1. Write a Python Program to find sum of array?

Sol:- # Initialize array

array = [10, 20, 30, 40, 50]

# Initialize sum

sum = 0

# Iterate through array elements and add them to the sum

for element in array:

sum += element

# Display the sum

print("Sum of array elements:", sum)

1. Write a Python Program to find largest element in an array?

Sol:- def find\_largest(arr):

# Initialize the first element as the largest

largest = arr[0]

# Loop through the array starting from the second element

for i in range(1, len(arr)):

# If the current element is greater than the largest element, update the largest

if arr[i] > largest:

largest = arr[i]

return largest

# Example usage

my\_arr = [2, 4, 7, 1, 9, 5, 8]

print("The largest element in the array is:", find\_largest(my\_arr))

1. Write a Python Program for array rotation?

Sol:- def rotate\_array(arr, d):

"""

Rotate the array 'arr' by 'd' elements to the left.

"""

# Calculate the length of the array

n = len(arr)

# If d is greater than n, then we need to take modulo with n

d = d % n

# Rotate the array

rotated\_arr = arr[d:] + arr[:d]

return rotated\_arr

# Example usage

arr = [1, 2, 3, 4, 5]

d = 2

rotated\_arr = rotate\_array(arr, d)

print(rotated\_arr)

1. Write a Python Program to Split the array and add the first part to the end?

Sol:- def split\_array(arr, n, k):

# Store the first k elements of the array

temp = arr[:k]

# Shift the remaining elements of the array to the left

for i in range(k, n):

arr[i - k] = arr[i]

# Add the first k elements to the end of the array

for i in range(n - k, n):

arr[i] = temp[i - n + k]

# Return the modified array

return arr

# Example usage

arr = [1, 2, 3, 4, 5]

n = len(arr)

k = 2

result = split\_array(arr, n, k)

print(result)

1. Write a Python Program to check if given array is Monotonic?

Sol:- def is\_monotonic(arr):

"""

This function takes an array as input and returns True if it is monotonic,

else returns False.

"""

if len(arr) <= 2:

return True

increasing = decreasing = True

for i in range(len(arr)-1):

if arr[i] > arr[i+1]:

increasing = False

if arr[i] < arr[i+1]:

decreasing = False

return increasing or decreasing

# Example usage

arr1 = [1, 2, 3, 4, 5]

arr2 = [5, 4, 3, 2, 1]

arr3 = [1, 2, 3, 2, 1]

arr4 = [1, 1, 1, 1, 1]

print(is\_monotonic(arr1)) # True

print(is\_monotonic(arr2)) # True

print(is\_monotonic(arr3)) # False

print(is\_monotonic(arr4)) # True