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// CS264_Study_Material
// Created by Stephen O Brien on 27/11/2017.
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//

//Iterators\\

#include <iostream>
#include <vector>
using namespace std;

int main() {

    /* we declare a vector that takes integers.
    */
    vector<int> col;

    /* This next loop uses the built in function of
    "variable_name.push_back(int)", to push an
    integer onto the vector named "col". It then outputs the vector col slot at
    [i].
    */

    for (int i= 0; i<10; i++)
    {
        col.push_back(i);

        cout<<col[i]<<endl;
    }

    /* this next loop uses an iterator which needs to be declared in the for loop.
    It
    has a set of functions (begin and end) that can be used to determine the
    parameters
    of the vector.
    Under the current parameters, i will start at thhe beginning of the vector.
    It will keep running once i is not equal to the end of the vector (i!
    =col.end)
    and it increments i before it uses it.
    line 42 shows us that '*i' finds the value in the slot at vector [i]. we can
    actually manipulate this value at this point.
    */

    for (vector<int>::iterator i = col.begin(); i!=col.end();++i)
    {
        cout<<*i<<endl;
    }
    return 0;
}

```