Map Reduce Function:

Here we shall feed both the matrices as input key value pairs would be the matrices and location of the matrix respectively.

Map (Key, Value list) =

{

Var X = Given Matrix with dimensions ixj (I Rows and j columns)

Var Y = Given Matrix with dimensions ixj (i Rows and j columns)

For i= 1 to m

For j = 1 to n

(Key, Value) = ((I,j);X(i)(j))

Emit (X, I, j, X[i][j]);

For i = 1 to m

For j = 1 to n

(Key, Value) = ((I,j);Y(i)(j))

Emit (Y, I, j, Y[i][j]); }

//Map will generate the intermediate key value pairs which is fed to reduce function, in this case it will be X[i][j],Y[i][j] and their values for each iteration.

reduce (Key, Value List)

{

//Create a new array Z to store the output which has dimensions ixj (I rows and j columns)

For i= 1 to m

For j = 1 to n

Z[i][j] = X[i][j]+Y[i][j]; //Addition of Matrices X and Y and storing the result to Z

For i= 1 to m

For j= 1 to n

Emit(Z[i][j]);}

Map and reduce function:

((i),(j),X/Y(i)(j)) X(i)(j)+Y(i)(j)

Map

Reduce

o/p

Map

o/p

Reduce

Map