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| **Ex. No: 4** | **Implementing MapReduce2** |
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**Aim: To understand how map reduce program works using Apriori algorithm**

**Program:**

**Mapper.py**

**import sys**

**from itertools import combinations**

**def generate\_combinations(items, k):**

**return combinations(sorted(set(items)), k)**

**k = 3**

**for line in sys.stdin:**

**items = line.strip().split()[1:]**

**item\_combinations = generate\_combinations(items, k)**

**for itemset in item\_combinations:**

**print(f"{','.join(itemset)}\t1")**

**Reducer.py**

**import sys**

**current\_itemset = None**

**current\_count = 0**

**min\_support = 2**

**for line in sys.stdin:**

**itemset, count = line.strip().split("\t")**

**count = int(count)**

**if current\_itemset == itemset:**

**current\_count += count**

**else:**

**if current\_itemset and current\_count >= min\_support:**

**print(f"{current\_itemset}\t{current\_count}")**

**current\_itemset = itemset**

**current\_count = count**

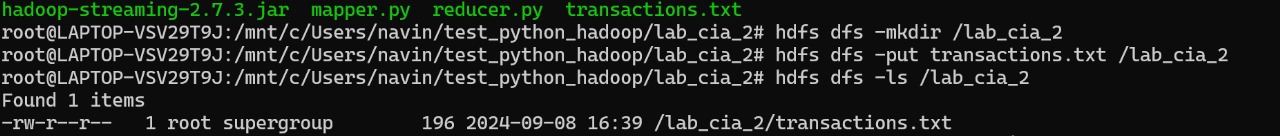
**if current\_itemset and current\_count >= min\_support:**

**print(f"{current\_itemset}\t{current\_count}")**

**Output:**

A black and white screen

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**Result: Thus Apriori implemented using the map reduce program**