### **9. Maximum profit with at most 2 transactions in a day**

def max\_profit\_two\_transactions(prices):

if not prices:

print("Max profit with two transactions: 0")

return 0

n = len(prices)

left\_profits = [0]\*n

right\_profits = [0]\*n

min\_price = prices[0]

for i in range(1, n):

min\_price = min(min\_price, prices[i])

left\_profits[i] = max(left\_profits[i-1], prices[i] - min\_price)

max\_price = prices[-1]

for i in range(n-2, -1, -1):

max\_price = max(max\_price, prices[i])

right\_profits[i] = max(right\_profits[i+1], max\_price - prices[i])

max\_profit = max(left\_profits[i] + right\_profits[i] for i in range(n))

print("Max profit with at most 2 transactions:", max\_profit)

return max\_profit

# Example:

stock\_prices = [3,3,5,0,0,3,1,4]

max\_profit\_two\_transactions(stock\_prices)