

# Computer Laboratory - lab sheet 9

## Task 1

Copy the program given below. Save (as `dynamic.cpp`), compile and run it.

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

int main() {
    int *value, n;
    double mean, s;

    while(true) {
        cout << "How many elements (0 or negative int to exit): "; cin >> n;
        if(n<=0) break;

        value = new int[n]; // allocate
        cout << "Input " << n << " integers: ";
        s = 0.0;
        for(int i=0; i<n; i++){
            cin >> value[i];
            s = s + value[i];
        }
        delete [] value; // deallocate
        mean = s / n;
        cout << "Their mean is: " << mean << endl;
    }
}
```

## Task 2

Copy the program given below. Save (as `vector.cpp`), compile and run it.

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

int main() {
    vector<int> iv;
    int n;

    while(true) {
        cout << "Input value (0 to exit):";
        cin >> n;
        if (n==0) break;
        iv.push_back(n);
    }

    cout << "iv is:" << endl;
    for(unsigned i=0; i<iv.size(); i++)
        cout << iv[i] << " ";
    cout << endl;
}
```

## Task 3

Write a program to perform the following tasks:

1. Input an integer n.
2. Declare an integer vector x of size n.
3. Input the elements of x.
4. Output the sum of the positive input values to the user screen.

## Task 4

Write a program that inputs ten integer values from the keyboard. Each value should be pushed onto a vector. After inputting the values, remove from the vector any repetition of a value. Finally output the list of values that remain.