

```
root@student-ThinkCentre-M72e:~# hdfs dfs -mkdir /aggregate
19/10/04 10:16:03 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
```

```
root@student-ThinkCentre-M72e:~# hdfs dfs -ls /
19/10/04 10:16:12 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
```

Found 26 items

```
drwxr-xr-x - root root    4096 2019-10-04 10:16 /aggregate
drwxr-xr-x - root root    4096 2014-11-19 18:00 /bin
drwxr-xr-x - root root    4096 2019-10-04 09:51 /npzt
```

```
root@student-ThinkCentre-M72e:~# hdfs dfs -copyFromLocal
/home/administrator/aggregate/input /aggregate
19/10/04 10:16:49 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
```

```
root@student-ThinkCentre-M72e:~# hdfs dfs -ls /aggregate
19/10/04 10:17:00 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
```

Found 1 items

```
-rw-r--r--  1 root root    368 2019-10-04 10:16 /aggregate/input
```

```
root@student-ThinkCentre-M72e:~# javac -d /home/administrator/aggregate/class
/home/administrator/aggregate/largest.java
javac: file not found: /home/administrator/aggregate/largest.java
Usage: javac <options> <source files>
use -help for a list of possible options
```

```
root@student-ThinkCentre-M72e:~# javac -d /home/administrator/aggregate/class
/home/administrator/aggregate/Mainmapper.java
Note: /home/administrator/aggregate/Mainmapper.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
```

```
root@student-ThinkCentre-M72e:~# hadoop jar /home/administrator/aggregate/aggr.jar
Mainmapper /aggregate/input /aggregate/output
19/10/04 10:20:30 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
19/10/04 10:20:31 INFO Configuration.deprecation: session.id is deprecated. Instead, use
dfs.metrics.session-id
19/10/04 10:20:31 INFO jvm.JvmMetrics: Initializing JVM Metrics with
processName=JobTracker, sessionId=
19/10/04 10:20:31 INFO input.FileInputFormat: Total input paths to process : 1
19/10/04 10:20:31 INFO mapreduce.JobSubmitter: number of splits:1
19/10/04 10:20:31 INFO mapreduce.JobSubmitter: Submitting tokens for job:
job_local407264505_0001
19/10/04 10:20:31 INFO mapreduce.Job: The url to track the job: http://localhost:8080/
19/10/04 10:20:31 INFO mapreduce.Job: Running job: job_local407264505_0001
```

19/10/04 10:20:31 INFO mapred.LocalJobRunner: OutputCommitter set in config null
19/10/04 10:20:31 INFO mapred.LocalJobRunner: OutputCommitter is
org.apache.hadoop.mapreduce.lib.output.FileOutputCommitter
19/10/04 10:20:31 INFO mapred.LocalJobRunner: Waiting for map tasks
19/10/04 10:20:31 INFO mapred.LocalJobRunner: Starting task:
attempt_local407264505_0001_m_000000_0
19/10/04 10:20:31 INFO mapred.Task: Using ResourceCalculatorProcessTree : []
19/10/04 10:20:31 INFO mapred.MapTask: Processing split: file:/aggregate/input:0+368
19/10/04 10:20:31 INFO mapred.MapTask: (EQUATOR) 0 kvi 26214396(104857584)
19/10/04 10:20:31 INFO mapred.MapTask: mapreduce.task.io.sort.mb: 100
19/10/04 10:20:31 INFO mapred.MapTask: soft limit at 83886080
19/10/04 10:20:31 INFO mapred.MapTask: bufstart = 0; bufvoid = 104857600
19/10/04 10:20:31 INFO mapred.MapTask: kvstart = 26214396; length = 6553600
19/10/04 10:20:31 INFO mapred.MapTask: Map output collector class =
org.apache.hadoop.mapred.MapTask\$MapOutputBuffer
19/10/04 10:20:31 INFO mapred.LocalJobRunner:
19/10/04 10:20:31 INFO mapred.MapTask: Starting flush of map output
19/10/04 10:20:31 INFO mapred.MapTask: Spilling map output
19/10/04 10:20:31 INFO mapred.MapTask: bufstart = 0; bufend = 128; bufvoid = 104857600
19/10/04 10:20:31 INFO mapred.MapTask: kvstart = 26214396(104857584); kvend =
26214336(104857344); length = 61/6553600
19/10/04 10:20:31 INFO mapred.MapTask: Finished spill 0
19/10/04 10:20:31 INFO mapred.Task: Task:attempt_local407264505_0001_m_000000_0 is
done. And is in the process of committing
19/10/04 10:20:31 INFO mapred.LocalJobRunner: map
19/10/04 10:20:31 INFO mapred.Task: Task 'attempt_local407264505_0001_m_000000_0'
done.
19/10/04 10:20:31 INFO mapred.LocalJobRunner: Finishing task:
attempt_local407264505_0001_m_000000_0
19/10/04 10:20:31 INFO mapred.LocalJobRunner: map task executor complete.
19/10/04 10:20:31 INFO mapred.LocalJobRunner: Waiting for reduce tasks
19/10/04 10:20:31 INFO mapred.LocalJobRunner: Starting task:
attempt_local407264505_0001_r_000000_0
19/10/04 10:20:31 INFO mapred.Task: Using ResourceCalculatorProcessTree : []
19/10/04 10:20:31 INFO mapred.ReduceTask: Using ShuffleConsumerPlugin:
org.apache.hadoop.mapreduce.task.reduce.Shuffle@cbeac9
19/10/04 10:20:31 INFO reduce.MergeManagerImpl: MergerManager:
memoryLimit=334063200, maxSingleShuffleLimit=83515800, mergeThreshold=220481728,
ioSortFactor=10, memToMemMergeOutputsThreshold=10
19/10/04 10:20:31 INFO reduce.EventFetcher: attempt_local407264505_0001_r_000000_0
Thread started: EventFetcher for fetching Map Completion Events
19/10/04 10:20:31 INFO reduce.LocalFetcher: localfetcher#1 about to shuffle output of map
attempt_local407264505_0001_m_000000_0 decomp: 162 len: 166 to MEMORY
19/10/04 10:20:31 INFO reduce.InMemoryMapOutput: Read 162 bytes from map-output for
attempt_local407264505_0001_m_000000_0
19/10/04 10:20:31 INFO reduce.MergeManagerImpl: closeInMemoryFile -> map-output of size:
162, inMemoryMapOutputs.size() -> 1, commitMemory -> 0, usedMemory -> 162
19/10/04 10:20:31 INFO reduce.EventFetcher: EventFetcher is interrupted.. Returning

19/10/04 10:20:31 INFO mapred.LocalJobRunner: 1 / 1 copied.
19/10/04 10:20:31 INFO reduce.MergeManagerImpl: finalMerge called with 1 in-memory map-outputs and 0 on-disk map-outputs
19/10/04 10:20:31 INFO mapred.Merger: Merging 1 sorted segments
19/10/04 10:20:31 INFO mapred.Merger: Down to the last merge-pass, with 1 segments left of total size: 156 bytes
19/10/04 10:20:31 INFO reduce.MergeManagerImpl: Merged 1 segments, 162 bytes to disk to satisfy reduce memory limit
19/10/04 10:20:31 INFO reduce.MergeManagerImpl: Merging 1 files, 166 bytes from disk
19/10/04 10:20:31 INFO reduce.MergeManagerImpl: Merging 0 segments, 0 bytes from memory into reduce
19/10/04 10:20:31 INFO mapred.Merger: Merging 1 sorted segments
19/10/04 10:20:31 INFO mapred.Merger: Down to the last merge-pass, with 1 segments left of total size: 156 bytes
19/10/04 10:20:31 INFO mapred.LocalJobRunner: 1 / 1 copied.
19/10/04 10:20:31 INFO Configuration.deprecation: mapred.skip.on is deprecated. Instead, use mapreduce.job.skiprecords
19/10/04 10:20:31 INFO mapred.Task: Task:attempt_local407264505_0001_r_000000_0 is done. And is in the process of committing
19/10/04 10:20:31 INFO mapred.LocalJobRunner: 1 / 1 copied.
19/10/04 10:20:31 INFO mapred.Task: Task attempt_local407264505_0001_r_000000_0 is allowed to commit now
19/10/04 10:20:31 INFO output.FileOutputCommitter: Saved output of task 'attempt_local407264505_0001_r_000000_0' to file:/aggregate/output/_temporary/0/task_local407264505_0001_r_000000
19/10/04 10:20:31 INFO mapred.LocalJobRunner: reduce > reduce
19/10/04 10:20:31 INFO mapred.Task: Task 'attempt_local407264505_0001_r_000000_0' done.
19/10/04 10:20:31 INFO mapred.LocalJobRunner: Finishing task: attempt_local407264505_0001_r_000000_0
19/10/04 10:20:31 INFO mapred.LocalJobRunner: reduce task executor complete.
19/10/04 10:20:32 INFO mapreduce.Job: Job job_local407264505_0001 running in uber mode : false
19/10/04 10:20:32 INFO mapreduce.Job: map 100% reduce 100%
19/10/04 10:20:32 INFO mapreduce.Job: Job job_local407264505_0001 completed successfully
19/10/04 10:20:32 INFO mapreduce.Job: Counters: 33

File System Counters

- FILE: Number of bytes read=7450
- FILE: Number of bytes written=510776
- FILE: Number of read operations=0
- FILE: Number of large read operations=0
- FILE: Number of write operations=0

Map-Reduce Framework

- Map input records=16
- Map output records=16
- Map output bytes=128
- Map output materialized bytes=166

```
Input split bytes=86
Combine input records=0
Combine output records=0
Reduce input groups=2
Reduce shuffle bytes=166
Reduce input records=16
Reduce output records=2
Spilled Records=32
Shuffled Maps =1
Failed Shuffles=0
Merged Map outputs=1
GC time elapsed (ms)=7
CPU time spent (ms)=0
Physical memory (bytes) snapshot=0
Virtual memory (bytes) snapshot=0
Total committed heap usage (bytes)=330956800

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=384
File Output Format Counters
  Bytes Written=32
```

```
root@student-ThinkCentre-M72e:~# hdfs dfs -ls /aggregate19/10/04 10:20:43 WARN
util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
builtin-java classes where applicable
Found 2 items
-rw-r--r--  1 root root      368 2019-10-04 10:16 /aggregate/input
drwxr-xr-x  - root root    4096 2019-10-04 10:20 /aggregate/output
```

```
root@student-ThinkCentre-M72e:~# hdfs dfs -ls /aggregate/output
19/10/04 10:20:49 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
Found 2 items
-rw-r--r--  1 root root        0 2019-10-04 10:20 /aggregate/output/_SUCCESS
-rw-r--r--  1 root root      20 2019-10-04 10:20 /aggregate/output/part-r-00000
```

//OUTPUT

```
root@student-ThinkCentre-M72e:~# hdfs dfs -cat /aggregate/output/part-r-00000
19/10/04 10:21:10 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
1900  31.0
1901  50.0
```

