Institute of Computer Technology

B. Tech. Computer Science and Engineering

Sub: ESFP – II

Practical -14

AIM: To learn about STL in C++.

Q.1. Mr. Omprakash want to accept n numbers of element from user in arraylist, and at the same he wants to show all the element of arraylist in list. So, write the appropriate C++ program for achieve the concept of arraylist and list through STL.

Input : 1,2,3,4,5,6 [in arraylist]
Output : 1,2,3,4,5,6 [in list]

Q.2. Mr.Rupesh Malhotra, want to perform some operations through STL in C++ program, In vector he stores 10 number from user. Now, perform following operation in vector with the help of below given STL function.

size(): It will shows numbers of elements.
push_back() : Append / add an element to the end of list.
pop_back() : Erase the last element.
begin() : Provide reference to last element.
end() : Provide reference to end of vector.

Post Practical Task

1. Make a C++ program, where you have to perform stack and queue concept through STL.

[Follow the following instruction]

1. Insert element in stack and Queue
2. Append element in Stack and Queue
3. Delete element from stack and Queue.

2. Make a program in C++, where you have to insert element in the format of key and value pair in map. Perform the following below given operation.

1. insert element
2. modify element
3. delete element

Q.3. find the output:

```
#include <vector>
#include <algorithm>
#include <iostream>

using namespace std;

int main()
{
	vector<int> v(10, 2);
	if (all_of(v.cbegin(), v.cend(), [](int i){ return i % 2 == 0; }))
	{
		cout << "Even Number";
	}
	else
	{
		cout << "Odd Number";
	}
	return 0;
}
```

a) Even Number.
b) All numbers are not even
c) Error
d) Segmentation fault

4. find the output of program.

```
#include <vector>
#include <algorithm>
#include <iostream>

using namespace std;

int main()
{
	vector<int> v;
	for(int i=0;i<10;i++)
		v.push_back(i+1);
	for(int i=0;i<10;i++)
		cout<<v[i]<<" ";
```

```
        cout<<endl;
        random_shuffle(v.begin(), v.end());
        for(int i=0;i<10;i++)
                cout<<v[i]<<" ";
        return 0;
}
```

a.

1 2 3 4 5 6 7 8 9 10
5 4 8 9 1 6 3 2 7 10

b.
1 2 3 4 6 7 8 9 10 11
5 6 7 8 9 3 2 1 4 10

C. None of the above.