```haskell
 1  #!/usr/bin/env ghc
 2
 3  -- the following error-provable roman czyborra space thesis
 4  -- ©©-by-sa czyborra@campus.tu-berlin.de 2013-10-30
 5  -- expresses that אל nature is governed by one tiny deterministic lex radicalis
 6  -- hereby creatively expressed in Y2K+13-human-graspable haskell formulae
 7  -- later definitely expressable less considerate and more mind-blowing
 8
 9  -- above all dedicated 2 alan & alfred from the turing & einstein tribes
10  -- who expressed major inspirations & harvested tragic obstacles
11  -- 2 studiendirektorin hellwig who taught us the ability 2 count is what counts
12  -- 2 professor penn-karras who memorizes all her math
13  -- 2 dietrich dörner for saying we have only understood what we can build by ourselves
14  -- 2 joscha bach for his αφορισμοσ that intelligence is motivated cognition
15  -- 2 olove hartmann who preached children must learn to walk backwards to learn math
16  -- & whom i miss the hardest due to his lonely drowning in this blind and ignorant hell
17
18  module Mature where
19
20  -- since max планк and his followers observed smallest quantum granularities
21  -- in natural effects and since it is considered radiometrically proven
22  -- that our universe must have been expanding ever since some urknall
23  -- and since konrad zuse conjectured in rechnender raum the concept of
24  -- digital physics that physique might just be digital information processing
25  -- the most likely initial space configuration is
26
27  urknall = [[['1']]]
28  test_0 = urknall
29
30  -- charles darwin and karl popper observed
31  -- that small evolutionary steps drive history
32
33  steps g0 step = g0 : steps (step g0) step
34  test_1 = take 11 (steps 1 (* 2))
35
36  -- wolfram researched finite sections of infinite
37  -- elementary 1-dimensional cellular automata
38  -- who map in single instruction multiple data parallelism
39  -- three neighboring cells into each new cell value
40
41  triples (a:b:c:d) = [a,b,c] : triples (b:c:d)
42  triples         _ = []
43  test_2 = triples "0110110"
44
45  -- wolfram found 2 αμφιχιραλ turing universal regulae
46  -- that do not generate ενεργεια 1 out of cold 000 namely
47  -- rule 124 is the universal expansion generation rule
48  -- rule 110 is the universal reflexion generation rule
49
50  update3cells  _   "000" = '0'
51  update3cells 124 "001" = '0'
52  update3cells 110 "100" = '0'
53  update3cells  _   "111" = '0'
54  update3cells  _    _    = '1'
55
56  addblanksfor 124 cellrow = triples ("0" ++ cellrow ++ "00")
57  addblanksfor 110 cellrow = triples ("00" ++ cellrow ++ "0")
58
59  updatecellrow by = map (update3cells by) . (addblanksfor by)
60  test_3 = updatecellrow 124 "1011100101"
```

```
61
62  -- the hitherto missing link published neither by wolfram nor google nor wolfram
63  -- is my personally added geometric synthesis as an expanding and rotating
64  -- cellular automaton with cubes in three location step dimensions over time steps
65  -- able to explain a universe with weakly attracting but loudly colliding masses
66  -- and strongly repelling but silently passing electric charges and
67  -- magnetic rotations underreputed as imaginary numbers rather than the core cause
68
69  heads = map head
70  tails = map tail
71  crossmap f m = if null m||null(head m) then [] else f(heads m):(crossmap f (tails m))
72  test_4 = (crossmap id) ["▒▒▒▒▒▒","123456","abcdef","абвгде","αβγδεφ", "אבגדהו"]
73
74  xup by = map (map (updatecellrow by))
75  yup by = map (crossmap (updatecellrow by))
76  zup by = crossmap (map (updatecellrow by))
77
78  radiate = zup 110 . yup 110 . xup 110 . zup 124 . yup 124 . xup 124
79  test_5 = radiate urknall
80
81  hiqstory = steps urknall radiate
82  test_6 = hiqstory !! 6
83  test_7 = hiqstory !! 7
84
```