Q1. Write an in-mapper combiner **algorithm** modifying Co-occurrence Matrix (pairs approach) algorithm.

Class Mapper

method initialized()

H = new AssociationArray

Method map(docId a, doc r)

for all v in r do

for all w in window(v) do

if(H{v,w} is null)

H{v,w} = 1

else

H{v,w} = H{v,w} + 1

Method close()

for all (v,w) in H do

emit((v,w),H{v,w})

Q2. Write an in-mapper combiner **algorithm** modifying Co-occurrence Matrix (stripe approach) algorithm.

Class Mapper

method initialized()

H = new AssociationArray

Method map(docId a, doc r)

for all v in r do

h = new AssociationArray

for all w in window(v) do

h{w} = h{w} + 1

if(H{v} == null)

H{v} = 1

else

H{v} = H{v} + 1

Method close()

for all v in H do

emit(v,H{v})

Q3. Assume that there are two input spits and two reducers. Note that Mapper 1 and Reducer 1 run on the same machine. Mapper 2 and Reducer 2 run on the same machine.











