**HEXAWARE Phase 2 Day 2 Training**

1. **Exercise 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 read\_array(arr):

print("Array elements:", arr)

def update\_array(arr):

index = int(input("Enter the index to update: "))

if 0 <= index < len(arr):

new\_value = int(input("Enter new value: "))

arr[index] = new\_value

print("Array updated successfully!")

else:

print("Invalid index!")

def delete\_element(arr):

value = int(input("Enter the value to delete: "))

if value in arr:

arr.remove(value)

print("Element deleted successfully!")

else:

print("Element not found!")

arr = create\_array()

while True:

print("\nChoose an operation:")

print("1. Read Array")

print("2. Update an Element")

print("3. Delete an Element")

print("4. Exit")

choice = int(input("Enter your choice: "))

if choice == 1:

read\_array(arr)

elif choice == 2:

update\_array(arr)

elif choice == 3:

delete\_element(arr)

elif choice == 4:

print("Exiting program...")

break

else:

print("Invalid choice! Please try again.")

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

def linear\_search(arr, target):

for i in range(len(arr)):

if arr[i] == target:

return i

return -1

arr = list(map(int, input("Enter array elements separated by space: ").split()))

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

index = linear\_search(arr, target)

if index != -1:

print(f"Element {target} found at index {index}")

else:

print(f"Element {target} not found in the array")