STANDARD TEMPLATE LIBRARY (STL)

1. STL Container: Vector

```cpp
#include <iostream>
#include <vector>
using namespace std;
int main() {
 // create vector of int type
 vector<int> numbers {1, 2, 3, 4, 5};
 // print vector elements using ranged loop
 for (int number : numbers) {
 cout << number << " ";
 }
 return 0;
}
```

Output

1 2 3 4 5

2.STL Iterators

```cpp
#include <iostream>
#include <vector>
using namespace std;
int main() {
 // initialize vector of int type
 vector<int> numbers {1, 2, 3, 4, 5};
 // initialize vector iterator to point to the first element
vector<int>::iterator itr = numbers.begin();
 cout << "First Element: " << *itr << " "<<endl;
 // change iterator to point to the last element
 itr = numbers.end() - 1;
 cout << "Last Element: " << *itr;
 return 0;
}
```

Output

First Element: 1
Last Element: 5

3.STL Algorithm: Sorting

```cpp
#include <iostream>
#include <algorithm>
#include <vector>
using namespace std;
int main() {
```

```cpp
// initialize vector of int type
vector<int> numbers = {3, 2, 5, 1, 4};  // sort vector elements in ascending order
sort(numbers.begin(), numbers.end());  // print the sorted vector
for (int number : numbers) {
cout << number << " ";
}
return 0;
}
```

Output

1 2 3 4 5