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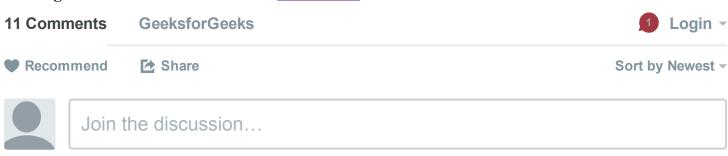
Sources:
http://en.wikipedia.org/wiki/Interpolation_search

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Goku · 9 months ago

Code for interpolation Search using C

http://ideone.com/N2DnX8

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sooraj · a year ago

Please explain the complexity log(log(n))..!!

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salilag · a year ago

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

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Priyanshu · 2 years ago

a short useful note on interpolation search.

http://data.linkedin.com/blog/...

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    Priyanshu ↱ Priyanshu · 2 years ago

    Happy Coding :)

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abhishek08aug · 2 years ago

Intelligent :)

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

|

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coder · 2 years 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 · 2 years ago

What is uniformly distributed array?

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GeeksforGeeks → Poorna Durga Yeddu · 2 years ago

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

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Poorna Durga Yeddu → GeeksforGeeks · 2 years ago

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

1 ∧ | ∨ • Reply • Share ›

Avinash · 2 years ago

[sourcecode language="C++"]

//interpolation search

#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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