Task 1:

def find\_missing\_number(array):

E\_sum=n\*(n+1)//2

A\_sum=sum(array)

return E\_sum-A\_sum

arr=[1,5,2,3,6,7]

n=max(arr)

missing\_num=find\_missing\_number(arr)

print(f'The missing number in an array is {missing\_num}')

**output:-**

The missing number in an array is 4

Task 2:

def is\_valid(s):

stack = []

for i in range(len(s)):

if s[i] == "(" or s[i] == "[" or s[i] == "{":

stack.append(s[i])

elif s[i] == ")" or s[i] == "]" or s[i] == "}":

if not stack:

return False

top = stack.pop()

if (s[i] == ")" and top != "(") or \

(s[i] == "]" and top != "[") or \

(s[i] == "}" and top != "{"):

return False

else:

return False

return len(stack) == 0

s = "({[]})"

if is\_valid(s):

print(True)

else:

print(False)

**output:-**

True

Task 3:

def find\_unique\_char(s):

str=s.upper()

n = len(str)

for i in range(n):

count = False

for j in range(n):

if i != j and str[i] == str[j]:

count = True

break

if not count:

return str[i]

return None

s = "tTeEjjaass"

print(find\_unique\_char(s))

**output:-**

None