gedit mulmapper.py

#!/usr/bin/env python

import sys

def mapper():

for line in sys.stdin:

line=line.strip()

entry=line.split()

key=entry[0]

value=line[1:]

if key=="A":

print "{0}\t{1}".format(key,value)

else:

print "{0}\t{1}".format(key,value)

mapper()

gedit matrixa.txt

A 0 0 1

A 0 1 2

A 1 0 4

A 1 1 5

B 0 0 9

B 0 1 8

B 1 0 6

B 1 1 5

gedit mulreducer.py

#!/usr/bin/env python

import sys

def reducer():

m1={}

m2={}

for line in sys.stdin:

line=line.strip()

key,value=line.split('\t')

v=value.split()

if key=='A':

m1[(int(v[0]),int(v[1]))]=int(v[2])

else:

m2[(int(v[0]),int(v[1]))]=int(v[2])

r=0

for i in range(0,2):

for j in range(0,2):

for k in range(0,2):

r+=m1[(i,k)]\*m2[(k,j)]

print "({0},{1})\t{2}".format(i,j,r)

r=0

reducer()

cat matrixa.txt | python mulmapper.py | sort | python mulreducer.py

hdfs dfs -put matrixa.txt matrixa.txt