

HEXAWARE PHASE 2 FOUNDATION TRAINING DAY 2

1.Perform Crud operation in an array

```
def create_array():
    arr = []
    n = int(input("Enter the number of elements: "))
    for i in range(n):
        element = int(input(f"Enter element {i+1}: "))
        arr.append(element)
    return arr

def display(arr):
    print("Current Array:", arr if arr else "Array is empty.")

def update(arr):
    index = int(input("Enter index to update: "))
    if 0 <= index < len(arr):
        value = int(input("Enter new value: "))
        arr[index] = value
        print("Updated successfully.")
    else:
        print("Error: Index out of range.")

def delete(arr):
    index = int(input("Enter index to delete: "))
    if 0 <= index < len(arr):
        print(f"Deleted {arr.pop(index)} successfully.")
    else:
        print("Error: Index out of range.")

if __name__ == "__main__":
    arr = create_array()
    while True:
        print("\nChoose an operation:")
        print("1. Display")
        print("2. Update")
        print("3. Delete")
        print("4. Exit")
        choice = input("Enter your choice: ")

        if choice == '1':
            display(arr)
        elif choice == '2':
            update(arr)
        elif choice == '3':
            delete(arr)
        elif choice == '4':
```

```
    print("Exiting program.")
    break
else:
    print("Invalid choice. Please try again.")
```

2.Take user input of numbers to perform linear search in an array or list.

```
def linear_search(numbers, target):
    for index in range(len(numbers)):
        if numbers[index] == target:
            return index
    return -1

size = int(input("Enter the number of elements: "))

numbers = []

for _ in range(size):
    num = int(input("Enter a number: "))
    numbers.append(num)

target = int(input("Enter the number to search: "))

result = linear_search(numbers, target)

if result != -1:
    print(f"Number found at index {result}")
else:
    print("Number not found")
```