Quicksort, iterative version
Source: http://en.wikipedia.org/wiki/Quicksort
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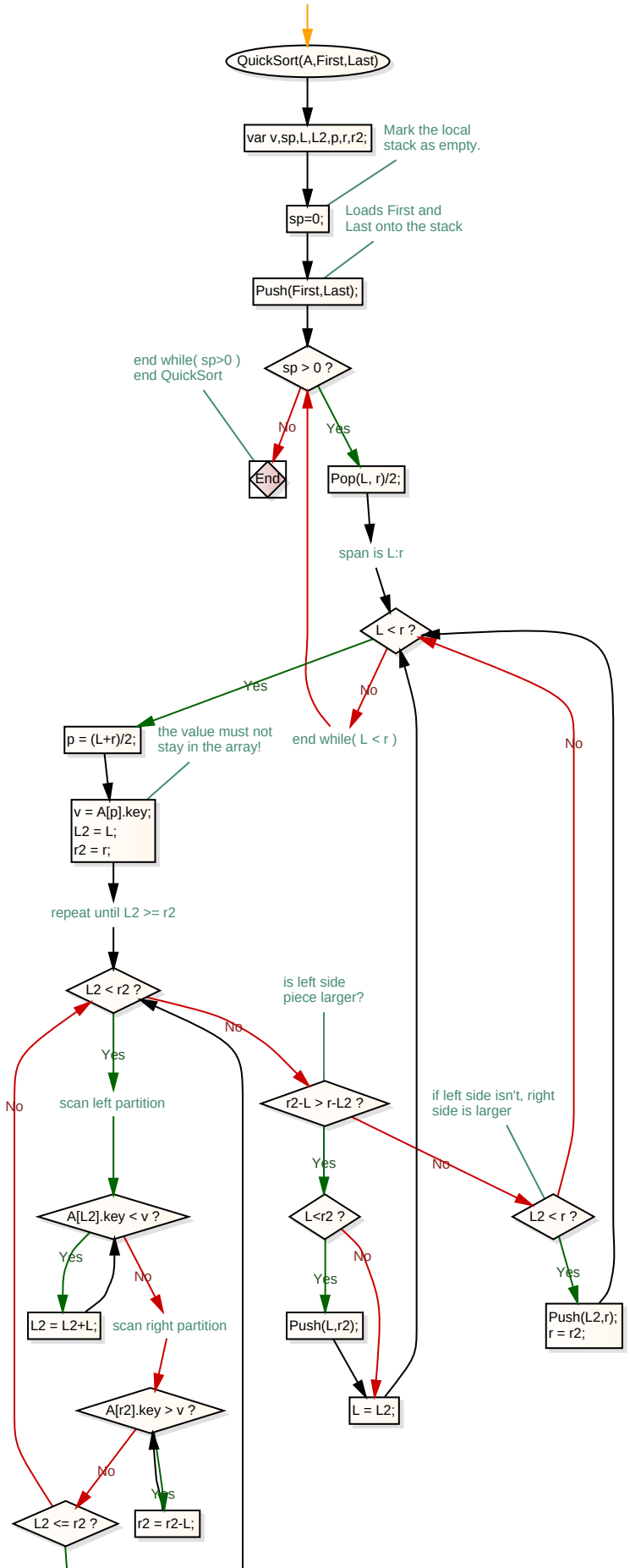
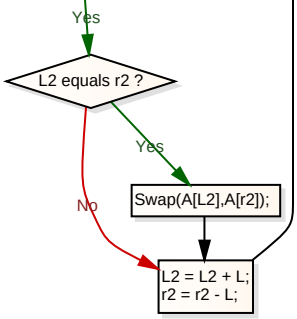
It is from the Wikipedia article "Quicksort" dated 2006-11-07.
Explicit recursion can be avoided using an iterative form of
quicksort that replaces the call stack by an explicit stack data
structure. The disadvantage is considerably greater complexity.
A is an array to be sorted for elements First to Last inclusive.
v is a variable of type corresponding to the sort key of array A.
sp is a stack pointer to a small local data structure used by Push and Pop.
something like local arrays SaveA(32), SaveB(32) of the same type as L and R,
where Push(x,y); means sp:=sp + 1; SaveA(sp):=x; SaveB(sp):=y;
and Pop(x,y); means x:=SaveA(sp); y:=SaveB(sp); sp:=sp - 1;
var L,L2,p,r,r2: longint; of a type equivalent to First and Last.




Yes
L2 equals r2 ?
Yes
No
Swap(A[L2],A[r2]);
L2 = L2 + L;
r2 = r2 - L;