
Exercise 1 — Second Largest Number (Without Sorting)

Given a list:

```
nums = [23, 89, 12, 78, 55, 42]
```

Find the second largest number without using `sort()` or `max()`.

Exercise 2 — Move All Zeros to the End

Input:

```
[0, 3, 0, 5, 7, 0, 9]
```

Output:

```
[3, 5, 7, 9, 0, 0, 0]
```

Do not use `sort()`.

Exercise 3 — Interchange First and Last Elements

Input:

```
['a', 'b', 'c', 'd', 'e']
```

Output:

```
['e', 'b', 'c', 'd', 'a']
```

Swap using indexing.

Exercise 4 — Extract Only Prime Numbers

Given:

```
nums = [10, 11, 12, 13, 17, 20, 23]
```

Output:

```
[11, 13, 17, 23]
```

Exercise 5 — Find All Indices of a Given Value

List:

```
nums = [5, 2, 7, 5, 9, 5, 3]
```

If user enters `5`, output:

```
[0, 3, 5]
```

Exercise 6 — Create a New List of Squares (Without Comprehension)

Input:

```
[2, 4, 6, 8]
```

Output:

```
[4, 16, 36, 64]
```

Exercise 7 — Separate Even and Odd into Two Lists

Input:

```
nums = [10, 3, 5, 12, 8, 7, 1]
```

Output:

Even: `[10, 12, 8]`

Odd: `[3, 5, 7, 1]`
