# DATA STRUCTURES

IN C LANGUAGE

### INDEX

INTRODUCTION

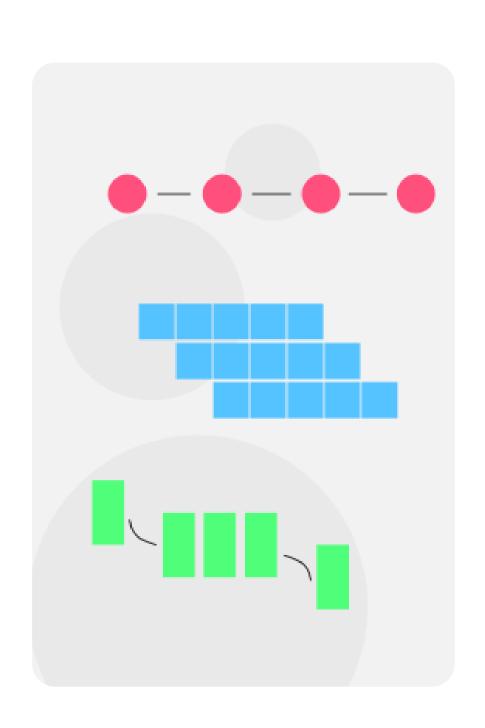
TYPES OF DATA STRUCTURES

WHY DATA STRUCTURES

**EXAMPLES** 

**EXERCISES** 

### INTRODUCTION TO DATA STRUCTURES



In essence, data structures refer to the organization of data. They provide a means to handle large amounts of data and perform operations on this data.

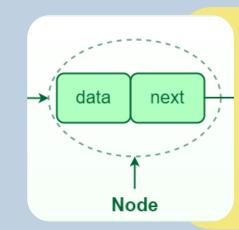
It's as straightforward as that!

### TYPES OF DATA STRUCTURE

#### ARRAYS

Arrays store elements in contiguous memory locations.



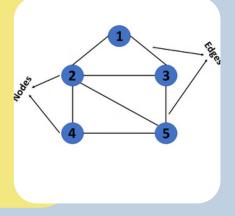


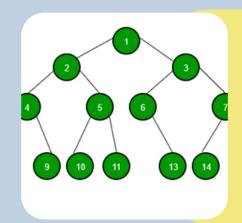
#### LINKED LIST

Linked lists are linear and contain nodes that hold the data.

#### GRAPH

A graph consists of a set of nodes (vertices) connected by edges.





#### BINARY TREE

A binary tree is a hierarchy in which each node has at most two children.

# WHY DATA STRUCTURES

# WHY NOT?

### GET TO WORK!