**PYTHON PROGRAMMING**

**LAB-12 ANSWERS**

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1. Write a Python program to sum all the items in a list.

**Code:**

List= [1, 2, 3, 4, 5] #input the list of numbers.

total\_sum = sum(List) # Using the built-in sum() function to calculate the sum of all items in the list.

print("The sum of all the items in the list is:", total\_sum)

# Printing the total sum.

**Output:**

The sum of all the items in the list is: 15

1. Write a Python program to get the largest and smallest number from a list without builtin functions.

**Code:**

List = [15, 32, 10, 21, 17]  #input list.

List.sort() # Sorting the list in ascending order.

smallest = List[0] # Finding the smallest number in the list.

largest = List[-1]  # Finding the smallest number in the list.

# Displaying the largest and smallest numbers

print("The largest number in the list is:", largest)

print("The smallest number in the list is:", smallest)

**Output:**

The largest number in the list is: 32

The smallest number in the list is: 10

1. Write a Python program to find duplicate values from a list and display those.

**Code:**

List = [1,3,1,4,2,3,4,5,10,10,2] #input the list of numbers.

duplicates = [num for num in List if List.count(num) > 1] # Finding duplicate values using list comprehension and count method.

duplicate\_numbers = list(set(duplicates))# Removing duplicates from the list.

print("Duplicate values in the list are:", duplicate\_numbers) # Printing duplicate values.

**Output:**

Duplicate values in the list are: [1, 2, 3, 4, 10]

4. Write a Python program to split a given list into two parts where the length of the first part of the list is given.

 Original list: [1, 1, 2, 3, 4, 4, 5, 1]

Length of the first part of the list: 3

 Splitted the said list into two parts:  ([1, 1, 2], [3, 4, 4, 5, 1])

**Code:**

Original\_list = [1, 1, 2, 3, 4, 4, 5, 1] #input (Original)list.

first\_part\_length = 3 # Length of the first part of the list.

first\_part = [Original\_list.pop(0) for \_ in range(first\_part\_length)]# Splitting the list into two parts using list comprehension and pop()

second\_part = Original\_list

# Printing the splitted parts

print("Original list:", Original\_list)

print("Length of the first part of the list:", first\_part\_length)

print("Splitted the list into two parts:", (first\_part, second\_part))

**Output:**

Original list: [3, 4, 4, 5, 1]

Length of the first part of the list: 3

Splitted the list into two parts: ([1, 1, 2], [3, 4, 4, 5, 1])

5. Write a Python program to traverse a given list in reverse order, and print the elements with the original index.

Original list: ['red', 'green', 'white', 'black']

Traverse the said list in reverse order:

black

white

green

 red

Code:

original\_list = ['red', 'green', 'white', 'black'] #input(Original)list.

print("Original list:", original\_list) # Traversing the list in reverse order using a reversed loop.

print("Traverse the list in reverse order:") #print the reverse order.

for index, element in reversed(list(enumerate(original\_list))): #enumerate condition.

    print(element) #print the element.

Output:

Original list: ['red', 'green', 'white', 'black']

Traverse the list in reverse order:

black

white

green

red