

Re: Search Algorithm

Source: <http://linux.derkeiler.com/Mailing-Lists/Debian/2004-11/1709.html>

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Date: 11/15/04

To: debian-user@lists.debian.org

Date: Mon, 15 Nov 2004 14:10:10 -0800

On Mon, 2004-11-15 at 12:09 -0800, Sergio Basurto Juarez wrote:

- > *First of all thanks for the note, I think I will use a*
- > *Hashing Table as some one suggest here, becuase in*
- > *this case seems to be more suitable for the problem,*
- > *why am so worry about speed, is becuase is a web*
- > *application in php, and it takes to long with the*
- > *binarysearch algorithm, nevertheless I am testing the*
- > *same with Hashing Tables and it suits to what I am*
- > *looking in time consuming.*
- >
- > *Also I was wondering if there were some magic equation*
- > *that do the trick without hashing tables, but I think*
- > *the time that will take me to find some one is too*
- > *much so I will use hashing tables meanwhile.*
- >
- > *Thanks again.*

The binary search is $O(\log n)$ which is quite fast. It reduces your problem by half on each iteration (divide and conquer). The problem is the sort. You haven't really specified enough about the problem to helpful. If you need fast search times then why use an array? You should be using some tree structure if you really want efficient search times. Obviously a good hash is going to be $O(1)$ depending on your collision handling.

In this case I would suggest a different language. It's not the algorithm itself but rather the language. Try coding this part in a different language. Even Perl will me much faster. The STL is the way to go these days. Try using a vector with the STL sort and find algorithms and you'll see it's very fast and probably meets the speeds of a hash in PHP.

Don't get me wrong, I'm not bashing PHP. It's just that it wasn't designed for intense algorithmic purposes. The web is very flexible and mixing languages shouldn't be too difficult to do. I know Python does extending and embedding.

Debian-User: Re: Search Algorithm

Don't just look at the algorithm, look at the whole picture.

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