# Department of Computing

**CS250: Data Structure and Algorithms**

**Class: BSCS-6C**

**Lab 12: Standard Template Library (STL)**

**Date: 29th December 2017**

**Time: 0900 to 1200**

# Instructor: Mr. Abid Rauf

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**Lab 12 STL**

**Introduction**

In this lab, you will be introduced to what is necessary to implement using STL.

**Objectives**

Objective of this lab is to get familiar with implementation of function in STL.

**Tools/Software Requirement**

Visual Studio C++

**Description**

We will use any of the library functions and use the appropriate data structure to implement it. The following example is for library functions of stack in STL.

**Stack constructors**

**Syntax:**

#include stack();

stack();

stack( const Container& con );

Stacks have an empty constructor and a constructor that can be used to specify a container type.

**Syntax:**

#include stack();

#include bool empty() const;

The empty() function returns true if the stack has no elements, false otherwise.

For example, the following code uses empty() as the stopping condition on a while loop to clear a stack and display its contents in reverse order:

Stack<int> s;

for( int i = 0; i < 5; i++ )

{

s.push(i);

}

while( !s.empty() )

{

cout << s.top() << endl;

s.pop();

}

**pop Syntax:**

#include <stack>

void pop();

The function pop() removes the top element of the stack and discards it.

**Lab Tasks**

**Task:** Implement Binary Search Using Standard Template Library (STL)

**Deliverable**

Students are required to upload the lab task on LMS before the deadline. Compile a single Word document by filling in the solution/answer part and submit this Word file on LMS.

This lab is graded. Min marks: 0. Max marks: 10.