

79. Finding the maximum and minimum

PROGRAM:-

```
import time
```

```
def find_max_min(lst):
```

```
    start_time = time.time() # Start time measurement
```

```
    maximum = max(lst)
```

```
    minimum = min(lst)
```

```
    end_time = time.time() # End time measurement
```

```
    elapsed_time = end_time - start_time
```

```
    return maximum, minimum, elapsed_time
```

```
# Example usage
```

```
example_list = [3, 1, 4, 1, 5, 9, 2, 6, 5, 3, 5]
```

```
max_value, min_value, execution_time = find_max_min(example_list)
```

```
print(f"Maximum value: {max_value}")
```

```
print(f"Minimum value: {min_value}")
```

```
print(f"Execution time: {execution_time:.10f} seconds")
```

OUTPUT:-

```
Maximum value: 9
Minimum value: 1
Execution time: 0.0000023842 seconds

=== Code Execution Successful ===
```

TIME COMPLEXITY:- $O(n)$