I read this code [1] on the old social networks of the Moscow mathematical society:

```
1  from math import gcd
2
3  h=m=p=0
4  d=f0=f3=n=q=1
5
6  while p**2 * (m-f0) < f3:
7      d=2*n*d-4*(-1)**n*h
8      n=n+1
9      g=gcd(n,q)
10     q=n*q/g
11     if g==1: p=p+1
12     m=0; g=q
13     while g>1:
14         g=g//2; m=m+d
15     h=f0
16     f0=2*n*h
17     f3=(2*n+3)*f3
```

It stops if $\zeta(s_0) = 0$ and s_0 is not a trivial zero, then $\mathrm{Re}(s_0) = \frac{1}{2}$ is false due to the condition imposed in line 6 with the inequality $\pi(n)^2(d(n)\ln(n) - f_0(n)) < f_3(n)$ which must be true for all n.

[1] Yuri Matiyasevich, The Riemann Hypothesis in computer science, 2020. https://doi.org/10.1016/j.tcs.2019.07.028.