

# Unordered Map

Unordered map is similar to `maps` except that it is `unordered` and there is no sorting of keys. Internally, unordered map is implemented using Hash Table, the key provided to map is hashed into indices of a hash table which is why the performance of data structure depends on the hash function a lot but on average, the cost of `search, insert, and delete` from the hash table is  $O(1)$ .

In the worst case, its time complexity can go from  $O(1)$  to  $O(n)$ , especially for big prime numbers. In this situation, it is highly advisable to use a map instead to avoid getting a TLE(Time Limit Exceeded) error.

1. To use an unordered map, you have to include the 'unordered\_map' header file

```
#include <unordered_map>
```

2. The syntax to declare an unordered map is:

```
std::unordered_map<key_type, value_type> name;
```