# Interpolation Search using Arrays

**Code**

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| #include <iostream>  using namespace std;  //Function to perform interpolation Search  int interpolationSearch ( int A[] , int n, int e)  {  int start, end , pos;  start= 0;  end = n-1;  while( start<=end && e>=A[start] && e<=A[end])  {  pos = start + (((double)(end-start)/(A[end]-A[start]))\*(e-A[start]));  if (A[pos] == e)  return pos;  if (e > A[pos])  start = pos + 1;  else  end = pos-1;  }  return -1;  }  int main()  {  int n,i,e;  cout<<"enter number of elements\n";  cin>>n;  int A[n];  cout<<"enter elements\n";  for(i=0;i<n;i++)  cin>>A[i];  cout<<"Enter element to be searched\n";  cin>>e;  //interpolation search function call  int index = interpolationSearch(A, n, e);  if(index != -1)  cout<<"found at index:"<<index;  else  cout<<"Not Found.";  return 0;  } |

**Output**

