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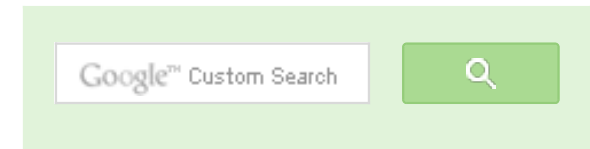| **Home**	**Algorithms**	**DS**	**GATE**	**Interview Corner**	**Q&A**	**C**	**C++**	**Java**	**Books**	**Contribute**	**Ask a Q**	**About**
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Interpolation search vs Binary search

Interpolation search works better than Binary Search for a sorted and uniformly distributed array.

On average the interpolation search makes about log(log(n)) comparisons (if the elements are uniformly distributed), where n is the number of elements to be searched. In the worst case (for instance where the numerical values of the keys increase exponentially) it can make up to O(n) comparisons.

Sources:

http://en.wikipedia.org/wiki/Interpolation_search

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- Remove minimum elements from either side such that 2*min becomes more than max
- Divide and Conquer | Set 6 (Search in a Row-wise and Column-wise Sorted 2D Array)
- Bucket Sort
- Kth smallest element in a row-wise and column-wise sorted 2D array | Set 1
- Find the number of zeroes
- Find if there is a subarray with 0 sum
- Divide and Conquer | Set 5 (Strassen's Matrix Multiplication)
- Count all possible groups of size 2 or 3 that have sum as multiple of 3

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salilag · a month ago

check this http://www.queryhome.com/39879...

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a short useful note on interpolation search.
http://data.linkedin.com/blog/...

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Happy Coding :)

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abhishek08aug · a year ago

Intelligent :)

```
/* Paste your code here (You may delete these lines if not writing co
```

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coder · a year ago

Can you please explain how is the complexity O(log log n) ....
Also, please explain these lines of the code gievn at the wikipedia page :
if (sortedArray[low] == toFind)
return low;
why do we need to check this condition after coming out of the while loop ??

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Poorna Durga Yeddu · a year ago

What is uniformly distributed array?

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http://en.wikipedia.org/wiki/Uniform_distribution_(discrete)

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So, that is the probability of occurrence of every key is same.

1 ⌃ | ⌄ ·

Avinash · a year ago

[sourcecode language="C++"]

//interpolation search

```c
#include <stdio.h>
#include <iostream>
using namespace std;

#define SIZE 10

bool InterpolationSearch(int array[SIZE], int low, int high, int toFind,int size){
int mid;

while(array[low]<=toFind && array[high]>=toFind){
mid= low + ((toFind-array[low])*(high-low))/(array[high]-array[low]);
if(array[mid]==toFind){
return true;
}
else if(array[mid]>toFind){
high=mid-1;
```

see more

∧ | ∨ ·

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