

Spreadsor in C  
Source: <http://en.wikipedia.org/wiki/Spreadsor>  
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It is from the Wikipedia article "Spreadsor" dated 2009-06-01.  
Spreadsor is a sorting algorithm invented by Steven J. Ross in 2002.  
It combines concepts from distribution-based sorts, such as radix sort and bucket sort, with partitioning concepts from comparison sorts such as quicksort and mergesort. In experimental results it was shown to be highly efficient, often outperforming traditional algorithms such as quicksort, particularly on distributions exhibiting structure.



unsigned  
RoughLog2(DATATYPE input)

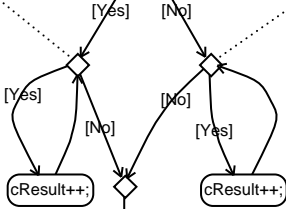
unsigned char  
cResult = 0;

The && is necessary on some compilers to avoid infinite loops, it doesn't significantly impair performance

«DecisionInput»  
input >= 0

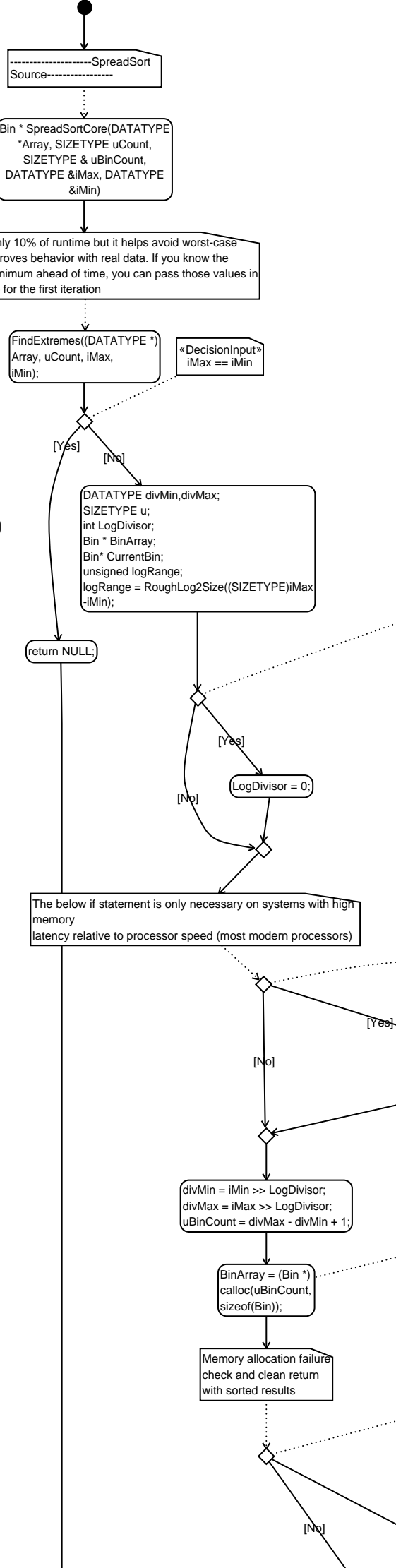
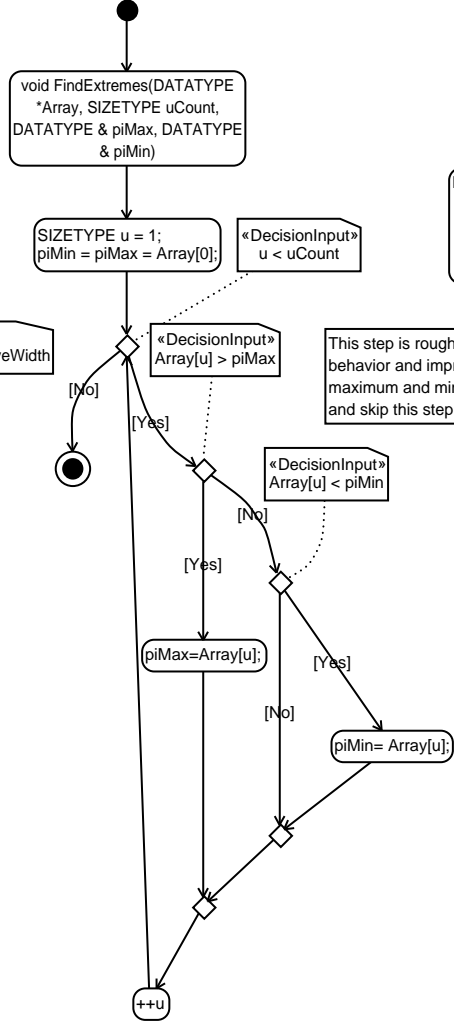
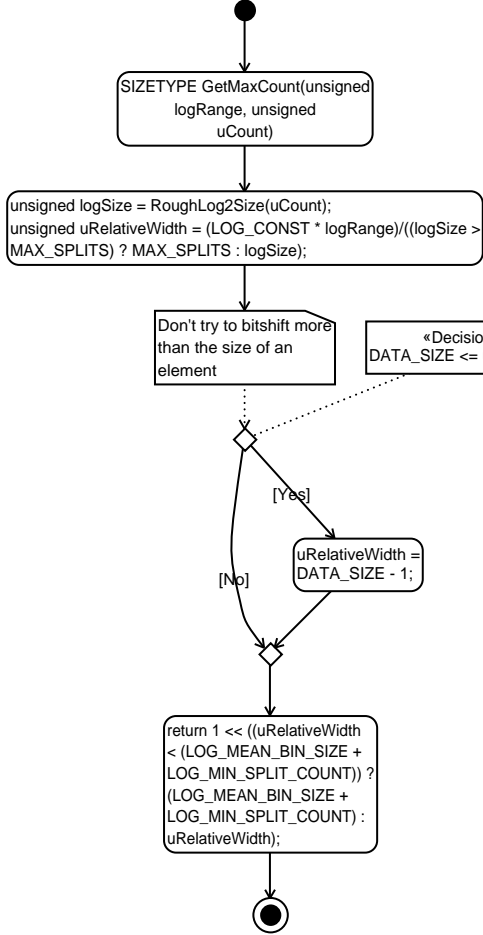
«DecisionInput»  
(input >> cResult) && (cResult < DATA\_SIZE)

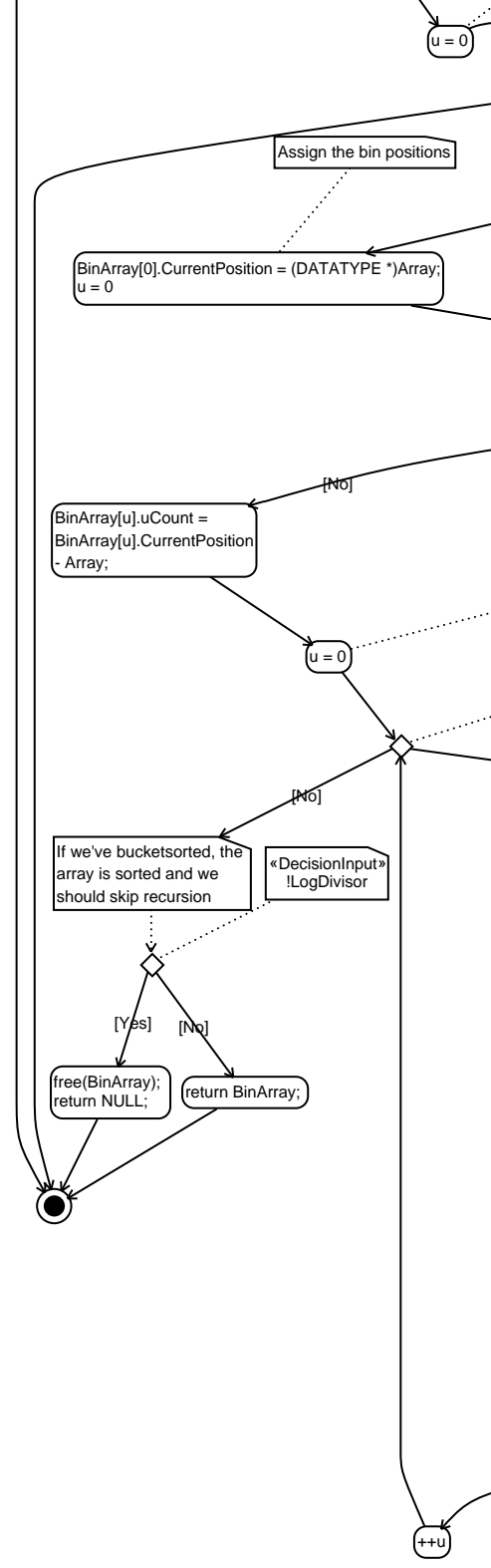
«DecisionInput»  
((input >> cResult < -1) && (cResult < DATA\_SIZE))

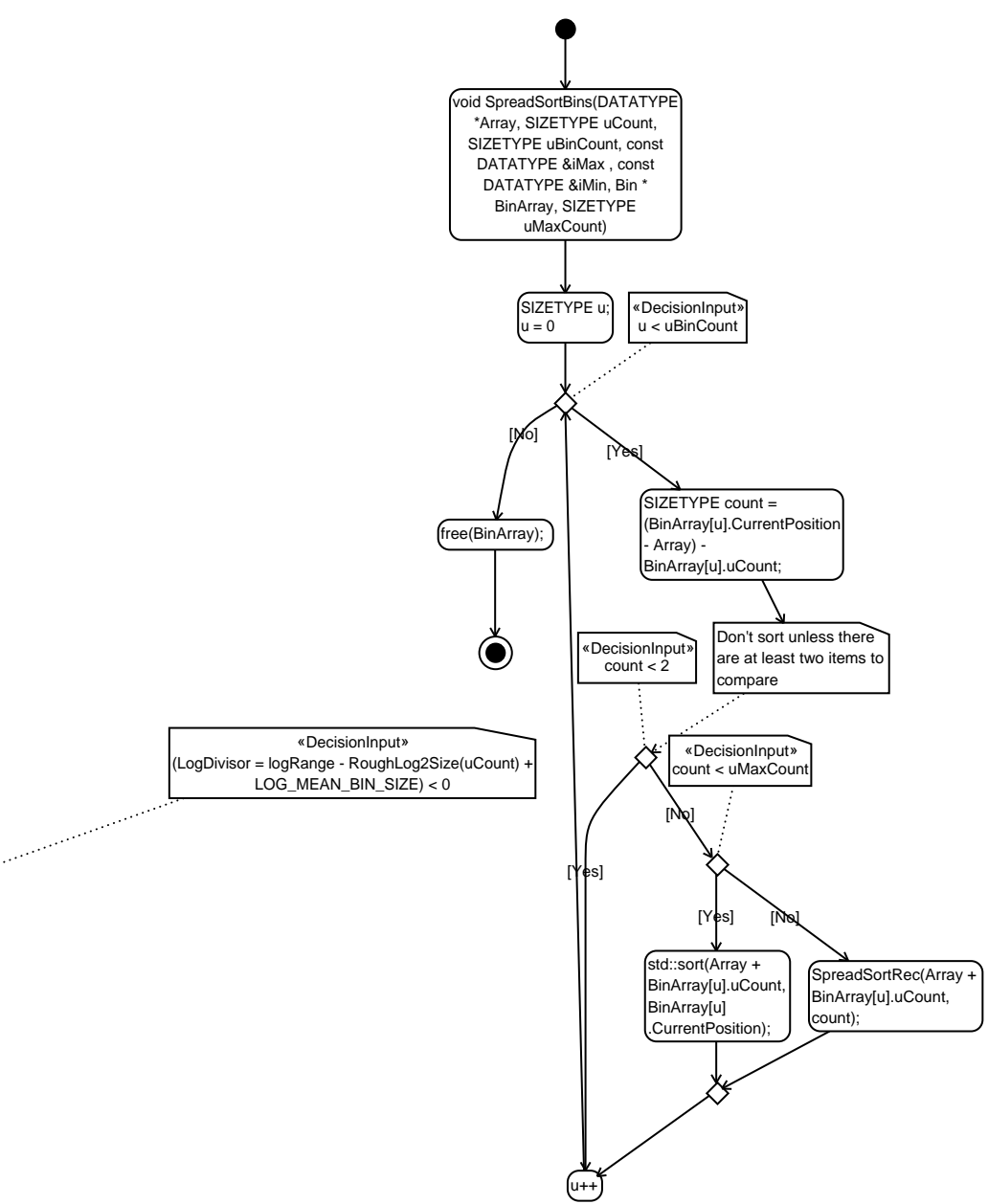


return cResult;









«DecisionInput»  
 $(\text{LogDivisor} = \log\text{Range} - \text{RoughLog2Size}(u\text{Count}) + \text{LOG\_MEAN\_BIN\_SIZE}) < 0$

«DecisionInput»  
 $(\log\text{Range} - \text{LogDivisor}) > \text{MAX\_SPLITS}$

LogDivisor = logRange - MAX\_SPLITS;

Allocate the bins and determine their sizes

«DecisionInput»  
 !BinArray

Calculating the size of each bin; this takes roughly 10% of runtime

«DecisionInput»  
 u < uCount

[Yes]

