#include <time.h>

#include <iostream>

#include<algorithm>

using namespace std;

int binarysearch(int ra[999],int size,int searchingvalue) //called function

{

sort(ra,ra+size+1); //array must be sorted in BINARY SEARCH otherwise use sort funtion

int low=0;

int high=size-1;

int mid;

while(low<=high)

{

mid=(low+high)/2;

if(searchingvalue==ra[mid])

{

return mid;

}

else if(searchingvalue>ra[mid])

{

low=mid+1;//update low

}

else

{

high=mid-1;

}

}

return -1;

}

/\* function main begins program execution \*/

int main(void)

{

int a[999];

int uservalue; int n;

cout<<"Enter the value of last index";

cin>>n;

for (int i = 1; i <=n; i++) {

/\* pick random number from 1 to 1000 and output it \*/

a[i]=(rand() % 1000);

cout<<a[i];

cout<<endl;

} /\* end for \*/

/\* indicates successful termination \*/

cout<<"\nEnter the searching value=";

cin>>uservalue;

int result=binarysearch(a,n,uservalue); //passing array calling

clock\_t start = clock(); //TIMER FUNCTION

if(result>=0)

{

cout<<"\n\nThe no="<<a[result]<<"was found at the element with index ="<<result<<endl;

}

else

{

cout<<"Number was not found"<<endl;

}

clock\_t stop = clock();

double elapsed = (double)(stop - start) \* 1000.0 / CLOCKS\_PER\_SEC;

cout<<"Time elapsed in ms: "<< elapsed;

getchar();

getchar();

return 0;

}