

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:

Step 1: I created a jar file of FacebookCommonFriend in IntelliJ IDEA using Maven commands.

Step 2: I uploaded this jar file together with an input file in remote server using FillZilla.

Step 3: I connected to the remote server using ssh, as: `ssh group2@172.16.2.241` in Terminal.

Step 4: Run hadoop command to execute the jar file.

```
$ hadoop fs -put CommonFriends-1.0-SNAPSHOT.jar
```

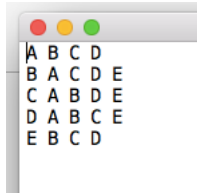
```
$ hadoop fs -put input
```

```
$ hadoop jar CommonFriends-1.0-SNAPSHOT.jar MutualFriends input output
```

```
$ hadoop fs -cat output*
```

Screenshots:

Input file:



Terminal (output):

```
application_1455690915780_0034/
16/02/22 00:51:53 INFO mapreduce.Job: Running job: job_1455690915780_0034
16/02/22 00:52:01 INFO mapreduce.Job: Job job_1455690915780_0034 running in uber mode :
16/02/22 00:52:01 INFO mapreduce.Job:  map 0% reduce 0%
16/02/22 00:52:08 INFO mapreduce.Job:  map 100% reduce 0%
16/02/22 00:52:17 INFO mapreduce.Job:  map 100% reduce 50%
16/02/22 00:52:26 INFO mapreduce.Job:  map 100% reduce 100%
16/02/22 00:52:26 INFO mapreduce.Job: Job job_1455690915780_0034 completed successfully
16/02/22 00:52:26 INFO mapreduce.Job: Counters: 49
```

```
Bytes Written=57
$ hadoop fs -cat output4/*
AB      CD
AD      BC
BC      ADE
BE      CD
CD      ABE
DE      BC
AC      BD
BD      ACE
CE      BD
$
```

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 developed a smartphone application using IBM Alchemy API to recognize the image.

It's inside the Alchemy API android SDK.

Screenshots:

When the user chooses one image, and click “classify image”, AlchemyAPI could analyze the image and provide the tags. (e.g. it successfully recognized the cat image)

