

Lab 5 Vectors and Deques

UWYO COSC 2030

1 Lab: Vectors and Deques

Vectors and deques (pronounced 'decks') are two more data structures you may be using during this course. Vectors you can think of as dynamic arrays, deques are double ended queues.

- <http://www.cplusplus.com/reference/vector/vector/>
- <http://www.cplusplus.com/reference/deque/deque/>

2 Lab: Assignment

Using the C++ program Lab5.cpp and card.h on the website <https://classroom.github.com/a/pcX3rkiB> you will familiarize yourself with the two new data structures. First using vectors you will simulate building a deck of cards, using the supplied card.h file, shuffling the deck, and dealing yourself five cards. Once that is completed you will complete the same two functions from last week's lab, this time using a deque.

2.1 Vector

Finish the function buildAndDeal. You will build a standard 52 card deck with a vector. As you add the cards remember to change the suit and face. There are four suits: hearts, spades, diamonds, clubs. Faces include Ace, 2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen, King. Read through the card.h header file to know how a card is set up, and what variables it has. Read through the buildAndDeal function, the deal portion is already written for you, it will give you an idea of how to access the functions of the card struct once inside a vector.

2.2 Deque

Using a deque you will complete the parenCheck and stringReverse functions from the previous lab. Feel free to reference your code from last time.

3 Lab: Python Deques

This lab will introduce you to python deques, the functions essentially the same as C++ deques, though their function calls are different.

3.1 Intro to Python Deques

- <https://www.geeksforgeeks.org/deque-in-python/>

3.2 Lab: Assignment

Complete the supplied functions for rever and parenCheck, we have done these two functions before so refer to lab assignment 4 if you need a reminder. The point of redoing this is to help you get comfortable with python and its syntax.

4 Turn in on Github, must include a README.md with your name and lab section