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# Exercise 1: CRUD Operations in an Array
class ArrayCRUD:
    def __init__(self):
        self.arr = []

    def create(self, element):
        self.arr.append(element)

    def read(self):
        return self.arr

    def update(self, index, element):
        if 0 <= index < len(self.arr):
            self.arr[index] = element
        else:
            return "Index out of range"

    def delete(self, index):
        if 0 <= index < len(self.arr):
            del self.arr[index]
        else:
            return "Index out of range"


# Example usage of CRUD operations
crud = ArrayCRUD()
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crud.create(10)
crud.create(20)
crud.create(30)
crud.create(40)
print("Initial array:", crud.read())

crud.update(1, 25)
print("After updating index 1 to 25:", crud.read())

crud.delete(2)
print("After deleting element at index 2:", crud.read())



# Exercise 2: Linear Search
def linear_search(arr, target):
    for i in range(len(arr)):
        if arr[i] == target:
            return i
    return -1

# Take user input
arr = list(map(int, input("Enter numbers separated by space: ").split()))
target = int(input("Enter target value to search: "))

result = linear_search(arr, target)
if result != -1:
    print(f"Element {target} found at index {result}")
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else:
    print(f"Element {target} not found")
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