**EXPERIMENT 4:**

import itertools

def solve\_cryptarithmetic():

letters = 'SENDMORY'

digits = range(10)

for perm in itertools.permutations(digits, len(letters)):

mapping = dict(zip(letters, perm))

if mapping['S'] == 0 or mapping['M'] == 0:

continue

send = 1000 \* mapping['S'] + 100 \* mapping['E'] + 10 \* mapping['N'] + mapping['D']

more = 1000 \* mapping['M'] + 100 \* mapping['O'] + 10 \* mapping['R'] + mapping['E']

money = 10000 \* mapping['M'] + 1000 \* mapping['O'] + 100 \* mapping['N'] + 10 \* mapping['E'] + mapping['Y']

if send + more == money:

print("Solution Found:")

print(f"SEND = {send}")

print(f"MORE = {more}")

print(f"MONEY = {money}")

print("Letter to Digit Mapping:")

for letter in letters:

print(f"{letter} = {mapping[letter]}")

return

print("No solution found.")

solve\_cryptarithmetic()

**OUTPUT:**

