

## P22 2.3-4 插入排序递归算法

```
#include <iostream>

using namespace std;

template<class T>

void Insertion(T array[], int first, int last){

    int i = last - 1;

    T key = array[last];

    while (i >= 0 && array[i] > key){

        array[i + 1] = array[i];

        i--;

    }

    array[i+1] = key;

}

template<class T>

void RecursionInsertionSort(T array[], int first,int last){

    if (first < last){

        last = last - 1;

        RecursionInsertionSort(array, first, last);

        Insertion(array, first, last+1);

    }

}

int main(){

    int n;

    cout << "输入数组长度: " << endl;

    cin >> n;

    int *arrays = new int[n];

    cout << "输入数组的各个数字: " << endl;

    int j = 0;

    while (j < n){

        cin >> arrays[j];

        j++;

    }

    RecursionInsertionSort(arrays, 0, n - 1);

    j = 0;

    while (j < n){

        cout << arrays[j] << " ";

        j++;

    }

}
```

```
cout << endl;  
delete arrays;  
return 0;  
}
```