Day 2 – Problem Solving and Data Structures

Excersise

1. **Perform Crud operation in an array**

class MyArray:

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

self.size = size

self.data = [None] \* size *# Initialize the array with None values*

def create(self):

for i in range(self.size):

self.data[i] = int(input(f"Enter value for index {i}: "))

def read(self):

print("Array:", self.data)

def update(self, index, value):

if 0 <= index < self.size:

self.data[index] = value

else:

print("Index out of range")

def delete(self, index):

if 0 <= index < self.size:

self.data[index] = None *# Setting to None instead of shifting elements*

else:

print("Index out of range")

*# Test the class*

arr = MyArray(5)

arr.create()

arr.read()

arr.update(2, 99)

arr.read()

arr.delete(1)

arr.read()

1. **Perform Linear Search in an Array**

def linear\_search(ar, match):

for i in range(len(ar)):

if ar[i] == match:

return i

return -1

ar = list(map(int, input("Enter numbers separated by space: ").split()))

match = int(input("Enter the number to be searched "))

print(linear\_search(ar, match))