HEXAWARE DAY -2

1. Create class for queue:

class Queue:

def \_\_init\_\_(self):

self.items = []

# Enqueue

def enqueue(self, item):

self.items.append(item)

# Dequeue

def dequeue(self):

if not self.is\_empty():

return self.items.pop(0)

else:

return "Queue is empty"

def is\_empty(self):

return len(self.items) == 0

def display(self):

return self.items

q = Queue()

q.enqueue(10)

q.enqueue(20)

q.enqueue(30)

print("Queue:", q.display()) # Output: [10, 20, 30]

print("Dequeued:", q.dequeue()) # Output: 10

2. linear search by getting input from user

def linear\_search(arr,match):

    for i in range(len(arr)):

        if arr[i]==match:

            return i

    return -1

arr= list(map(int, input("Enter numbers: ").split()))

match = int(input("Enter number to search: "))

print("the match found is" , linear\_search(arr,match))

3. CRUD OPERATIONS IN ARRAY

arr = []

# Create Operation (to accept multiple inputs)

def create():

    elements = list(map(int, input("Enter elements to add (separated by spaces): ").split()))

    arr.extend(elements)

    print("Elements added successfully:", arr)

# Read Operation

def read():

if arr :

    print("Array elements:", arr )

else:

print(“not fofund”)

# Update Operation

def update():

    element = int(input("Enter new value: "))

    if len(arr) > 3:

        if arr[2] > arr[3]:

            arr[2] = element

            print("Element updated successfully:", arr)

        else:

            print("Condition not met")

    else:

        print("Array doesn't have enough elements")

# Delete Operation

def delete():

    if arr:

        index = int(input("Enter index to delete: "))

        if 0 <= index < len(arr):

            removed\_element = arr.pop(index)

            print(f"{removed\_element} deleted successfully.")

        else:

            print("Invalid index.")

    else:

        print("Array is empty.")

while True:

    print("\n1. Create\n2. Read\n3. Update\n4. Delete\n5. Exit")

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

    if choice == 1:

        create()

    elif choice == 2:

        read()

    elif choice == 3:

        update()

    elif choice == 4:

        delete()

    elif choice == 5:

        print("Exiting... Goodbye!")

        break

    else:

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