Report For Lab Assignment 4

1.

Question:

Hadoop MapReduce Algorithm
Implement MapReduce algorithm for finding Facebook common friends problem and run the MapReduce job on Apache Hadoop. Write a report including your algorithm and result screenshots.

Description:

ALGORITHM:

The Algorithm is implemented by using Mapper and Reducer

Let us assume input file as key value pairs as (Person, Friends)

Mapper

The Mapper class takes above input and emits this Key Value Pair (Person1Person2, Friends of Person1+Friends of Person2)

Reducer

The Reducer takes above input and and converts the Key value Pair which is Output of our program (Person1,Person2, Common Friends)

EXECUTION:

Firstly I have executed the program in Intellij and created the jar file using Maven. and then exported that jar file into cloudera using Filejilla . After exporting I run the jar in cloudera platform by creating input and output files. The results are shown in the following screen shots.

Screenshots:

```
[cloudera@quickstart ~]$ hadoop fs -put '/home/cloudera/Desktop/Input.txt' fbinput
[cloudera@quickstart ~]$ hadoop jar '/home/cloudera/Desktop/FB-Friends-4.0-SNAPSHOT.jar' FBMain fbinput fbout
16/02/17 19:43:27 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
16/02/17 19:43:29 WARN mapreduce.JobSubmitter: Hadoop command-line option parsing not performed. Implement the Tool interface and execu
er to remedy this.
16/02/17 19:43:30 INFO input.FileInputFormat: Total input paths to process : 1
16/02/17 19:43:30 INFO mapreduce.JobSubmitter: number of splits:1
16/02/17 19:43:31 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1455759153571_0006
16/02/17 19:43:32 INFO impl.YarnClientImpl: Submitted application application_1455759153571_0006
16/02/17 19:43:33 INFO mapreduce.Job: The url to track the job: http://quickstart.cloudera:8088/proxy/application_1455759153571_0006/
16/02/17 19:43:33 INFO mapreduce.Job: Running job: job_1455759153571_0006
16/02/17 19:43:56 INFO mapreduce.Job: Job job_1455759153571_0006 running in uber mode : false
16/02/17 19:43:56 INFO mapreduce.Job:  map 0% reduce 0%
16/02/17 19:44:16 INFO mapreduce.Job:  map 100% reduce 0%
16/02/17 19:44:37 INFO mapreduce.Job:  map 100% reduce 100%
16/02/17 19:44:38 INFO mapreduce.Job: Job job_1455759153571_0006 completed successfully
16/02/17 19:44:38 INFO mapreduce.Job: Counters: 49
```

```
[cloudera@quickstart ~]$ hadoop fs -ls fbout
Found 2 items
-rw-r--r--   1 cloudera cloudera          0 2016-02-17 19:44 fbout/_SUCCESS
-rw-r--r--   1 cloudera cloudera         66 2016-02-17 19:44 fbout/part-r-00000
[cloudera@quickstart ~]$ hadoop fs -cat fbout/part-r-00000
AB      CD
AC      BD
AD      BC
BC      ADE
BD      ACE
BE      CD
CD      ABE
CE      BD
DE      BC
```

The source code also included in the following submisson.

2.

Question:

Smartphone/Watch Application
Implement a smartwatch/smartphone application using existing speech services/image services (e.g., IBM Alchemyapi, Face++) related to your project.

Description:

I had designed a interface which relates to our project ROBOCARE and used the existing Voice-text features in that application. The application Voice-text works by pressing the Recording button and it records the voice input and stores in a text. It can be explained with the following Screenshots.

Screenshots:

74% 5:23 PM

RoboCare

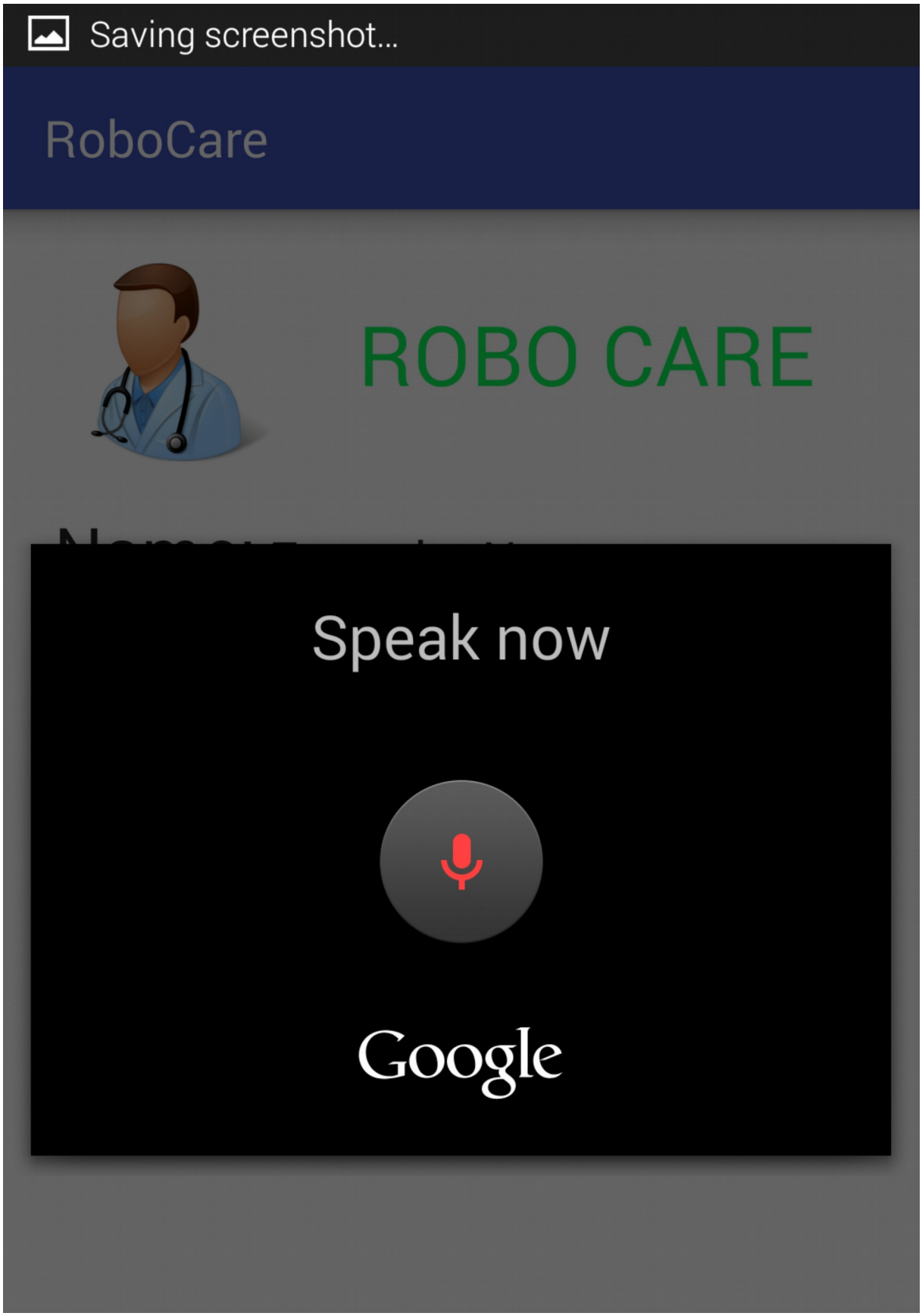
ROBO CARE

Name: Enter the Name

Age: Enter the Age

Addess: Enter the Address

Tap to Speak


Saving screenshot...
RoboCare
ROBO CARE
Speak now
Google

74% 5:23 PM

RoboCare

ROBO CARE

Name: Enter the Name

Age: Enter the Age

Addess: Enter the Address

Tap to Speak

headache