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| **Ex. No: 3** | **Implementing MapReduce** |
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**Aim: To Implement a simple map-reduce code for the wordcount problem using Java/Python.**

**Program:**

Mapper.py

#!/usr/bin/env python3

import sys

for line in sys.stdin:

    fields = line.strip().split()

    if len(fields) >= 8:

        date = fields[1]

        max\_temp = fields[7]

        min\_temp = fields[6]

        try:

            print(f"{date}\t{max\_temp}\t{min\_temp}")

        except ValueError:

            continue

Reducer.py

#!/usr/bin/env python3

import sys

current\_date = None

current\_max\_temp = float('-inf')

current\_min\_temp = float('inf')

for line in sys.stdin:

    line = line.strip()

    date, max\_temp, min\_temp = line.split("\t")

    try:

        max\_temp = float(max\_temp)

        min\_temp = float(min\_temp)

    except ValueError:

        continue

    if current\_date == date:

        current\_max\_temp = max(current\_max\_temp, max\_temp)

        current\_min\_temp = min(current\_min\_temp, min\_temp)

    else:

        if current\_date:

            print(f"{current\_date}\t{current\_max\_temp}\t{current\_min\_temp}")

        current\_date = date

        current\_max\_temp = max\_temp

        current\_min\_temp = min\_temp

if current\_date:

    print(f"{current\_date}\t{current\_max\_temp}\t{current\_min\_temp}")

**Output:**

A computer screen with white text

Description automatically generatedA black screen with white text

Description automatically generatedA computer screen with white text

Description automatically generated

**Result: Thus map reduce program is implemented using python**