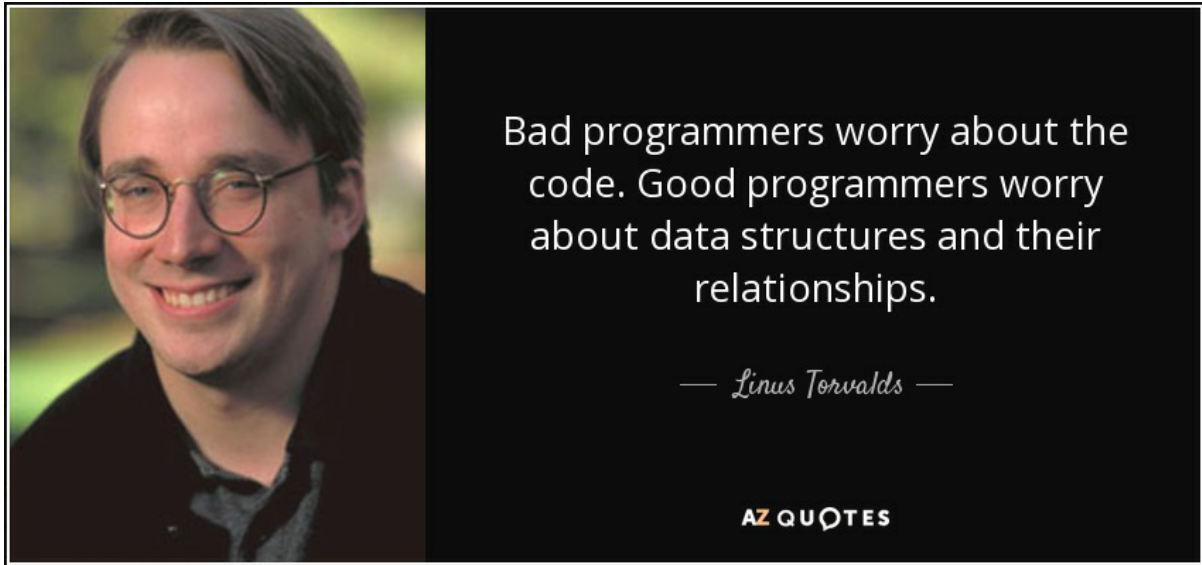


DATA STRUCTURES



WHAT ARE DATA STRUCTURES?

Data Structures is the way for store and organize data so that it can be used efficiently.

DIFFERENT TYPES OF DATA STRUCTURES:

1. Linear:

Elements are organized sequentially or linearly.

Elements are present in a single level.

Can be traversed completely in a single run.

Eg:

Array

Linked List

Stack

Queue

2. Non-linear

Elements are organized hierarchically or non-linearly.

Elements are present in multiple levels.

Needs multiple runs to be traversed completely.

Eg:

Tree

Graph

Hashing

APPLICATIONS OF DATA STRUCTURES:

1. Movie Ticket Booking
2. Music Player
3. Web Browser
4. Operating System Scheduling
5. Print Queue
6. Google Map
7. Facebook

Data Structure	Applications
Arrays	Ticket Booking, Representing images
Linked List	Dynamic memory allocation, Music player, Symbol table, Multiplayer game turn changing
Stack	Web Browsers, Undo/Redo,
Queue	Operating System scheduling, Print Queue
Tree	Routing algorithms, File System organization, Google Map
Graph	Computer Networks, Facebook friends list
Hashing	Database indexing