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STL

* **STL:**
  - STL (Standard Template Library).
  - It is not the part of original C++.
  - It is developed by programmers.

* **Pair:**
  - Pair < Type1, Type2 > name_of_pair;

  Ex:

  Pair < String, int > p;

  Methods of Pair creation:

  - P = make_pair("Rohit", 30);
  - P.first = "Rohit";
    P.second = 30;

  - We can implement pair by using class.

* **List:**
  - It is same as Linked List.
  - But here it is doubly linked list.

  - list < Type > name_of_list;

  Ex:

  list < int > l1;

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Operations:

- Push_back().
- Push_front().
- Pop_front().
- Pop_back().
- front().
- back().
- size().
- Empty().

* Set:

- It stores only unique element.
- It stores values in sorted order.
- Search, insert & delete → all can done in log(n) T.C.
- Set is implemented using AVL and Red Black Tree.

```
set <int> s;
s.insert(20);
s.insert(30);
```

* Unordered Set:

- It store unique ~~s~~ element.
- It store data in unordered way.

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⇉ It can do search, insert & delete in O(1).

⇉ It is implemented using Hashing.

* Map:

⇉ It store values in key-value pair.

key - value → Duplicate

Unique

key →	3	10	20
value →	2	3	2

⇉ key should be unique.

⇉ Search, insert, delete → log(n)

⇉ It is implemented using AVL & RB Tree.