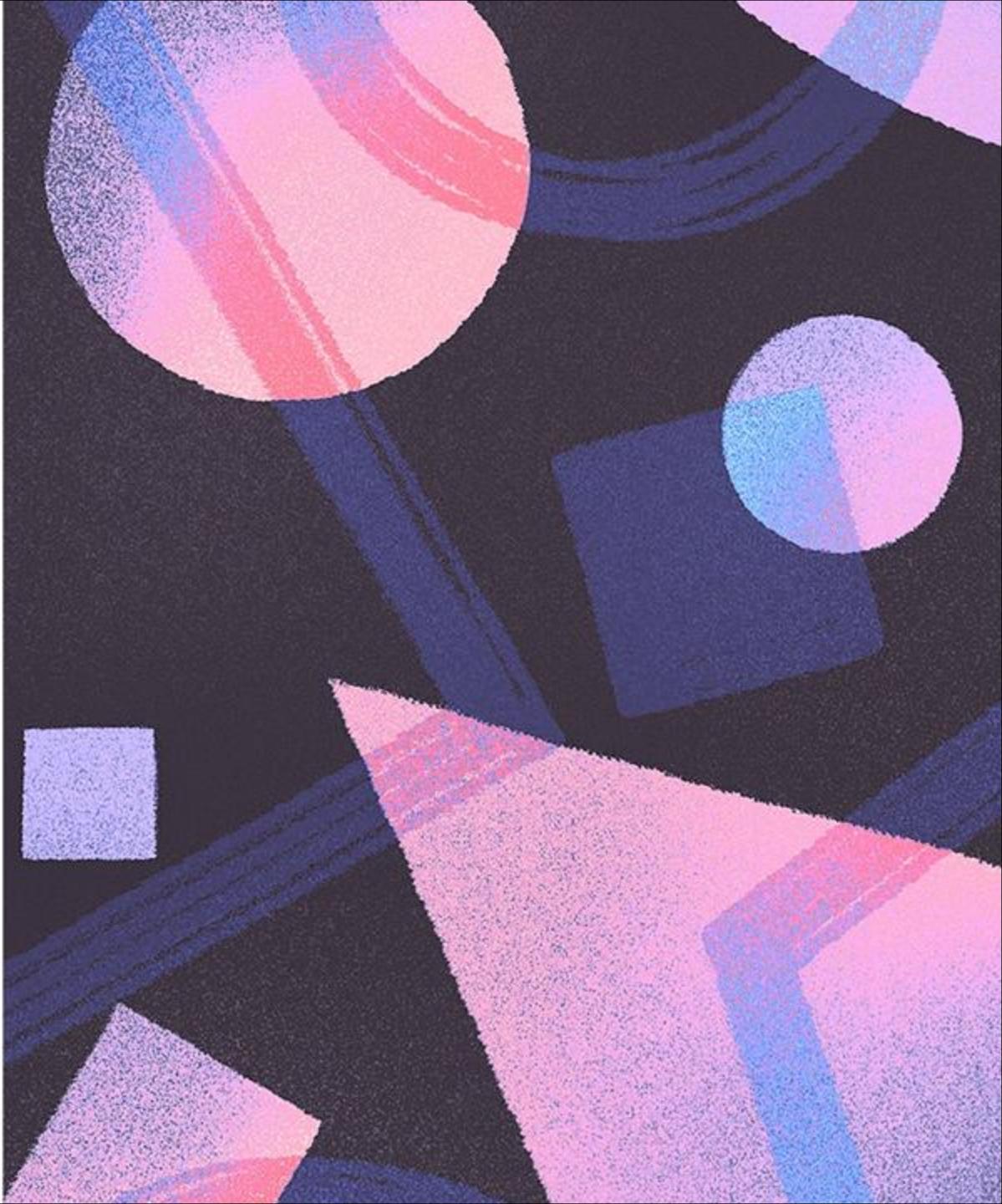


Data Structures Lab

Lecture 1

> Arrays in Java



CONTENT

01

PART

What is an Array?

02

PART

Features of Arrays

03

PART

Advantages

04

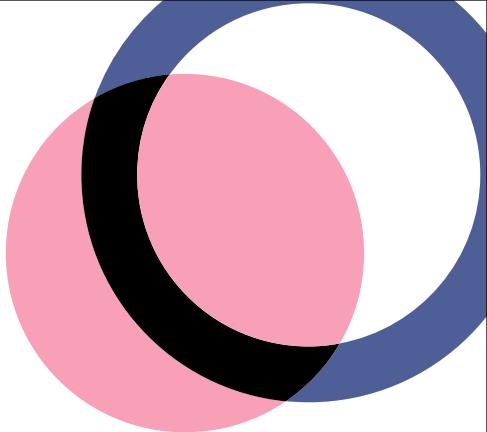
PART

Limitations

05

PART

Examples



01: What is an Array?

- An array is a collection of elements of the same type stored in contiguous memory.
- Allows access by index.
- Example: `int[] numbers = new int[5];`

02: Features of Arrays

- Fixed size (defined at creation).
- Elements are of the same type.
- Index starts at 0.
- Supports iteration using loops.

03: Advantages

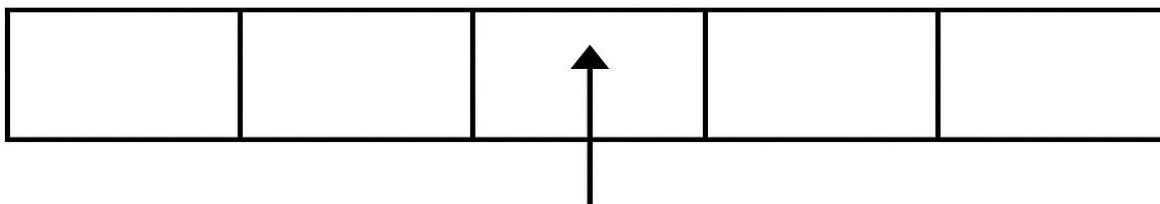
- Fast access to elements by index.
- Simple structure for storing multiple elements.
- Useful when the number of elements is known.

04: Limitations

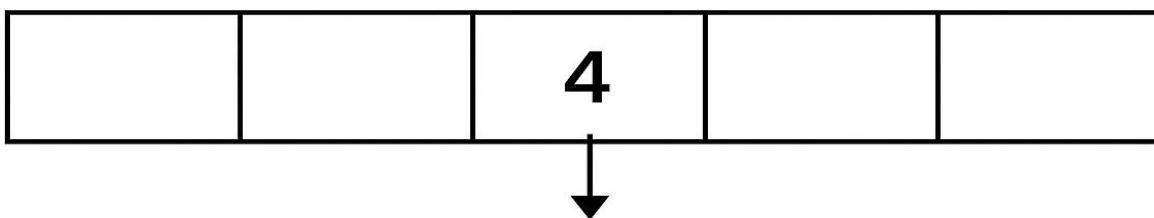
- Fixed size → cannot grow or shrink dynamically.
- Inserting or deleting elements in the middle requires shifting → inefficient.
- Only stores homogeneous data types.

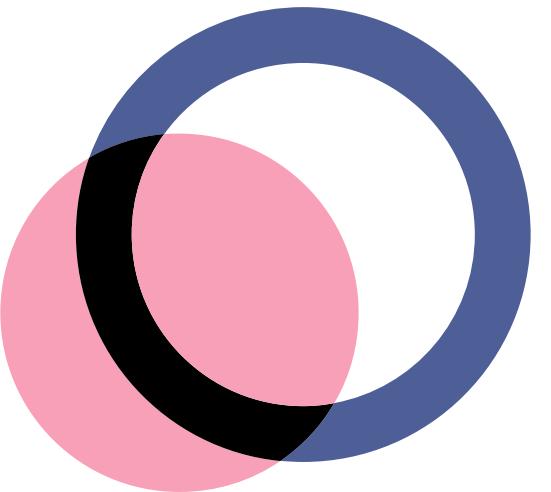
05: Examples

Insertion into Array



Deletion from Array





**THANK
YOU**

