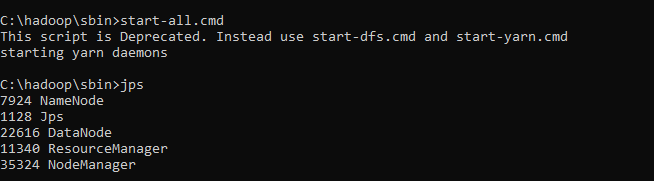
# IMPLEMENT WORD COUNT/FREQUENCY PROGRAMS USING MAPREDUCE

**AIM:**

To implement the python mapper and reducer programs using MapReduce to count the words in a text file using Hadoop.

# PROCEDURE:

1. Open command prompt and run as administrator and start the Hadoop by using the command:



1. Create a new directory in the Hadoop file systems using the command:



1. Upload the input text file into the wordcount\_word directory using the command:



1. Create the mapper and reducer files.

# MAPPER.PY

#!/usr/bin/env python import sys

# Read lines from standard input for line in sys.stdin:

# Strip leading and trailing whitespaces line = line.strip()

# Split the line into words words = line.split()

# Output each word with a count of 1 for word in words:

print(f'{word}\t1')

# REDUCER.PY

#!/usr/bin/env python import sys

from collections import defaultdict

# Initialize a dictionary to store word counts word\_count = defaultdict(int)

# Read lines from standard input for line in sys.stdin:

# Strip leading and trailing whitespaces line = line.strip()

# Split the line into word and count word, count = line.split('\t', 1)

try:

count = int(count) except ValueError:

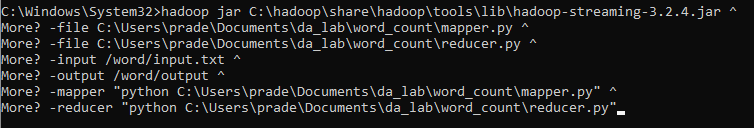
# If count is not an integer, skip this line continue

# Add the count to the word's total word\_count[word] += count

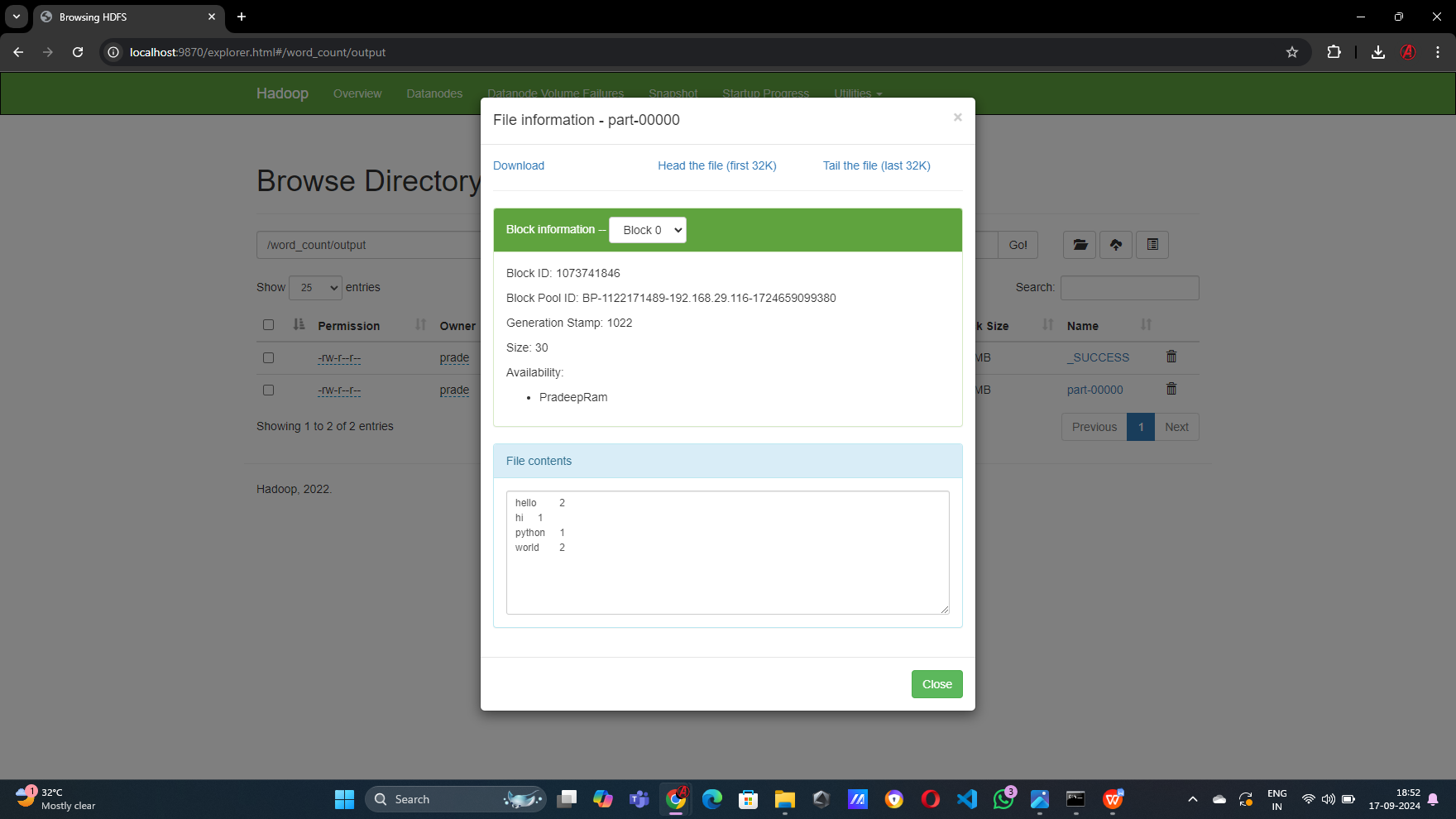
# Output each word and its total count for word, count in word\_count.items():

print(f'{word}\t{count}')

1. To execute the files with Hadoop streaming run the following command:



# OUTPUT:



**RESULT:**

Thus the implementation of the python mapper and reducer programs using MapReduce to count the words in a text file using Hadoop is executed successfully.