Hadoop MapReduce Algorithm

Question

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

The algorithm used to collect a list of shared friends is:

```
Map:
Given: User Object N = Array of friend objects of N
for (each A friend of N)
  Key = new array of size 2
  SharedFriends = new array of size (size of N - 1)
  for (each B friend of N)
    If (friend A == friend B)
      Key = Array(N, A)
    Else
      Push friend B onto array SharedFriends
    End if
  End for
  Sort (Key)
  Push(Key, SharedFriends) onto MapReduce stack
End for

Reduce:
For (each A friend in first array of SharedFriends)
  Joined = new array  //Shared friends between N and A
  For (each B friend in all subsequent arrays of SharedFriends)
    If (friend A == friend B)
      Push (A onto Joined)
    End if
  End for
End for
```

Smartphone/Smartwatch Application

Question

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

Description