

PYTHON PROGRAMMING

LAB-12 ANSWERS

HAREESHA H M

AF0364330

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

2. 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

3. 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