scicsYung1995

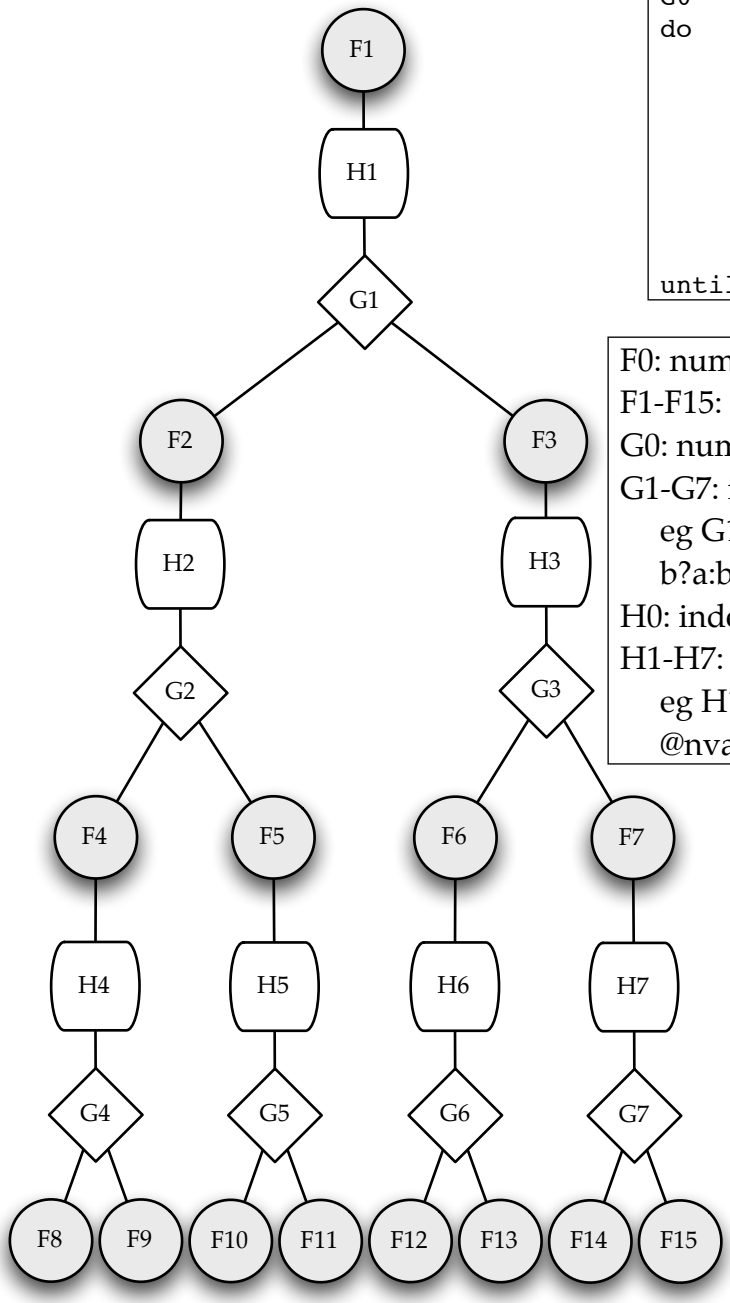
G1 (10 2 0) [G0<2?0:(G0<3?2:(F2>F3?2:3))]

	A	B	C	D	E	F	G	H
0	592	4681	1120	1609		15.00	15.00	
1	4704	81	4684	4683		11.00	2.00	0.00
2	2632	4682	8272	1610		12.00	4.00	0.00
3	1136	59952	4681	5705		10.00	7.00	0.00
4	49676	608	10320	587		100.00	8.00	1.00
5	1120	12289	6730	5706		45.00	11.00	0.00
6	8272	4704	59952	58368		30.00	13.00	0.00
7	4681	1	588			31.00	15.00	1.00
8	10320	4720	4720		7.00	91.00		
9	6730	624	57881			0.00		
10	59952	32769	2656			22.00		
11	2632	12896	61965			83.00		
12	61955	49706	63488			4.00		
13	2656	2672				56.00		
14	608	1136				3.00		
15	8272	49706				24.00		
16								
17								

arrow keys: to move
=: to change a value
ctrl-space: into ICS
END: out of ICS
r: run ICS, starting at address given by cursor
q: quit
ctrl-g: abort current operation

```
makeheap:
for i = 7 to 1
        if H[i] == false then
                swap F[G[i]], F[i]
        endif
endfor

output sort:
G0 = F0
do
        swap F[G0], F1
        G0--
        H0 = 1
        while 2 * H0 <= G0 && H[H0] == false do
                swap F[G[H0]], F[H0]
                H0 = G[H0]
        end while
until G0 == 1
```



F0: number of data items (literal)
F1-F15: array to be sorted (literal)
G0: number of data items yet to be sorted (literal)
G1-G7: index in the heap of the larger of the two children
    eg G1 = G0<2?0:(G0<3?2:(F2>F3?2:3))
    b?a:b = if b is true then a else b
H0: index of data item in heap-shift operation (literal)
H1-H7: local indicator for heap condition
    eg H1 = F1>@nval("F",G1)?1:0
    @nval(se,e) = numeric value of cell at column se, row e

```
The ICS memory map onto the spreadsheet is
such that the addressable locations map to
A0-A15, B0-B15, ....

A0=0:000, A1=0:001, A2=0:002... A7=0:007,
A8=0:010, A9=0:011, A10=0:012... A15=0:017,
B0=0:020, B1=0:021...
E0=0:100...
H0=0:160...
```