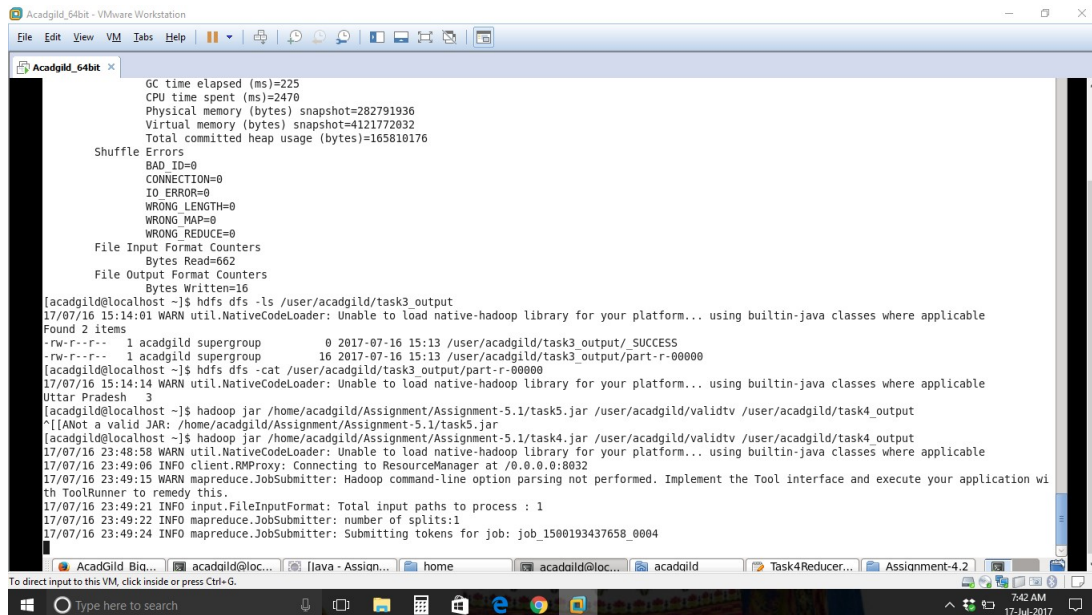# Assignment 5.1 Screenshots

Task 4:

Write a Map Reduce program to modify Task 2 (refer session 4, assignment 2) to use a custom partitioner with 4 reducers. Make sure that all records whose company name starts with A-F (upper or lower case) should go to 1st reducer, those starting with G-L to 2nd reducer, those starting with M-R to 3rd reducer and others to 4th reducer.
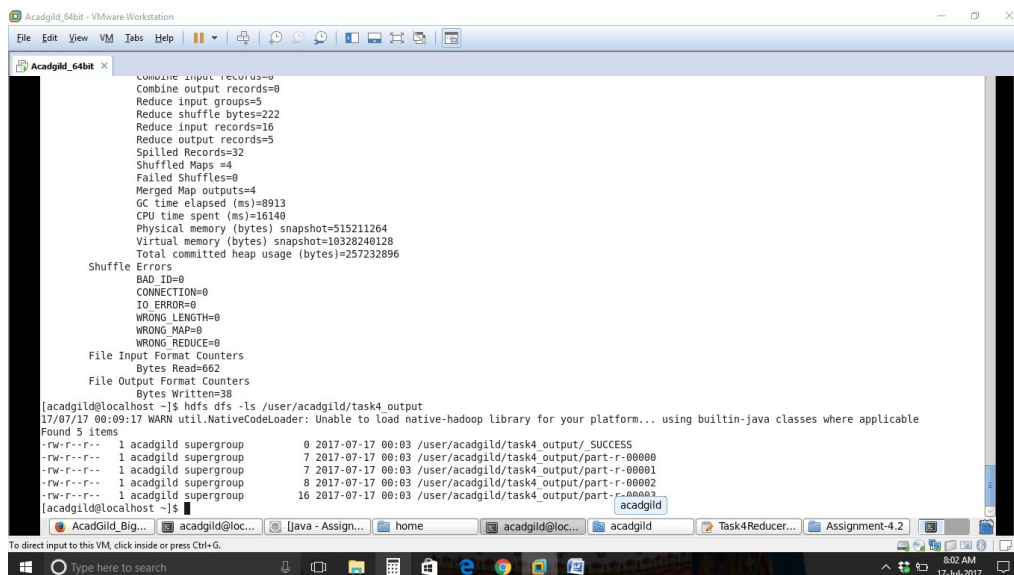

Ouptut hdfs folder shows four files for four reducers

Subsequent four screenshots show four reducers output for companies A-F,G_L,M-R,S-Z respectively

```
                Merged Map outputs=4
                GC time elapsed (ms)=8913
                CPU time spent (ms)=16140
                Physical memory (bytes) snapshot=515211264
                Virtual memory (bytes) snapshot=10328240128
                Total committed heap usage (bytes)=257232896
        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=662
        File Output Format Counters
                Bytes Written=38
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/task4_output
17/07/17 00:09:17 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 5 items
-rw-r--r--   1 acadgild supergroup          0 2017-07-17 00:03 /user/acadgild/task4_output/_SUCCESS
-rw-r--r--   1 acadgild supergroup          7 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00000
-rw-r--r--   1 acadgild supergroup          7 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00001
-rw-r--r--   1 acadgild supergroup          8 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00002
-rw-r--r--   1 acadgild supergroup         16 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00003
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00000
17/07/17 00:09:48 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Akai    1
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00001
17/07/17 00:10:07 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Lava    3
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00002
17/07/17 00:10:27 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Onida   3
[acadgild@localhost ~]$
```

```
        virtual memory (bytes) snapshot=10328240128
                Total committed heap usage (bytes)=257232896
        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=662
        File Output Format Counters
                Bytes Written=38
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/task4_output
17/07/17 00:09:17 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 5 items
-rw-r--r--   1 acadgild supergroup          0 2017-07-17 00:03 /user/acadgild/task4_output/_SUCCESS
-rw-r--r--   1 acadgild supergroup          7 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00000
-rw-r--r--   1 acadgild supergroup          7 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00001
-rw-r--r--   1 acadgild supergroup          8 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00002
-rw-r--r--   1 acadgild supergroup         16 2017-07-17 00:03 /user/acadgild/task4_output/part-r-00003
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00000
17/07/17 00:09:48 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Akai    1
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00001
17/07/17 00:10:07 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Lava    3
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00002
17/07/17 00:10:27 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Onida   3
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/task4_output/part-r-00003
17/07/17 00:10:48 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Samsung 7
Zen     2
[acadgild@localhost ~]$
```
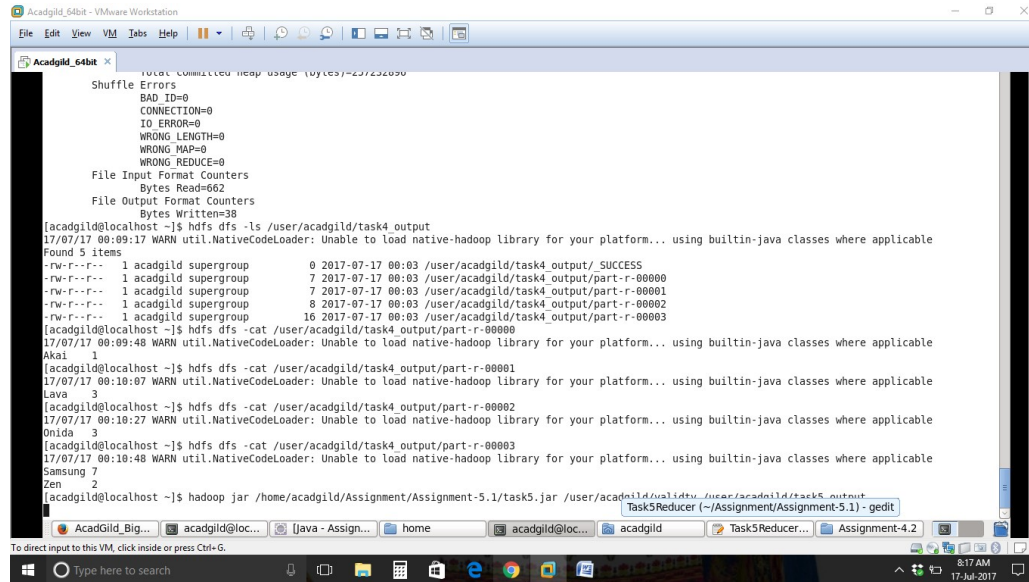
Task4Reducer.java (~/Assignment/Assignment-5.1) - gedit

Task 5:
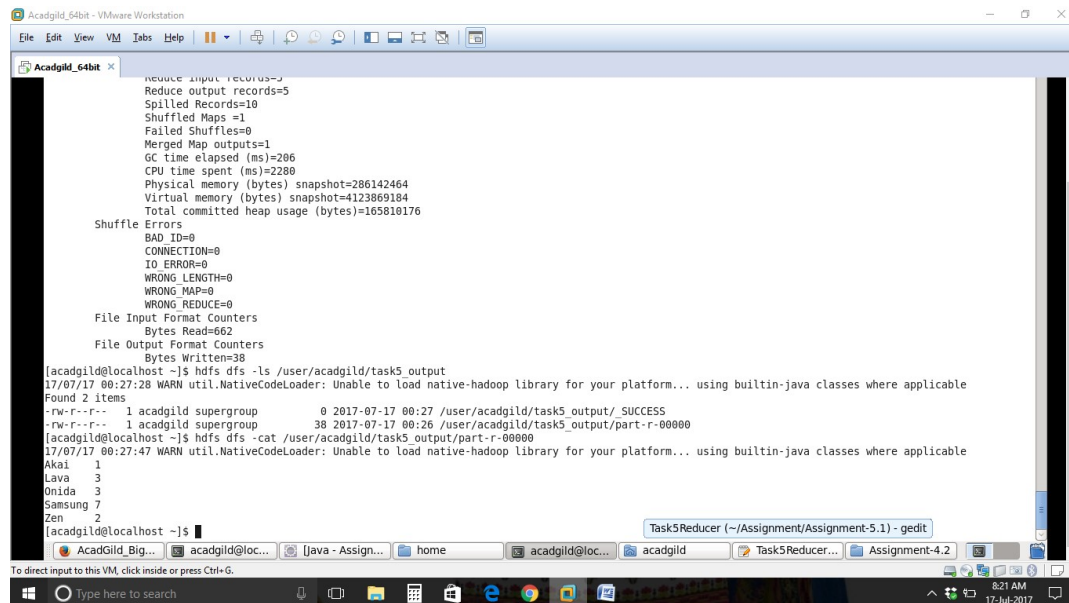
Modify Task 2 (refer session 4, assignment 2) to take advantage of Combiner.

All 4 reducers outptut is combined