

## → MAPS

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→ Initializing a Map

```
MAP <INT, STRING> m;
```

→ Inserting values in map

```
m[1] = "abc"; // O(log(m))
```

```
m[5] = "def";
```

```
m[2] = "ghi";
```

```
m[9] = "xyz";
```

→ Another way to insert value in a map

```
m.INSERT({7, "MANO"});
```

→ If we try to add the same key which already exists, it will replace the previous key.

```
m[a] = "Temp";
```

→ Printing size of a map

```
cout << m.size() << "\n";
```

→ Printing a map

```
for (auto &x : m)
```

```
{
```

```
    cout << x.first << " " << x.second << "\n";
```

```
}
```

→ FIND() function takes a key and returns an iterator corresponding to it, if there is no key corresponding to it, it returns end() iterator

```
auto it = m.find(10); // O(log(n))
```

```
if (it == m.end())
```

```
{
```

```
    cout << "NO VALUE" << "\n";
```

```
}
```

```
else
```

```
{
```

```
    cout << it->first << " " << it->second << "\n";
```

```
}
```

→ ERASE() function takes a key or iterator and removes that key-value pair if that exist.

```
m.erase(2);
```

→ CLEAR() clears the whole map

`m.CLEAR();`

NOTE: Map stores unique keys only, and are sorted according to their keys.