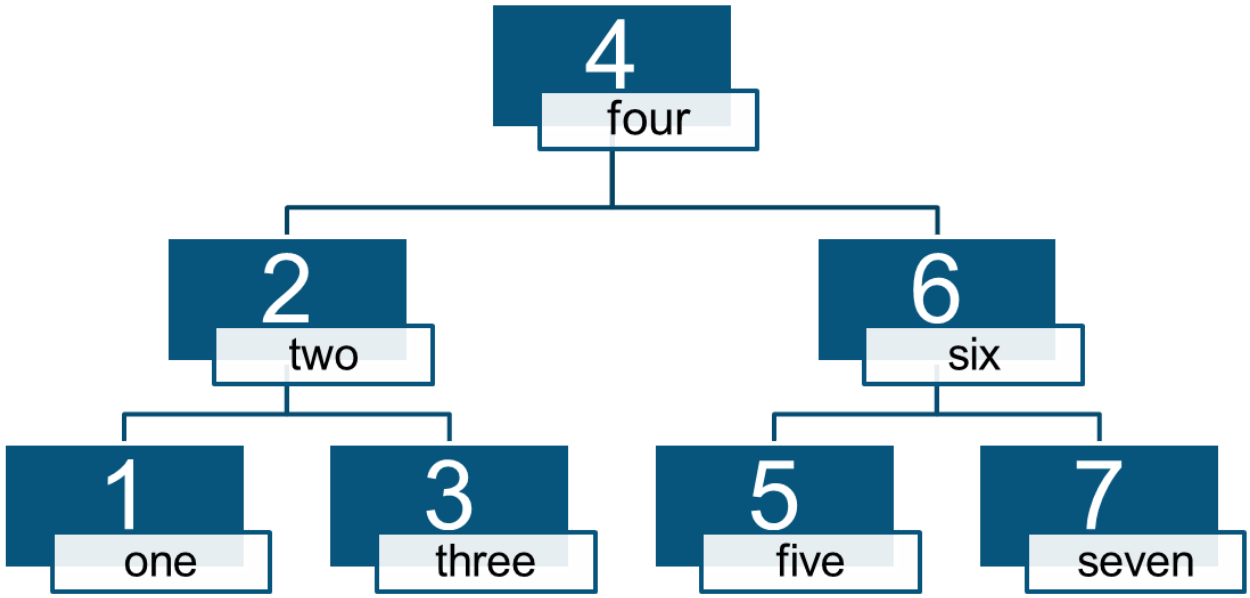
Maps

Now, we shall look at the features of std::map which make it such a popular container.



Key-Value pairs in std::map

`std::map` is by far the most frequently used associative container. The reason is simple; It combines adequate(https://www.educative.io/collection/page/10370001/5128982204776448/5935479880941568) with a very convenient interface. We can access its elements via the index operator. If the key doesn't exist, `std:map` creates a key-value pair. For the value, the default constructor is used.

> 🔦 **Consider `std::map` as a generalization of `std::vector`**
> Often, `std::map` is called an associative array because `std::map` supports the index operator like a sequential container. The subtle difference is that its index is not restricted to a number like in the case of

> `std::vector`. Its index can be almost any arbitrary type.
>
> The same observations hold for its namesake `std::unordered_map`.

In addition to the index operator, `std::map` supports the `at` method.The compiler checks the `at` function to make sure it is not out of bounds. So if the request key doesn't exist in the `std::map`, an `std::out_of_range` exception is thrown.

In the next lesson, we'll analyze some code to better understand this concept.