISE H- 4:

AIM:

To Install, deploy & configure Apache Spark cluster. Run Apache Spark applications using Scala.

ALGORITHM:

Step 1: Verify Java Installation
Step 2: Verify Scala installation
Step 3: Download Scala
Step 4: Install Scala
Step 5: Download Apache Spark
Step 6: Install Spark
Step 7: Verify the Spark Installation

CODE:

Step 1: Verifying Java Installation

$java -version

Step 2: Verifying Scala installation

$scala -version

Step 3: Downloading Scala

Download: Scala tar file

Step 4: Installing Scala

Extract: Scala tar file
Type: $ tar xvf scala-2.11.6.tgz
Move Scala software files to directory: /usr/local/scala
$ su –
Password:
cd /home/Hadoop/Downloads/
mv scala-2.11.6 /usr/local/scala
exit
Set PATH for Scala
Use: $ export PATH = $PATH:/usr/local/scala/bin
Verifying Scala Installation
$scala -version

Step 5: Downloading Apache Spark

Download Spark. **spark-1.3.1-bin-hadoop2.6** version.
Spark tar file

Step 6: Installing Spark

Extracting Spark tar

$ tar xvf spark-1.3.1-bin-hadoop2.6.tgz

Moving Spark software files to directory:/usr/local/spark

$ su –

Password:

cd /home/Hadoop/Downloads/

mv spark-1.3.1-bin-hadoop2.6 /usr/local/spark

exit

Setting up the environment for Spark

Add:~**/.bashrc** file.

export PATH=$PATH:/usr/local/spark/bin

$ source ~/.bashrc

Step 7: Verifying the Spark Installation

opening Spark shell.

$spark-shell

RESULT:

Thus, Apache Spark Cluster is installed, deployed & configured for running Apache Spark applications using Scala.

OUTPUT:

If spark is installed successfully then you will find the following output.

```
Spark assembly has been built with Hive, including Datanucleus jars on classpath
Using Spark's default log4j profile: org/apache/spark/log4j-defaults.properties
15/06/04 15:25:22 INFO SecurityManager: Changing view acls to: hadoop
15/06/04 15:25:22 INFO SecurityManager: Changing modify acls to: hadoop
15/06/04 15:25:22 INFO SecurityManager: SecurityManager: authentication disabled;
ui acls disabled; users with view permissions: Set(hadoop); users with modify permissions:
Set(hadoop)
15/06/04 15:25:22 INFO HttpServer: Starting HTTP Server
15/06/04 15:25:23 INFO Utils: Successfully started service 'HTTP class server' on port 43292.
Welcome to
      ____              __
     / __/__  ___ _____/ /__
    _\ \/ _ \/ _ `/ __/  '_/
   /___/ .__/\_,_/_/ /_/\_\   version 1.4.0
      /_/
Using Scala version 2.10.4 (Java HotSpot(TM) 64-Bit Server VM, Java 1.7.0_71)
Type in expressions to have them evaluated.
Spark context available as sc
scala>
```