#include <iostream>  
#include <vector>  
  
  
template<typename T>  
  
class VectorOperations{  
public:  
 T findMax(std::vector<T>& vec){  
 T max=vec[0];  
 for(int i=1; i<vec.size();i++ ){  
 if(max<vec[i]){  
 max=vec[i];  
 }  
 }  
 std::cout<<"Max is:"<< max<<std::endl;  
 }  
  
 T findMin(std::vector<T>& vec){  
 T min=vec[0];  
 for(int i=1; i<vec.size();i++ ){  
 if(min>vec[i]){  
 min=vec[i];  
 }  
 }  
 std::cout<<"Min is:"<<min<<std::endl;  
 }  
  
 void sortVector(std::vector<T>&vec){  
 T key;  
 int j;  
 for (int i=1;i<vec.size(); i++){  
 key=vec[i];  
 j=i-1;  
 while(j>=0 && vec[j]>key){  
 vec[j+1]=vec[j];  
 j-=1;  
 }  
 vec[j+1]=key;  
 }  
 }  
  
 void elemReplace(std::vector<T>& vec){  
 T newElem = vec[0];  
 std::cout<<"Please, enter new element:"<<" ";  
 std::cin>>newElem;  
 T repElem=vec[0];  
 std::cout<<"Please, enter elem to replace:"<<" ";  
 std::cin>>repElem;  
 for(int i=0; i<vec.size();i++){  
 if (repElem==vec[i]){  
 vec[i]=newElem;  
 }  
 }  
 }  
 void binarySearch(std::vector<T>& vec) {  
 T key;  
 std::cout << "Please, enter the key element:" << " ";  
 std::cin >> key;  
 bool flag = false;  
 T l = vec[0];  
 T r = vec.size()-1;  
 T mid;  
  
 while ((l <= r) && (flag != true)) {  
 mid = (l + r) / 2;  
 if (vec[mid] == key)  
 flag = true;  
 if (vec[mid] > key)  
 r = mid - 1;  
 else  
 l = mid + 1;  
 }  
 if (flag)  
 std::cout << "Elemets' index is:" << mid << "in vector";  
 else  
 std::cout << "Can's find the element" << std::endl;  
 }  
  
  
 void printVector(std::vector<T>& vec){  
 for(int i=0; i<vec.size();i++){  
 std::cout<<vec[i]<<" ";  
 }  
 std::cout<<std::endl;  
 }  
};  
  
  
int main() {  
 std::vector<int> g**{**1,2,3,4,5,6,7,8**}**;  
 std::vector<double>g1**{**1.2,3.4,3.5,6.7,7.4,9.0,0.0**}**;  
 VectorOperations<int> vo;  
 vo.printVector(g);  
 vo.findMax(g);  
 vo.findMin(g);  
 VectorOperations<double> vo1;  
 vo1.findMax(g1);  
 vo1.findMin(g1);  
 vo1.sortVector(g1);  
 vo1.printVector(g1);  
 vo.elemReplace(g);  
 vo.printVector(g);  
 vo1.sortVector(g1);  
 vo1.printVector(g1);  
 vo1.binarySearch(g1);  
}

Вывод:

/Users/apple\_mac/CLionProjects/untitled3/Letsrepeate/cmake-build-debug/Letsrepeate

1 2 3 4 5 6 7 8

Max is:8

Min is:1

Max is:9

Min is:0

0 1.2 3.4 3.5 6.7 7.4 9

Please, enter new element: 66

Please, enter elem to replace: 4

1 2 3 66 5 6 7 8

0 1.2 3.4 3.5 6.7 7.4 9

Please, enter the key element: 3.4

Elemet's index is:2in vector

Process finished with exit code 0