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Day 12: List

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

```
# 1. Write a Python program to sum all the items in a list.
# Define a list of numbers.
num = [45, 56, 45, 67, 24, 87, 46, 45]

# Initialize a variable to store the sum of numbers.
sum_is = 0

# Loop through the list to calculate the sum of its elements.
for sum in num:
    sum_is += sum

# Print the total sum of the list elements.
print(f"Sum of given numbers in the list is: {sum_is}")
```

2. Write a Python program to get the largest and smallest number from a list without built-in functions.

```
# Initialize a variable to store the maximum value with the first element of
the list.
max_is = num[0]

# Loop through the list to find the maximum value.
for max_num in num:
    if max_is < max_num: # Compare each element with the current maximum.
        max_is = max_num # Update the maximum value if a larger number is
found.

# Print the largest number in the list.
print("Max number is", max_is)
```

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

Input: List of numbers

numbers = [1, 2, 3, 4, 2, 5, 3, 6]

Initialize lists to track seen numbers and duplicates.

seen = []

duplicates = []

Loop through the list to find duplicates.

for number in numbers:

 if number in seen: # Check if the number is already in the seen list.

 if number not in duplicates: # Ensure no duplicate is added twice.

 duplicates.append(number) # Add to duplicates if not already

added.

 else:

 seen.append(number) # Add the number to seen if it's encountered

for the first time.

Output the duplicates, if any, otherwise indicate no duplicates were found.

if duplicates:

 print("Duplicate numbers are:", duplicates)

else:

 print("No duplicates found.")

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.

Define the original list.

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

Calculate the length of the first part (half of the list length).

l1 = len(og) // 2

Split the list into two parts using slicing.

p1 = og[:l1] # First part.

p2 = og[l1:] # Second part.

Print the two split parts of the list.

print("Parted Lists are:", p1, p2)

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

```
# Define the original list.
original_list = ['red', 'green', 'white', 'black']

# Get the length of the list.
n = len(original_list)

# Print the original list.
print("Original list:", original_list)

# Traverse the list in reverse order while keeping track of the original
indices.
print("Traversing in reverse order with original indices:")
for i, element in enumerate(reversed(original_list)):
    # Calculate the original index of the current element.
    original_index = n - 1 - i
    # Print the original index and the corresponding element.
    print(f"Index: {original_index}, Element: {element}")
```

Output:

CONSOLE PREVIEW

```
Sum of given numbers in the list is: 415
max number is 87
Duplicate numbers are: [2, 3]
Parted Lists are: [1, 1, 2, 3] [4, 4, 5, 1]
Original list: ['red', 'green', 'white', 'black']
Traversing in reverse order with original indices:
Index: 3, Element: black
Index: 2, Element: white
Index: 1, Element: green
Index: 0, Element: red
>>>
```

