

**DSA through C++**

# Introduction to Sorting



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# Agenda

➤ **Sorting**

➤ **Types of Sorting**

# Sorting

- **Sorting is the process of arranging a collection of items or elements in a logical order, typically based on some criteria.**
- **The goal of sorting is to organize data in a way that makes it easier to search, retrieve, and analyze.**
- **Sorting we are going to cover is also known as internal sorting.**

- **When elements are numbers, sorting means arranging numbers in ascending order (by default).**
- **When elements are strings, sorting means arranging strings in dictionary order (alphabetical) order (by default).**

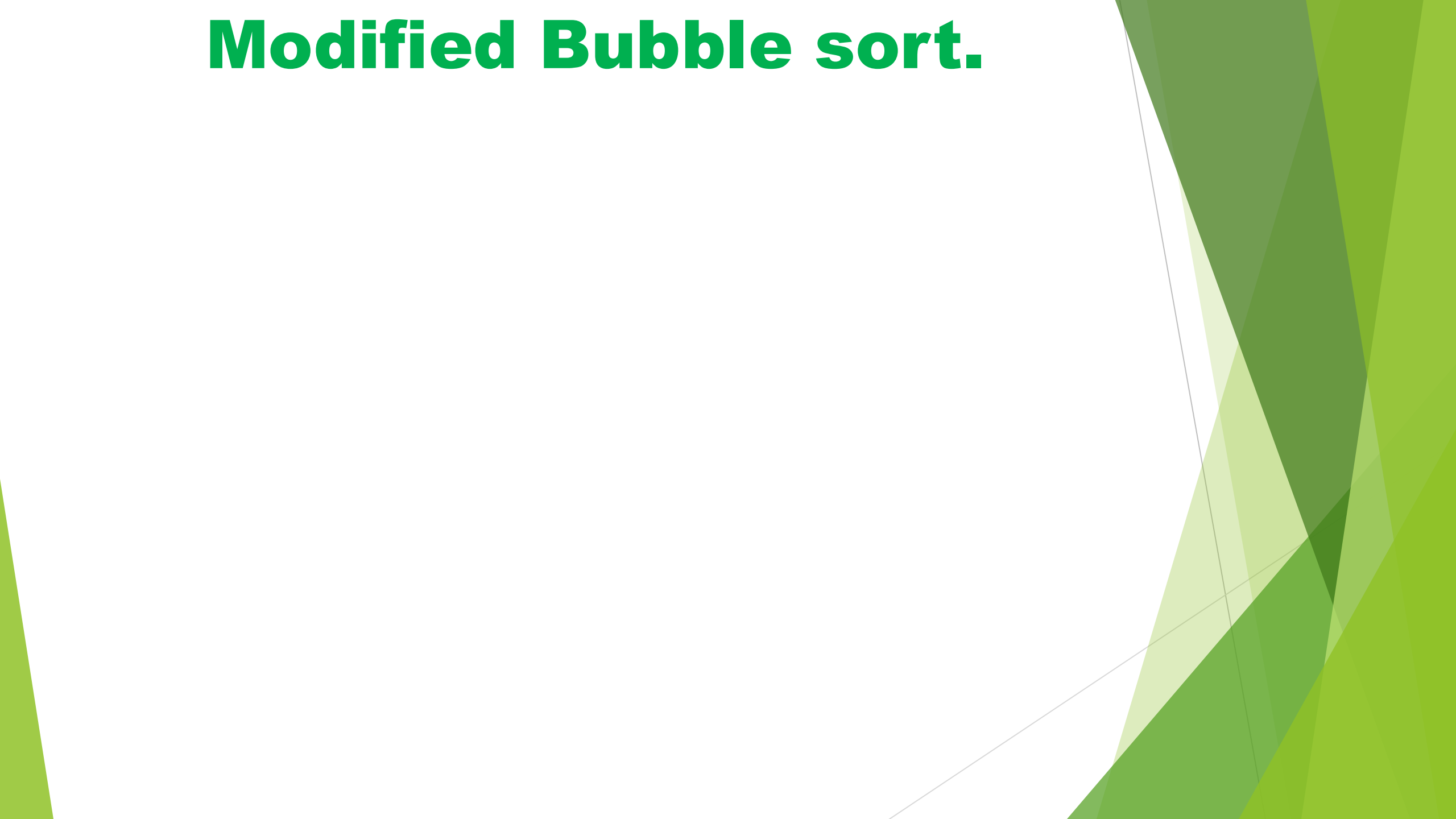
# Types of Sorting

- 1. Bubble sort.**
- 2. Modified Bubble sort.**
- 3. Selection sort.**
- 4. Insertion sort.**
- 5. Merge sort.**
- 6. Quick sort.**
- 7. Heap sort.**

# Bubble sort.

100 50 18 10 28 90

# Modified Bubble sort.



# Selection sort.

100 50 18 10 28 90



# Insertion sort.

100 50 18 10 28 90



# Merge sort.

40 50 18 10 28 90 100