

# List Slicing in Python

MUKESH KUMAR

# AGENDA

- Introduction to List Slicing
- Basic Syntax and Examples
- Omitting Indices
- Negative Indexing
- Step Parameter
- Practical Examples
- Common Errors
- Summary

# What is List Slicing?

- Allows extracting specific portions of a list.
- Uses start, stop, and step values

# Basic Syntax

- **General format:**

```
list[start:stop:step]
```

- **start:** Index where slicing begins (inclusive).
- **stop:** Index where slicing stops (exclusive).
- **step:** Increment between elements.

# Basic Examples

- Extracting first N elements: `list[:N]`
- Extracting last N elements: `list[-N:]`
- Skipping elements: `list[::2]` (every second element)

# Omitting Indices

- `list[:5]` (from start to index 4)
- `list[3:]` (from index 3 to the end)
- `list[:]` (copying the entire list)

# Negative Indexing

- `list[-3:]` (last 3 elements)
- `list[:-2]` (everything except last 2)
- `list[::-1]` (reversing the list)

# Step Parameter

- `list[::2]` (every second element)
- `list[1::3]` (every third element, starting at index 1)
- `list[::-2]` (reverse every second element)



# Practice Questions

- Extract the first 3 elements of a list.
- Extract the last 2 elements of a list.
- Extract every second element from the list starting from the second element (index 1).
- Reverse the list using slicing.
- Extract all elements from the list except the first 2.
- Create a copy of the list using slicing.
- Extract every third element of a list starting from index 0.