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SE-C Comp, Viit, Pune

CODE:

```
/*  
*  
* @RajvaibhavRahane  
*/  
  
#include<iostream>  
using namespace std;  
#define SIZE 9  
int ternarySearch(int *arr,int element,int size){  
    int ub=size-1,lb=0,mid1,mid2;  
    while(lb<=ub){  
        //cout<<lb<<" "<<ub<<endl;  
        mid1=lb+(ub-lb)/3;  
        if(arr[mid1]==element)  
            return mid1;  
        mid2=ub-(ub-lb)/3;  
        if(arr[mid2]==element)  
            return mid2;  
        if(arr[mid2]<element)  
            lb=mid2+1;  
        else if(arr[mid1]>element)  
            ub=mid1-1;  
        else{  
            lb=mid1+1;ub=mid2-1;  
        }  
    }  
    return -1;  
}  
int main(){  
    int arr[]={9,10,11,23,33,45,46,67,78};  
  
    for(int i=0;i<SIZE;i++)  
        cout<<ternarySearch(arr,arr[i],SIZE)<<" ";  
    cout<<endl;  
    return 0;  
}
```

Output:

```
rajrahane@visraj-lenovo-g500: ~/Desktop/c++/Lab1/FDS/Search
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/FDS/Search$ ./ternarySearch
0
1
2
3
4
5
6
7
8
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/FDS/Search$ ./ternarySearch
0
1
2
3
4
5
6
7
8
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/FDS/Search$ g++ -o ternarySearch ternarySearch.cpp
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/FDS/Search$ ./ternarySearch
0 1 2 3 4 5 6 7 8
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/FDS/Search$
```