```
class Node:
    def __init__(self, coeff, power):
        self.coeff = coeff
        self.power = power
        self.next = None

def insert_term(head, coeff, power):
    new_node = Node(coeff, power)
    if head is None or power > head.power:
        new_node.next = head
        return new_node
    temp = head
    while temp.next and temp.next.power
>= power:
        if temp.next.power == power:
            temp.next.coeff += coeff
            return head
        temp = temp.next
    if temp.power == power:
        temp.coeff += coeff
    else:
        new_node.next = temp.next
        temp.next = new_node
    return head

def add_poly(p1, p2):
    result = None
    while p1 and p2:
        if p1.power == p2.power:
            result = insert_term(result, p1.coeff
+ p2.coeff, p1.power)
            p1 = p1.next
            p2 = p2.next
        elif p1.power > p2.power:
            result = insert_term(result,
p1.coeff, p1.power)
            p1 = p1.next
        else:
            result = insert_term(result,
p2.coeff, p2.power)
            p2 = p2.next
    while p1:
        result = insert_term(result, p1.coeff,
p1.power)
        p1 = p1.next
    while p2:
        result = insert_term(result, p2.coeff,
p2.power)
        p2 = p2.next
    return result

def display_poly(head):
    if head is None:
        print("0")
        return
    temp = head
    while temp:
        print(f"{temp.coeff}x^{temp.power}",
end=" ")
        if temp.next:
            print("+", end=" ")
        temp = temp.next
    print()

def get_polynomial():
    head = None
    n = int(input("Enter number of terms:
"))
    for _ in range(n):
        coeff = int(input("Enter coefficient: "))
        power = int(input("Enter power: "))
        head = insert_term(head, coeff,
power)
    return head

# --- Main Program ---
print("Enter first polynomial:")
poly1 = get_polynomial()

print("Enter second polynomial:")
poly2 = get_polynomial()

print("\nFirst Polynomial:")
display_poly(poly1)

print("Second Polynomial:")
display_poly(poly2)

sum_poly = add_poly(poly1, poly2)
print("Sum of Polynomials:")
display_poly(sum_poly)
```

OUTPUT:

Enter first polynomial:

Enter number of terms: 3

Enter coefficient: 2

Enter power: 0

Enter coefficient: -4

Enter power: 1

Enter coefficient: 5

Enter power: 2

Enter second polynomial:

Enter number of terms: 3

Enter coefficient: 1

Enter power: 0

Enter coefficient: 2

Enter power: 1

Enter coefficient: -3

Enter power: 3

First Polynomial:

5x^2 + -4x^1 + 2x^0

Second Polynomial:

-3x^3 + 2x^1 + 1x^0

Sum of Polynomials:

-3x^3 + 5x^2 + -2x^1 + 3x^0