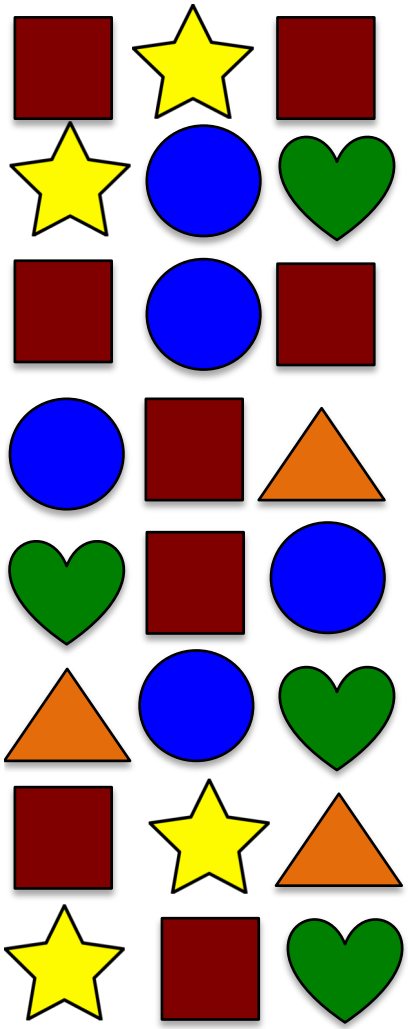
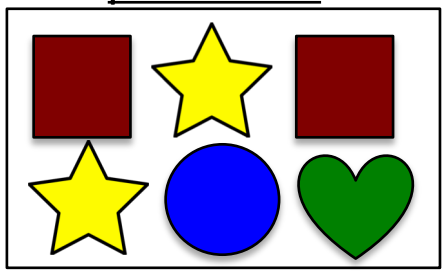
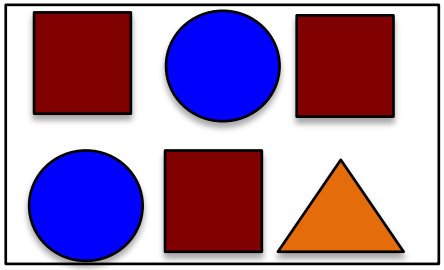
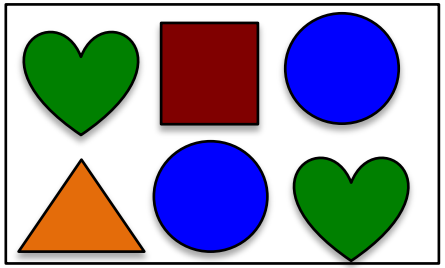


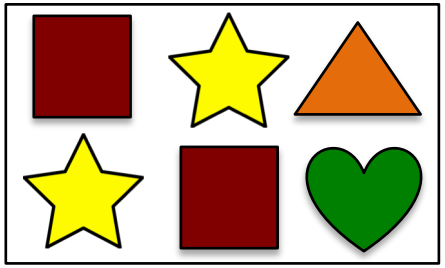
## STEP 0 – STORE TO HDFS

Assume 4 data partitions.









## 1 - MAP

( , 2)
( , 2 )
( , 1 )
( , 1 )
( , 0 )

( , 3 )
( , 0 )
( , 2 )
( , 0 )
( , 1 )

( , 1 )
( , 0 )
( , 2 )
( , 2 )
( , 1 )

( , 2 )
( , 2 )
( , 0 )
( , 1 )
( , 1 )

## 2 – SHUFFLE and SORT

( , 2 )
( , 3 )
( , 1 )
( , 2 )
( , 1)
( , 2 )
( , 2 )
( , 0 )

( , 0 )
( , 1 )
( , 1 )
( , 1 )
( , 2)
( , 0 )
( , 0 )
( , 2 )

( , 1 )
( , 0 )
( , 2 )
( , 1 )

## 3 - REDUCE

( , 8 )
( , 4 )
( , 5 )
( , 4 )
( , 3 )