Hashing STL

Standard template library has two containers for hashing.

1. Map
   Maps are containers which store elements by mapping their value against a particular key. Key values are used to uniquely identify the elements mapped to it.
   a. The data type of key value and mapped value can be different.
   b. Elements in the map are always in sorted order by their corresponding key.
2. Unordered_map
   Unordered_maps are containers which store elements by mapping their value against a particular key. Key values are used to uniquely identify the elements mapped to it.
   a. The data type of key value and mapped value can be different.
   b. Elements in the unordered_map are not sorted by their corresponding key.

Difference between map and unordered_map:

Operation	Map	Unordered_map
Insertion	O(log(n))	O(1)
Accessing	O(log(n))	O(1)
Implementation	Red-black trees	Hash tables (array of buckets)

Declaration of

- Maps

  map<int,int> mp;

- Unordered_map

  unordered_map<int,int> mp;