# P22 2.3-5 二分查找递归算法

```
#include <iostream>
#include <string>
using namespace std;
template < class T >
int BinarySearch(T array[],int first, int last, T value){
  if (first <= last){
    int mid = (first+last) / 2;
    if (array[mid] > value){
      return BinarySearch(array, first, mid - 1, value);
    }
    else if (array[mid] < value){
      return BinarySearch(array, mid + 1, last, value);
    }
    else{
      return mid;
    }
  }
  else{
    return -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++;
  }
  cout << "输入要查找的数字：" << endl;
  int number;
  cin >> number;
  int v = BinarySearch(arrays,0, n-1, number);
  cout << v << endl;
```

```
    delete arrays;
    return 0;
}
```