

TETRIS programming example

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 With reference to: <http://www.youtube.com/watch?v=JDnypVoQcPw>

```

800 ' Subroutine for testing a block collision.
801 ' Params: curx,cury,curblock,currotate
802 ' Output: collided
810 for by=0 to 3: for bx=0 to 3
820 if FNblock(curblock,currotate,bx,by)=0 then 860
830 x=curx+bx: y=cury+by
840 IF FNbound(x,y)=0 then 860 ' this is a short-form for GOTO btw.
850 if area(x,y) and 16 then collided=1: return
860 next bx,by: 'btw" is short-form for "by the way"; by the way
870 collided=0: return
    
```

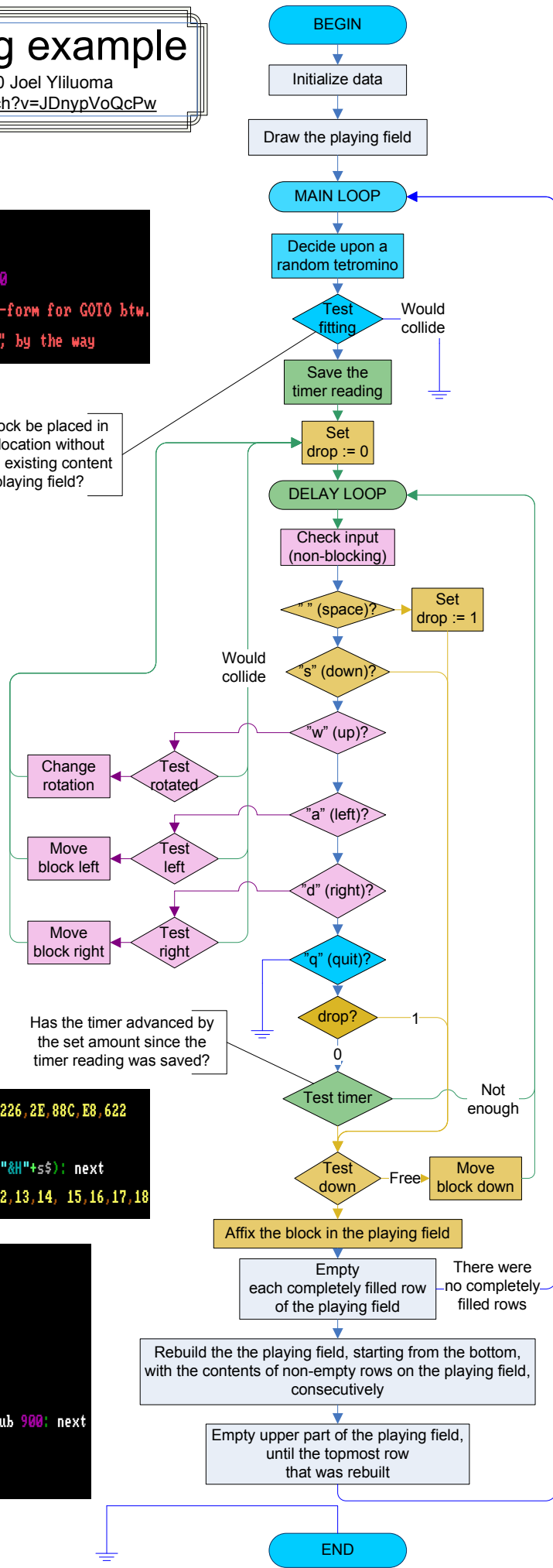
Can the block be placed in the given location without colliding on existing content of the playing field?

```

30 ' Define all distinct tetromino shapes as bitmasks
31 data CC,8C4,6C,4444,F0,264,C6,E4,4C4,4E0,464,8E,C88,E2,226,2E,88C,E8,622
32 rem e.g. 8C4 = 1000, 2E = 0010
33 rem      1100      1110
34 rem      0100      and so on.
35 dim shapes(18): for a=0 to 18: read s$: shapes(a)=val("&H"+s$): next
40 ' Define the mappings of block number -> block shape
41 data 0,0,0,0,1,2,1,2,3,4,3,4,5,6,5,6,7,8,9,10,11,12,13,14,15,16,17,18
45 dim indices(28): for a=0 to 27: read indices(a): next
    
```

```

400 ' Make full lines empty
410 for y=1 to 23
420 x=1: while x<=10 and area(x,y)>0: x=x+1: wend
421 empty=x\10
430 if empty then c=0: for x=1 to 10: gosub 900: next
440 next
450 ' Drop non-empty lines that are above empty lines
451 y=23: ' Target of next non-empty line = bottom
460 for source=23 to 1 step -1
465 x=1: while x<=10 and area(x,source)=0: x=x+1: wend
471 empty = x\10
480 if y(>source) then for x=1 to 10: c=area(x,source): gosub 900: next
490 if not empty then y=y-1
495 next
496 ' Clear the top in case it was not cleared yet
497 c=0
498 while y>1: for x=1 to 10: gosub 900: y=y-1: wend
    
```



Has the timer advanced by the set amount since the timer reading was saved?

Would collide

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Not enough

There were no completely filled rows