**SOFTNERVE CONFIDENTIAL CODING TEST**

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**Q.NO 1 LEADER OF AN ARRAY**

total\_no\_of\_elements = int(input("Enter the number of elements: "))

input\_array = []

for i in range(total\_no\_of\_elements):

element = int(input(f"Enter the element{i+1}:"))

input\_array.append(element)

leader\_array = []

leader\_array.append(input\_array[-1])

size = 0

for i in range(len(input\_array)-1,-1,-1):

if(input\_array[i]>leader\_array[size]):

leader\_array.append(input\_array[i])

size += 1

leader\_array.reverse()

print(leader\_array)

**Q.NO 2 BEST TIME TO BUY AND SELL STOCK**

prices\_for\_n\_days= int(input("Enter the number of days to get the price input : "))

while(prices\_for\_n\_days > 105 or prices\_for\_n\_days < 1):

print("Invalid number of days")

prices\_for\_n\_days = int(input("Enter the number of days to get the price input: "))

input\_array = []

for i in range(prices\_for\_n\_days):

input\_price = int(input(f"Enter the price{i+1}:"))

while(input\_price > 104 or input\_price < 0):

print("Invalid input price")

input\_price = int(input(f"Enter the price{i+1}:"))

input\_array.append(input\_price)

profit = 0

for i in range(len(input\_array)):

for j in range(i+1,len(input\_array)):

if input\_array[j] > input\_array[i] and input\_array[j] - input\_array[i] > profit:

profit = input\_array[j] - input\_array[i]

print(“Profit=",profit)

**Q.NO 3 SUM OF ALL SUBSET XOR TOTALS**

total\_no\_of\_elements = int(input("Enter the number of elements: "))

input\_array = []

for index in range(total\_no\_of\_elements):

element = int(input(f"Enter the element{index+1}:"))

input\_array.append(element)

def subsetXORSum(input\_array):

def helper(index, xor\_total):

if index == len(input\_array):

return xor\_total

return helper(index + 1, xor\_total ^ input\_array[index]) + helper(index + 1, xor\_total)

return helper(0, 0)

print(subsetXORSum(input\_array))