

Re: How to find the maximum sum of atleast L consecutive integers given a sequence of N integers.

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- *From:* Ben C <spamsam@xxxxxxxx>
 - *Date:* 20 Mar 2006 15:15:56 GMT
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On 2006-03-20, vb@xxxxxxxx <vb.here@xxxxxxxx> wrote:

Hi all,

How can we find the maximum sum of atleast L consecutive integers given a sequence of N integers.

The brute force approach of forming all possible length sequences at every index and finding their sum gives an $O(N^2)$ solution which is not desirable.

Could you do something like this:

1. Create a new sequence by replacing each run of adjacent positive integers with their sum and each run of adjacent negatives with their sum. Also create some kind of index so that each member of the new sequence can be mapped back to the start and end of the run it represents in the original sequence.
2. Find the highest adjacent sum in the new (shorter) sequence using your brute force method.
3. Using the index match this back to the original sequence. If the length of this sequence is $< L$, go back to step 2 looking for the next highest.

Just a thought, I haven't tried it.

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