Task: Execute WordMedian , WordMean , WordStandardDeviation programs using hadoop-mapreduce-examples-2.9.0.jar file present in your AcadGild VM. Refer path below.
/home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/mapreduce

```
[acadgild@localhost Desktop]$ hadoop fs -cat /Customer_Input.txt
18/09/04 17:28:49 WARN util.NativeCodeLoader: Unable to load native-hadoop library for you
asses where applicable
1234    Fname    LName    India
1234    Fname    LName    India
1234    Fname    LName    India
1234    Fname    LName    India
[acadgild@localhost Desktop]$
```

WordMedian:

```
                                    acadgild@localhost:~/Desktop                        _  □
File  Edit  View  Search  Terminal  Help
[acadgild@localhost Desktop]$ hadoop jar /home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/mapreduce/hadoop-mapreduce-e
xamples-2.6.5.jar wordmedian /Customer_Input.txt /AssignmentOutput/
18/09/04 17:10:12 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
18/09/04 17:10:14 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
org.apache.hadoop.mapred.FileAlreadyExistsException: Output directory hdfs://localhost:8020/AssignmentOutput already exists
        at org.apache.hadoop.mapreduce.lib.output.FileOutputFormat.checkOutputSpecs(FileOutputFormat.java:146)
        at org.apache.hadoop.mapreduce.JobSubmitter.checkSpecs(JobSubmitter.java:267)
        at org.apache.hadoop.mapreduce.JobSubmitter.submitJobInternal(JobSubmitter.java:140)
        at org.apache.hadoop.mapreduce.Job$10.run(Job.java:1297)
        at org.apache.hadoop.mapreduce.Job$10.run(Job.java:1294)
        at java.security.AccessController.doPrivileged(Native Method)
        at javax.security.auth.Subject.doAs(Subject.java:422)
        at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1692)
        at org.apache.hadoop.mapreduce.Job.submit(Job.java:1294)
        at org.apache.hadoop.mapreduce.Job.waitForCompletion(Job.java:1315)
        at org.apache.hadoop.examples.WordMedian.run(WordMedian.java:194)
        at org.apache.hadoop.util.ToolRunner.run(ToolRunner.java:70)
        at org.apache.hadoop.examples.WordMedian.main(WordMedian.java:171)
        at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
        at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
        at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
        at java.lang.reflect.Method.invoke(Method.java:498)
        at org.apache.hadoop.util.ProgramDriver$ProgramDescription.invoke(ProgramDriver.java:71)
        at org.apache.hadoop.util.ProgramDriver.run(ProgramDriver.java:144)
        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:221)
        at org.apache.hadoop.util.RunJar.main(RunJar.java:136)
[acadgild@localhost Desktop]$ hadoop jar /home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/mapreduce/hadoop-mapreduce-e
xamples-2.6.5.jar wordmedian /Customer_Input.txt /AssignmentOutputYarn/
[acadgild@localhost Desktop]$ hadoop jar /home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/mapreduce/hadoop-mapreduce-e
xamples-2.6.5.jar wordmedian /Customer_Input.txt /AssignmentOutputYarn/
18/09/04 17:10:38 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
18/09/04 17:10:39 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
```

```
                Virtual memory (bytes) snapshot=4118
                Total committed heap usage (bytes)=1
        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=92
        File Output Format Counters
                Bytes Written=9
The median is: 5
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost Desktop]$
```

```
[acadgild@localhost Desktop]$ hadoop fs -ls /AssignmentOutputYarn/
18/09/04 17:27:57 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platfo
asses where applicable
Found 2 items
-rw-r--r--   1 acadgild supergroup          0 2018-09-04 17:11 /AssignmentOutputYarn/_SUCCESS
-rw-r--r--   1 acadgild supergroup          9 2018-09-04 17:11 /AssignmentOutputYarn/part-r-00000
You have new mail in /var/spool/mail/acadgild
```

WordMean:


```
                                    acadgild@localhost:~/Desktop                        _  □  ×
File  Edit  View  Search  Terminal  Help
[acadgild@localhost Desktop]$ hadoop jar /home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/mapreduce/hadoop-mapreduce-e
xamples-2.6.5.jar wordmean /Customer_Input.txt /AssignmentOutputYarn1/
18/09/04 17:16:59 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
18/09/04 17:17:00 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
18/09/04 17:17:02 INFO input.FileInputFormat: Total input paths to process : 1
18/09/04 17:17:02 INFO mapreduce.JobSubmitter: number of splits:1
18/09/04 17:17:03 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1536061112797_0002
18/09/04 17:17:03 INFO impl.YarnClientImpl: Submitted application application_1536061112797_0002
18/09/04 17:17:03 INFO mapreduce.Job: The url to track the job: http://localhost:8088/proxy/application_1536061112797_0002/
18/09/04 17:17:03 INFO mapreduce.Job: Running job: job_1536061112797_0002
18/09/04 17:17:13 INFO mapreduce.Job: Job job_1536061112797_0002 running in uber mode : false
18/09/04 17:17:13 INFO mapreduce.Job:   map 0% reduce 0%
18/09/04 17:17:20 INFO mapreduce.Job:   map 100% reduce 0%
18/09/04 17:17:28 INFO mapreduce.Job:   map 100% reduce 100%
18/09/04 17:17:28 INFO mapreduce.Job: Job job_1536061112797_0002 completed successfully
18/09/04 17:17:29 INFO mapreduce.Job: Counters: 49
        File System Counters
                FILE: Number of bytes read=39
                FILE: Number of bytes written=215429
                FILE: Number of read operations=0
                FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=197
                HDFS: Number of bytes written=19
                HDFS: Number of read operations=6
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=2
        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)=4692
                Total time spent by all reduces in occupied slots (ms)=4947
                Total time spent by all map tasks (ms)=4692
                Total time spent by all reduce tasks (ms)=4947
                Total vcore-milliseconds taken by all map tasks=4692
                Total vcore-milliseconds taken by all reduce tasks=4947
                Total megabyte-milliseconds taken by all map tasks=4804608
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```
                Reduce input groups=2
                Reduce shuffle bytes=39
                Reduce input records=2
                Reduce output records=2
                Spilled Records=4
                Shuffled Maps =1
                Failed Shuffles=0
                Merged Map outputs=1
                GC time elapsed (ms)=155
                CPU time spent (ms)=1310
                Physical memory (bytes) snapshot=297955328
                Virtual memory (bytes) snapshot=4118224896
                Total committed heap usage (bytes)=170004480
        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=92
        File Output Format Counters
                Bytes Written=19
The mean is: 4.75
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost Desktop]$
```

```
[acadgild@localhost Desktop]$ hadoop fs -ls /AssignmentOutputYarn1/
18/09/04 17:26:42 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platfor
asses where applicable
Found 2 items
-rw-r--r--   1 acadgild supergroup          0 2018-09-04 17:17 /AssignmentOutputYarn1/_SUCCESS
-rw-r--r--   1 acadgild supergroup         19 2018-09-04 17:17 /AssignmentOutputYarn1/part-r-00000
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost Desktop]$
```

WordStandardDeviation:

acadgild@localhost:~/Desktop

File Edit View Search Terminal Help
[acadgild@localhost Desktop]$ hadoop jar /home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/mapreduce/hadoop-mapreduce-e
xamples-2.6.5.jar wordstandarddeviation /Customer_Input.txt /AssignmentOutputYarn2/
18/09/04 17:21:38 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
18/09/04 17:21:39 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
18/09/04 17:21:41 INFO input.FileInputFormat: Total input paths to process : 1
18/09/04 17:21:41 INFO mapreduce.JobSubmitter: number of splits:1
18/09/04 17:21:41 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1536061112797_0003
18/09/04 17:21:42 INFO impl.YarnClientImpl: Submitted application application_1536061112797_0003
18/09/04 17:21:42 INFO mapreduce.Job: The url to track the job: http://localhost:8088/proxy/application_1536061112797_0003/
18/09/04 17:21:42 INFO mapreduce.Job: Running job: job_1536061112797_0003
18/09/04 17:21:51 INFO mapreduce.Job: Job job_1536061112797_0003 running in uber mode : false
18/09/04 17:21:51 INFO mapreduce.Job: map 0% reduce 0%
18/09/04 17:21:58 INFO mapreduce.Job: map 100% reduce 0%
18/09/04 17:22:07 INFO mapreduce.Job: map 100% reduce 100%
18/09/04 17:22:08 INFO mapreduce.Job: Job job_1536061112797_0003 completed successfully
18/09/04 17:22:08 INFO mapreduce.Job: Counters: 49
        File System Counters
                FILE: Number of bytes read=56
                FILE: Number of bytes written=215623
                FILE: Number of read operations=0
                FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=197
                HDFS: Number of bytes written=30
                HDFS: Number of read operations=6
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=2
        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)=5009
                Total time spent by all reduces in occupied slots (ms)=5444
                Total time spent by all map tasks (ms)=5009
                Total time spent by all reduce tasks (ms)=5444
                Total vcore-milliseconds taken by all map tasks=5009
                Total vcore-milliseconds taken by all reduce tasks=5444
                Total megabyte-milliseconds taken by all map tasks=5129216

                Merged Map outputs=1
                GC time elapsed (ms)=174
                CPU time spent (ms)=1340
                Physical memory (bytes) snapshot=298815488
                Virtual memory (bytes) snapshot=4118224896
                Total committed heap usage (bytes)=170004480
        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=92
        File Output Format Counters
                Bytes Written=30
The standard deviation is: 0.4330127018922193
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost Desktop]$

[acadgild@localhost Desktop]$ hadoop fs -ls /AssignmentOutputYarn2/
18/09/04 17:25:18 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
asses where applicable
Found 2 items
-rw-r--r--   1 acadgild supergroup   0 2018-09-04 17:22 /AssignmentOutputYarn2/_SUCCESS
-rw-r--r--   1 acadgild supergroup   30 2018-09-04 17:22 /AssignmentOutputYarn2/part-r-00000
[acadgild@localhost Desktop]$