U10P32002 Spring 2021

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**◎ Problem Description**

In this assignment, we are going to write a C++ program files(dse\_assign03.cpp”and text file with code also included), we will need to finish the implementation of the parking-lot simulation. . These program needs to use software tool for implementation of the list of assignment.We` used CodeBlocks (IDE).

**◎ Goals**

This assignment is designed to help understanding and mastering the use of C++ header files, basic C++ syntax, and stream-based I/O. By successfully completing this assignment we could master the following outcomes:

* **Understanding the of basic C++ syntax.**
* **By using basic C++ we learn implementation of control structures.**

The Standard Template Library (STL) is a [software library](https://en.wikipedia.org/wiki/Library_(computer_science)) for the [C++](https://en.wikipedia.org/wiki/C%2B%2B) programming language that influenced many parts of the [C++ Standard Library](https://en.wikipedia.org/wiki/C%2B%2B_Standard_Library). It provides four components called [*algorithms*](https://en.wikipedia.org/wiki/Algorithm_(C%2B%2B)), [*containers*](https://en.wikipedia.org/wiki/Container_(data_structure)), [*functions*](https://en.wikipedia.org/wiki/Function_object), and [*iterators*](https://en.wikipedia.org/wiki/Iterator).

The STL provides a set of common [classes](https://en.wikipedia.org/wiki/C%2B%2B_classes) for C++, such as containers and [associative arrays](https://en.wikipedia.org/wiki/Associative_array), that can be used with any built-in type and with any user-defined type that supports some elementary operations (such as copying and assignment). STL algorithms are independent of containers, which significantly reduces the complexity of the library.

Stacks are a type of container adaptors with LIFO(Last In First Out) type of working, where a new element is added at one end and (top) an element is removed from that end only.  Stack uses an encapsulated object of either [vector](https://www.geeksforgeeks.org/vector-in-cpp-stl/)or [deque](https://www.geeksforgeeks.org/deque-cpp-stl/)(by default) or [list](https://www.geeksforgeeks.org/list-cpp-stl/)(sequential container class) as its underlying container, providing a specific set of member functions to access its elements.