

```
/*This programme allows the user to enter a sequence of numbers until 0 is entered then displays
them all*/
/* it does the same functionality as the code in L5D1.cpp but far more effeciently*/

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

int main() {

    vector<int> myvec; // declares an empty vector

    int x=1; // Initialise to get in the loop

    while (x) {

        cout << "Enter a number" << "\n";
        cin >> x;

        myvec.push_back(x); // Adds an element to the end of the vector

    }

    cout << "The numbers entered were: ";

    for (unsigned int i = 0; i < myvec.size(); i++) cout << myvec[i] << " ";

    system("pause");

    /*NOTE: a vector's head is allocated on the stack while all its data are
    allocated on the heap. If you want to allocate everything on the heap
    you should use "vector<int> *pmyvec=new vector<int>();" but it is
    unusual*/

}
```