DATA STRUCTURES IN C++
(Quick Recap)

Data Structure Decision Diagram

- The following diagram gives you the direction to which data structure to use in C++ according to the problem you are trying to solve

Note: I don't have the source of this diagram. If you know it, please drop me a msg so I can add it here.

Arrays

- Fixed-size collection of elements of the same type

- Stored in **contiguous memory**

- Declared with syntax: **type arrayName[size]**

  Example:

  `int numbers[5]`

- Can also be initialized at declaration:

  `int arr[3] = {1 ,2, 3}`

- Cannot resize after declaration

- Size can be calculated by **sizeoff(arr) / sizeof(arr[0])**

- stdlib provides **std::array<type, size>**

- **Example:**

  `std::array<int, 3> a = {1, 2, 3};`

Arrays (vectors)

- std::vector is a sequence container that encapsulates dynamic sized arrays*

Linked List

- desc

Stack

- desc

Queue

- desc

Heap

- desc

Hash Table

- desc

Tree

- desc