

# Big Data Analysis

## Practical 6: MapReduce

### Objective :

Analyse impact of different number of mapper and reducer on same definition as practical 4.

- Prepare a conclusive report on analysis.

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Table:

NO.	Mapper	Reducer	Time (Second)	File Size(Lines)
1	1	1	47	7
2	2	1	35	7
3	1	2	31	7
4	2	2	40	7
5	5	1	51	7
6	1	5	41	7
7	5	5	92	7
1	1	1	45	100
2	1	2	32	100
3	2	1	30	100
4	2	2	30	100
5	5	1	34	100
6	1	5	37	100
7	5	5	42	100
8	10	1	43	100

Mapper:1,Reducer:1,Lines:7

time :35

```
C:\big-data\hadoop-3.3.0\sbin>hadoop jar
2021-10-21 09:31:14,253 INFO client.Default
2021-10-21 09:31:14,445 INFO client.Default
2021-10-21 09:31:15,470 WARN mapreduce.Job
2021-10-21 09:31:15,545 INFO mapreduce.Job
2021-10-21 09:31:16,109 INFO mapred.FileIn
2021-10-21 09:31:16,530 INFO mapreduce.Job
2021-10-21 09:31:16,853 INFO mapreduce.Job
2021-10-21 09:31:16,853 INFO mapreduce.Job
2021-10-21 09:31:17,058 INFO conf.Configur
2021-10-21 09:31:17,059 INFO resource.Reso
2021-10-21 09:31:17,149 INFO impl.YarnClie
2021-10-21 09:31:17,200 INFO mapreduce.Job
2021-10-21 09:31:17,204 INFO mapreduce.Job
2021-10-21 09:31:29,450 INFO mapreduce.Job
2021-10-21 09:31:29,453 INFO mapreduce.Job
2021-10-21 09:31:48,878 INFO mapreduce.Job
2021-10-21 09:31:58,023 INFO mapreduce.Job
2021-10-21 09:32:01,089 INFO mapreduce.Job
2021-10-21 09:32:01,288 INFO mapreduce.Job

File System Counters
    FILE: Number of bytes read
    FILE: Number of bytes writ
    FILE: Number of read opera
    FILE: Number of large read
    FILE: Number of write oper
    HDFS: Number of bytes read
    HDFS: Number of bytes writ
    HDFS: Number of read opera
    HDFS: Number of large read
    HDFS: Number of write oper
    HDFS: Number of bytes read

Job Counters
    Launched map tasks=2
    Launched reduce tasks=1
    Data-local map tasks=2
```

Mapper: 2, Reducer: 1 , Lines: 7

time:47

```
2021-10-21 09:29:12,341 INFO client.Default
2021-10-21 09:29:12,573 INFO client.Default
2021-10-21 09:29:13,542 WARN mapreduce.Job
2021-10-21 09:29:13,704 INFO mapreduce.Job
2021-10-21 09:29:14,512 INFO mapred.FileIn
2021-10-21 09:29:15,053 INFO mapreduce.Job
2021-10-21 09:29:15,478 INFO mapreduce.Job
2021-10-21 09:29:15,479 INFO mapreduce.Job
2021-10-21 09:29:15,805 INFO conf.Configur
2021-10-21 09:29:15,807 INFO resource.Reso
2021-10-21 09:29:15,937 INFO impl.YarnClie
2021-10-21 09:29:15,996 INFO mapreduce.Job
2021-10-21 09:29:15,999 INFO mapreduce.Job
2021-10-21 09:29:28,255 INFO mapreduce.Job
2021-10-21 09:29:28,257 INFO mapreduce.Job
2021-10-21 09:29:36,422 INFO mapreduce.Job
2021-10-21 09:29:45,551 INFO mapreduce.Job
2021-10-21 09:29:47,595 INFO mapreduce.Job
2021-10-21 09:29:47,777 INFO mapreduce.Job

File System Counters
    FILE: Number of bytes read
    FILE: Number of bytes writ
    FILE: Number of read opera
    FILE: Number of large read
    FILE: Number of write oper
    HDFS: Number of bytes read
    HDFS: Number of bytes writ
    HDFS: Number of read opera
    HDFS: Number of large read
    HDFS: Number of write oper
    HDFS: Number of bytes read

Job Counters
    Launched map tasks=1
    Launched reduce tasks=1
    Data-local map tasks=1
```

Mapper:1 Reducer:2 Lines:7  
time:31

```
C:\big-data\hadoop-3.3.0\sbin>hadoop jar C:\big-data\hadoop-3.3.0\bin\hadoop.jar
2021-10-21 09:41:16,247 INFO client.DefaultConfiguration: client.DefaultConfiguration
2021-10-21 09:41:16,453 INFO client.DefaultConfiguration: client.DefaultConfiguration
2021-10-21 09:41:17,250 WARN mapreduce.Job: mapreduce.Job
2021-10-21 09:41:17,609 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:18,188 INFO mapred.FileInputFormat: mapred.FileInputFormat
2021-10-21 09:41:18,714 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:19,026 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:19,026 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:19,279 INFO conf.Configuration: conf.Configuration
2021-10-21 09:41:19,280 INFO resource.ResourceManager: resource.ResourceManager
2021-10-21 09:41:19,362 INFO impl.YarnClient: impl.YarnClient
2021-10-21 09:41:19,418 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:19,421 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:28,615 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:28,617 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:36,764 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:44,867 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:45,879 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:46,911 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:41:47,024 INFO mapreduce.Job: mapreduce.Job
File System Counters
  FILE: Number of bytes read=1048576
  FILE: Number of bytes written=1048576
  FILE: Number of read operations=1048576
  FILE: Number of large read operations=1048576
  FILE: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
  HDFS: Number of bytes written=1048576
  HDFS: Number of read operations=1048576
  HDFS: Number of large read operations=1048576
  HDFS: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
Job Counters
  Launched map tasks=1
  Launched reduce tasks=2
  Data-local map tasks=1
```

Mapper:2 Reducer:2 Lines:7  
time:40

```
C:\big-data\hadoop-3.3.0\sbin>hadoop jar C:\big-data\hadoop-3.3.0\bin\hadoop.jar
2021-10-21 09:46:29,200 INFO client.DefaultConfiguration: client.DefaultConfiguration
2021-10-21 09:46:29,450 INFO client.DefaultConfiguration: client.DefaultConfiguration
2021-10-21 09:46:30,613 WARN mapreduce.Job: mapreduce.Job
2021-10-21 09:46:30,766 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:31,556 INFO mapred.FileInputFormat: mapred.FileInputFormat
2021-10-21 09:46:32,178 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:32,645 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:32,646 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:32,918 INFO conf.Configuration: conf.Configuration
2021-10-21 09:46:32,919 INFO resource.ResourceManager: resource.ResourceManager
2021-10-21 09:46:33,025 INFO impl.YarnClient: impl.YarnClient
2021-10-21 09:46:33,082 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:33,086 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:44,338 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:44,342 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:46:53,553 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:47:04,703 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:47:07,764 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:47:09,824 INFO mapreduce.Job: mapreduce.Job
2021-10-21 09:47:09,989 INFO mapreduce.Job: mapreduce.Job
File System Counters
  FILE: Number of bytes read=1048576
  FILE: Number of bytes written=1048576
  FILE: Number of read operations=1048576
  FILE: Number of large read operations=1048576
  FILE: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
  HDFS: Number of bytes written=1048576
  HDFS: Number of read operations=1048576
  HDFS: Number of large read operations=1048576
  HDFS: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
Job Counters
  Launched map tasks=2
  Launched reduce tasks=2
```

Mapper:5,Reducer:1,Lines:7

time:51

```
C:\big-data\hadoop-3.3.0\sbin>hadoop jar
2021-10-21 09:49:32,981 INFO client.Defa
2021-10-21 09:49:33,221 INFO client.Defa
2021-10-21 09:49:34,092 WARN mapreduce.J
2021-10-21 09:49:34,211 INFO mapreduce.J
2021-10-21 09:49:35,025 INFO mapred.File
2021-10-21 09:49:35,688 INFO mapreduce.J
2021-10-21 09:49:36,089 INFO mapreduce.J
2021-10-21 09:49:36,089 INFO mapreduce.J
2021-10-21 09:49:36,368 INFO conf.Config
2021-10-21 09:49:36,369 INFO resource.Re
2021-10-21 09:49:36,503 INFO impl.YarnCl
2021-10-21 09:49:36,571 INFO mapreduce.J
2021-10-21 09:49:36,574 INFO mapreduce.J
2021-10-21 09:49:48,818 INFO mapreduce.J
2021-10-21 09:49:48,821 INFO mapreduce.J
2021-10-21 09:50:02,277 INFO mapreduce.J
2021-10-21 09:50:04,309 INFO mapreduce.J
2021-10-21 09:50:05,333 INFO mapreduce.J
2021-10-21 09:50:20,581 INFO mapreduce.J
2021-10-21 09:50:23,635 INFO mapreduce.J
2021-10-21 09:50:23,803 INFO mapreduce.J
```

#### File System Counters

FILE: Number of bytes re  
FILE: Number of bytes wr  
FILE: Number of read ope  
FILE: Number of large re  
FILE: Number of write op  
HDFS: Number of bytes re  
HDFS: Number of bytes wr  
HDFS: Number of read ope  
HDFS: Number of large re  
HDFS: Number of write op  
HDFS: Number of bytes re

#### Job Counters

Killed map tasks=1  
Launched map tasks=5  
Launched reduce tasks=1

Mapper:1,Reducer:5

time:41

```
C:\big-data\hadoop-3.3.0\sbin>hadoop jar
2021-10-21 09:52:18,147 INFO client.Defa
2021-10-21 09:52:18,734 INFO client.Defa
2021-10-21 09:52:19,408 WARN mapreduce.J
2021-10-21 09:52:19,548 INFO mapreduce.J
2021-10-21 09:52:20,332 INFO mapred.File
2021-10-21 09:52:20,797 INFO mapreduce.J
2021-10-21 09:52:21,324 INFO mapreduce.J
2021-10-21 09:52:21,325 INFO mapreduce.J
2021-10-21 09:52:21,748 INFO conf.Config
2021-10-21 09:52:21,749 INFO resource.Re
2021-10-21 09:52:21,928 INFO impl.YarnCl
2021-10-21 09:52:22,044 INFO mapreduce.J
2021-10-21 09:52:22,049 INFO mapreduce.J
2021-10-21 09:52:34,357 INFO mapreduce.J
2021-10-21 09:52:34,361 INFO mapreduce.J
2021-10-21 09:52:42,539 INFO mapreduce.J
2021-10-21 09:52:53,748 INFO mapreduce.J
2021-10-21 09:52:54,769 INFO mapreduce.J
2021-10-21 09:52:55,794 INFO mapreduce.J
2021-10-21 09:52:57,843 INFO mapreduce.J
2021-10-21 09:52:58,873 INFO mapreduce.J
2021-10-21 09:52:59,066 INFO mapreduce.J
```

#### File System Counters

FILE: Number of bytes re  
FILE: Number of bytes wr  
FILE: Number of read ope  
FILE: Number of large re  
FILE: Number of write op  
HDFS: Number of bytes re  
HDFS: Number of bytes wr  
HDFS: Number of bytes wr  
HDFS: Number of read ope  
HDFS: Number of large re  
HDFS: Number of write op  
HDFS: Number of bytes re

#### Job Counters

Killed reduce tasks=1  
Launched map tasks=1  
Launched reduce tasks=5

Mapper:5,Reducer:5

tim:92

```
a\hadoop-3.3.0\sbin>hadoop jar
09:56:36,800 INFO client.Defa
09:56:36,980 INFO client.Defa
09:56:37,511 WARN mapreduce.J
09:56:37,807 INFO mapreduce.J
09:56:39,367 INFO mapred.File
09:56:40,799 INFO mapreduce.J
09:56:41,679 INFO mapreduce.J
09:56:41,680 INFO mapreduce.J
09:56:41,897 INFO conf.Config
09:56:41,898 INFO resource.Re
09:56:42,609 INFO impl.YarnCl
09:56:42,658 INFO mapreduce.J
09:56:42,661 INFO mapreduce.J
09:56:53,840 INFO mapreduce.J
09:56:53,844 INFO mapreduce.J
09:57:14,563 INFO mapreduce.J
09:58:03,540 INFO mapreduce.J
09:58:04,555 INFO mapreduce.J
09:58:08,613 INFO mapreduce.J
09:58:08,712 INFO mapreduce.J
```

#### File System Counters

FILE: Number of bytes re  
FILE: Number of bytes wr  
FILE: Number of read ope  
FILE: Number of large re  
FILE: Number of write op  
HDFS: Number of bytes re  
HDFS: Number of bytes wr  
HDFS: Number of read ope  
HDFS: Number of large re  
HDFS: Number of write op  
HDFS: Number of bytes re

#### Job Counters

Launched map tasks=5  
Launched reduce tasks=5  
Data-local map tasks=5

Mapper:1, Reducer:1, Lines:100 ,time:45

```
C:\big-data\hadoop-3.3.0\sbin>hadoop jar
2021-10-21 12:54:20,771 INFO client.Default
2021-10-21 12:54:21,217 INFO client.Default
2021-10-21 12:54:23,369 WARN mapreduce.Job
2021-10-21 12:54:23,527 INFO mapreduce.Job
2021-10-21 12:54:24,538 INFO mapred.FileInp
2021-10-21 12:54:25,415 INFO mapreduce.Job
2021-10-21 12:54:26,416 INFO mapreduce.Job
2021-10-21 12:54:26,416 INFO mapreduce.Job
2021-10-21 12:54:26,784 INFO conf.Configur
2021-10-21 12:54:26,785 INFO resource.Resou
2021-10-21 12:54:27,907 INFO impl.YarnClie
2021-10-21 12:54:28,020 INFO mapreduce.Job
2021-10-21 12:54:28,022 INFO mapreduce.Job
2021-10-21 12:54:46,187 INFO mapreduce.Job
2021-10-21 12:54:46,190 INFO mapreduce.Job
2021-10-21 12:54:53,429 INFO mapreduce.Job
2021-10-21 12:55:03,575 INFO mapreduce.Job
2021-10-21 12:55:05,614 INFO mapreduce.Job
2021-10-21 12:55:05,912 INFO mapreduce.Job

File System Counters
    FILE: Number of bytes read=1048576
    FILE: Number of bytes written=1048576
    FILE: Number of read operations=1048576
    FILE: Number of large read operations=1048576
    FILE: Number of write operations=1048576
    HDFS: Number of bytes read=1048576
    HDFS: Number of bytes written=1048576
    HDFS: Number of read operations=1048576
    HDFS: Number of large read operations=1048576
    HDFS: Number of write operations=1048576
    HDFS: Number of bytes read=1048576

Job Counters
    Launched map tasks=1
    Launched reduce tasks=1
    Data-local map tasks=1
```

Mapper:1 ,Reducer:1 ,Lines:100, time:31

```
12:58:31,369 INFO client.Default
12:58:31,593 INFO client.Default
12:58:32,225 WARN mapreduce.Job
12:58:32,310 INFO mapreduce.Job
12:58:33,104 INFO mapred.FileInp
12:58:33,664 INFO mapreduce.Job
12:58:34,009 INFO mapreduce.Job
12:58:34,009 INFO mapreduce.Job
12:58:34,216 INFO conf.Configur
12:58:34,217 INFO resource.Resou
12:58:34,291 INFO impl.YarnClie
12:58:34,360 INFO mapreduce.Job
12:58:34,368 INFO mapreduce.Job
12:58:43,602 INFO mapreduce.Job
12:58:43,603 INFO mapreduce.Job
12:58:50,791 INFO mapreduce.Job
12:58:58,893 INFO mapreduce.Job
12:59:01,954 INFO mapreduce.Job
12:59:02,152 INFO mapreduce.Job

File System Counters
    FILE: Number of bytes read=1048576
    FILE: Number of bytes written=1048576
    FILE: Number of read operations=1048576
    FILE: Number of large read operations=1048576
    FILE: Number of write operations=1048576
    HDFS: Number of bytes read=1048576
    HDFS: Number of bytes written=1048576
    HDFS: Number of read operations=1048576
    HDFS: Number of large read operations=1048576
    HDFS: Number of write operations=1048576
    HDFS: Number of bytes read=1048576

Job Counters
    Launched map tasks=2
    Launched reduce tasks=1
    Data-local map tasks=2
```



Mapper:1,Reducer:2,Lines:100,

Mapper:2,Reducer:1,Lines:100

Mapper:2,Reducer:2,Lines:100

Time:32

Time:30

Time:30

```
13:03:26,604 INFO client.Default
13:03:26,811 INFO client.Default
13:03:27,495 WARN mapreduce.Job
13:03:27,572 INFO mapreduce.Job
13:03:28,233 INFO mapred.FileIn
13:03:28,838 INFO mapreduce.Job
13:03:29,198 INFO mapreduce.Job
13:03:29,199 INFO mapreduce.Job
13:03:29,439 INFO conf.Configuration
13:03:29,440 INFO resource.Resource
13:03:29,533 INFO impl.YarnClient
13:03:29,597 INFO mapreduce.Job
13:03:29,605 INFO mapreduce.Job
13:03:40,831 INFO mapreduce.Job
13:03:40,832 INFO mapreduce.Job
13:03:47,017 INFO mapreduce.Job
13:03:55,103 INFO mapreduce.Job
13:03:56,115 INFO mapreduce.Job
13:03:58,165 INFO mapreduce.Job
13:03:58,328 INFO mapreduce.Job
File System Counters
  FILE: Number of bytes read=1048576
  FILE: Number of bytes written=1048576
  FILE: Number of read operations=1048576
  FILE: Number of large read operations=1048576
  FILE: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
  HDFS: Number of bytes written=1048576
  HDFS: Number of read operations=1048576
  HDFS: Number of large read operations=1048576
  HDFS: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
Job Counters
  Killed reduce tasks=1
  Launched map tasks=1
  Launched reduce tasks=2
```

```
13:06:06,604 INFO client.Default
13:06:06,800 INFO client.Default
13:06:07,478 WARN mapreduce.Job
13:06:07,586 INFO mapreduce.Job
13:06:08,420 INFO mapred.FileIn
13:06:09,250 INFO mapreduce.Job
13:06:09,650 INFO mapreduce.Job
13:06:09,650 INFO mapreduce.Job
13:06:09,939 INFO conf.Configuration
13:06:09,940 INFO resource.Resource
13:06:10,033 INFO impl.YarnClient
13:06:10,093 INFO mapreduce.Job
13:06:10,100 INFO mapreduce.Job
13:06:19,358 INFO mapreduce.Job
13:06:19,361 INFO mapreduce.Job
13:06:26,566 INFO mapreduce.Job
13:06:34,664 INFO mapreduce.Job
13:06:36,721 INFO mapreduce.Job
13:06:36,908 INFO mapreduce.Job
File System Counters
  FILE: Number of bytes read=1048576
  FILE: Number of bytes written=1048576
  FILE: Number of read operations=1048576
  FILE: Number of large read operations=1048576
  FILE: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
  HDFS: Number of bytes written=1048576
  HDFS: Number of read operations=1048576
  HDFS: Number of large read operations=1048576
  HDFS: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
Job Counters
  Launched map tasks=2
  Launched reduce tasks=1
  Data-local map tasks=2
```

```
13:08:40,089 INFO client.Default
13:08:40,312 INFO client.Default
13:08:41,072 WARN mapreduce.Job
13:08:41,190 INFO mapreduce.Job
13:08:41,921 INFO mapred.FileIn
13:08:42,624 INFO mapreduce.Job
13:08:43,113 INFO mapreduce.Job
13:08:43,114 INFO mapreduce.Job
13:08:43,375 INFO conf.Configuration
13:08:43,376 INFO resource.Resource
13:08:43,526 INFO impl.YarnClient
13:08:43,628 INFO mapreduce.Job
13:08:43,636 INFO mapreduce.Job
13:08:52,800 INFO mapreduce.Job
13:08:52,804 INFO mapreduce.Job
13:08:59,989 INFO mapreduce.Job
13:09:07,067 INFO mapreduce.Job
13:09:08,080 INFO mapreduce.Job
13:09:10,142 INFO mapreduce.Job
13:09:10,289 INFO mapreduce.Job
File System Counters
  FILE: Number of bytes read=1048576
  FILE: Number of bytes written=1048576
  FILE: Number of read operations=1048576
  FILE: Number of large read operations=1048576
  FILE: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
  HDFS: Number of bytes written=1048576
  HDFS: Number of read operations=1048576
  HDFS: Number of large read operations=1048576
  HDFS: Number of write operations=1048576
  HDFS: Number of bytes read=1048576
Job Counters
  Killed reduce tasks=1
  Launched map tasks=2
  Launched reduce tasks=2
  Data-local map tasks=2
```

Mapper:5,reduce:1,line:100

Time:34

```
13:14:26,782 INFO client.Default
13:14:27,003 INFO client.Default
13:14:27,735 WARN mapreduce.Job
13:14:27,844 INFO mapreduce.Job
13:14:28,469 INFO mapred.FileInp
13:14:29,168 INFO mapreduce.Job
13:14:29,495 INFO mapreduce.Job
13:14:29,495 INFO mapreduce.Job
13:14:29,813 INFO conf.Configur
13:14:29,815 INFO resource.Resou
13:14:29,924 INFO impl.YarnClie
13:14:30,042 INFO mapreduce.Job
13:14:30,049 INFO mapreduce.Job
13:14:40,228 INFO mapreduce.Job
13:14:40,230 INFO mapreduce.Job
13:14:54,880 INFO mapreduce.Job
13:15:08,040 INFO mapreduce.Job
13:15:10,082 INFO mapreduce.Job
13:15:10,221 INFO mapreduce.Job
```

#### File System Counters

```
FILE: Number of bytes read=
FILE: Number of bytes writ
FILE: Number of read operat
FILE: Number of large read
FILE: Number of write oper
HDFS: Number of bytes read=
HDFS: Number of bytes writ
HDFS: Number of read operat
HDFS: Number of large read
HDFS: Number of write oper
HDFS: Number of bytes read
```

#### Job Counters

```
Launched map tasks=5
Launched reduce tasks=1
Data-local map tasks=5
```

Mapper:1,Reducer:5, line:100 Mapper:5,Reducer:5,line:100

Time:37

```
13:17:49,184 INFO client.Default
13:17:49,552 INFO client.Default
13:17:50,172 WARN mapreduce.JobR
13:17:50,302 INFO mapreduce.JobR
13:17:50,968 INFO mapred.FileInp
13:17:51,530 INFO mapreduce.JobS
13:17:52,436 INFO mapreduce.JobS
13:17:52,437 INFO mapreduce.JobS
13:17:52,743 INFO conf.Configur
13:17:52,745 INFO resource.Resou
13:17:52,891 INFO impl.YarnClie
13:17:52,970 INFO mapreduce.Job
13:17:52,973 INFO mapreduce.Job
13:18:05,330 INFO mapreduce.Job
13:18:05,334 INFO mapreduce.Job
13:18:11,481 INFO mapreduce.Job
13:18:22,688 INFO mapreduce.Job
13:18:23,708 INFO mapreduce.Job
13:18:24,732 INFO mapreduce.Job
13:18:25,758 INFO mapreduce.Job
13:18:26,775 INFO mapreduce.Job
13:18:26,952 INFO mapreduce.Job
```

#### File System Counters

```
FILE: Number of bytes read=
FILE: Number of bytes writt
FILE: Number of read operat
FILE: Number of large read
FILE: Number of write operat
HDFS: Number of bytes read=
HDFS: Number of bytes writt
HDFS: Number of read operat
HDFS: Number of large read
HDFS: Number of write operat
HDFS: Number of bytes read
```

#### Job Counters

```
Killed reduce tasks=1
Launched map tasks=1
Launched reduce tasks=5
Data-local map tasks=1
```

Time:42

```
13:20:43,697 INFO client.Default
13:20:43,993 INFO client.Default
13:20:44,839 WARN mapreduce.Jo
13:20:44,925 INFO mapreduce.Jo
13:20:45,545 INFO mapred.File
13:20:46,144 INFO mapreduce.Jo
13:20:46,446 INFO mapreduce.Jo
13:20:46,446 INFO mapreduce.Jo
13:20:46,831 INFO conf.Config
13:20:46,832 INFO resource.Re
13:20:47,213 INFO impl.YarnCl
13:20:47,300 INFO mapreduce.Jo
13:20:47,303 INFO mapreduce.Jo
13:20:57,582 INFO mapreduce.Jo
13:20:57,585 INFO mapreduce.Jo
13:21:08,864 INFO mapreduce.Jo
13:21:20,079 INFO mapreduce.Jo
13:21:22,129 INFO mapreduce.Jo
13:21:23,141 INFO mapreduce.Jo
13:21:24,150 INFO mapreduce.Jo
13:21:25,187 INFO mapreduce.Jo
13:21:25,351 INFO mapreduce.Jo
```

#### File System Counters

```
FILE: Number of bytes read=
FILE: Number of bytes writ
FILE: Number of read oper
FILE: Number of large read
FILE: Number of write oper
HDFS: Number of bytes read=
HDFS: Number of bytes writ
HDFS: Number of read oper
HDFS: Number of large read
HDFS: Number of write oper
HDFS: Number of bytes read
```

#### Job Counters

```
Killed reduce tasks=1
Launched map tasks=5
Launched reduce tasks=5
Data-local map tasks=5
```

Mapper:10,Reducer:1, size:100

Time:43

```
13:23:34,887 INFO client.Default
13:23:35,111 INFO client.Default
13:23:35,799 WARN mapreduce.Job
13:23:35,878 INFO mapreduce.Job
13:23:36,627 INFO mapred.FileIn
13:23:37,131 INFO mapreduce.Job
13:23:37,420 INFO mapreduce.Job
13:23:37,421 INFO mapreduce.Job
13:23:37,687 INFO conf.Configur
13:23:37,688 INFO resource.Resc
13:23:37,893 INFO impl.YarnClie
13:23:37,959 INFO mapreduce.Job
13:23:37,963 INFO mapreduce.Job
13:23:49,179 INFO mapreduce.Job
13:23:49,183 INFO mapreduce.Job
13:24:01,819 INFO mapreduce.Job
13:24:02,842 INFO mapreduce.Job
13:24:13,317 INFO mapreduce.Job
13:24:15,350 INFO mapreduce.Job
13:24:17,390 INFO mapreduce.Job
13:24:17,569 INFO mapreduce.Job
e System Counters
    FILE: Number of bytes read
    FILE: Number of bytes writ
    FILE: Number of read opera
    FILE: Number of large read
    FILE: Number of write oper
    HDFS: Number of bytes read
    HDFS: Number of bytes writ
    HDFS: Number of read opera
    HDFS: Number of large read
    HDFS: Number of write oper
    HDFS: Number of bytes read
o Counters
    Killed map tasks=1
    Launched map tasks=10
    Launched reduce tasks=1
    Data-local map tasks=10
```

## Conclusion:

Mapper and Reducer sizes are depends on input size and types of data.

If input size is greater then mappers requirement is more.

Reducer size depends in quality of data.