

## Python Revision - II Worksheet

### List operations

Explain the difference between the `append()`, `extend()`, and `insert()` methods in a list with an example.

```
lst = [1, 2, 3]
```

- `append(item)`: Adds a single element to the end of the list.  
`lst.append(4)` # Output: [1, 2, 3, 4]
- `extend(iterable)`: Adds elements of an iterable (list, tuple) to the end of the list.  
`lst.extend([5, 6])` # Output: [1, 2, 3, 4, 5, 6]
- `insert(index, item)`: Inserts an element at a specific position in the list.  
`lst.insert(2, 'X')` # Output: [1, 2, 'X', 3, 4, 5, 6]

Write a Python program to remove duplicate elements from a list and sort the list in ascending order.

How can you reverse a list in Python without using the `reverse()` method? Provide an example.

Write a Python program to find the second largest number in a list.