Darshan UNIVERSITY

योग: कर्मसु कौशलम्

# Python Programming - 2101CS405

# Lab - 5


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# list

### 01) WAP to find sum of all the elements in List.

In [4]:
```
my_list = [1, 2, 3, 4, 5]
sum_elements = 0

for element in my_list:
    sum_elements += element

print("Sum of elements in the list:", sum_elements)
```

```
Sum of elements in the list: 15
```

### 02) WAP to find largest element in a List.

In [5]:
```
my_list = [10, 5, 8, 20, 3]
max_element = my_list[0]

for element in my_list:
    if element > max_element:
        max_element = element
```

```
print("Largest element in the list:", max_element)
```

```
Largest element in the list: 20
```

## 03) WAP to split the List into two and append the first part to the end.

In [7]:
```
my_list = [1, 2, 3, 4, 5]
split_index = len(my_list) // 2

first_part = my_list[:split_index]
second_part = my_list[split_index:]

my_list = second_part + first_part
print("List after splitting and appending:", my_list)
```

```
List after splitting and appending: [3, 4, 5, 1, 2]
```

## 04) WAP to interchange first and last elements in list entered by a user.

In [8]:
```
my_list = list(map(int, input("Enter elements separated by space: ").split()))

if len(my_list) >= 2:
    my_list[0], my_list[-1] = my_list[-1], my_list[0]

print("List after interchanging first and last elements:", my_list)
```

```
List after interchanging first and last elements: [15, 18, 16, 12, 58, 23, 12]
```

## 05) WAP to interchange the elements on two positions entered by a user.

In [11]:
```
my_list = list(map(int, input("Enter elements separated by space: ").split()))

position1 = int(input("Enter the first position: "))
position2 = int(input("Enter the second position: "))

if 0 <= position1 < len(my_list) and 0 <= position2 < len(my_list):
    my_list[position1], my_list[position2] = my_list[position2], my_list[positio

print("List after interchanging elements at positions {} and {}:".format(positio
```

```
List after interchanging elements at positions 2 and 4: [15, 12, 12, 16, 14]
```

## 06) WAP to reverses the list entered by user.

In [10]:
```
my_list = list(map(int, input("Enter elements separated by space: ").split()))
my_list.reverse()
print("Reversed list:", my_list)
```

```
Reversed list: [18, 17, 16, 15, 12]
```

## 07) Python program to remove multiple elements from a list using list comprehension

In [19]:
```
my_list = [1, 2, 3, 4, 5, 6, 7, 8, 9]
elements_to_remove = [2, 4, 6]

my_list = [element for element in my_list if element not in elements_to_remove]
print("List after removing specified elements:", my_list)
```

```
List after removing specified elements: [1, 3, 5, 7, 8, 9]
```

## 08) Create a list from the specified start to end index of another list.

In [21]:
```
original_list = [10, 20, 30, 40, 50, 60, 70, 80]
start_index = 2
end_index = 5
new_list = original_list[start_index:end_index+1]
print("New list from index {} to {}:".format(start_index, end_index), new_list)
```

```
New list from index 2 to 5: [30, 40, 50, 60]
```

## 09) Input comma separated elements, convert into list and print.

In [22]:
```
input_str = input("Enter comma-separated elements: ")

my_list = [int(element.strip()) for element in input_str.split(',')]

print("List after conversion:", my_list)
```

```
List after conversion: [12, 45, 18, 13, 1, 5, 6, 4, 8, 9]
```

## 01) WAP to count Even and Odd numbers in a List.

In [24]:
```
my_list = [1, 2, 3, 4, 5, 6, 7, 8, 9]
count_even = 0
count_odd = 0

for element in my_list:
    if element % 2 == 0:
        count_even += 1
    else:
        count_odd += 1

print("Count of even numbers:", count_even)
print("Count of odd numbers:", count_odd)
```

```
Count of even numbers: 4
Count of odd numbers: 5
```

## 02) Python program to find N largest and smallest elements from the list

In [25]:
```
my_list = [5, 2, 8, 1, 6, 3, 7, 4]

N = 3
sorted_list = sorted(my_list)

N_largest = sorted_list[-N:]
```

```
N_smallest = sorted_list[:N]

print("N largest elements:", N_largest)
print("N smallest elements:", N_smallest)
```

```
N largest elements: [6, 7, 8]
N smallest elements: [1, 2, 3]
```

## 03) WAP to print duplicates from a list of integers

In [29]:
```
my_list = [1, 2, 3, 2, 4, 5, 6, 6, 7, 8, 9]
duplicates = set()

for element in my_list:
    if my_list.count(element) > 1:
        duplicates.add(element)

print("Duplicates in the list:", list(duplicates))
```

```
Duplicates in the list: [2, 6]
```

In [ ]:
```

```