```
2019/08/13 17:44:34 Loading start genome for XOR experiment
INFO: 17:44:34 genome reader go:106: /* The XOR experiment start genome */
GENOME START
Nodes:
       B(SENSOR id:001, BIAS, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])
       I(SENSOR id:002, INPT, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])
       I(SENSOR id:003, INPT, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])
       O(NEURON id:004, OUTP, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])
Genes:
                     4) INNOV (
                                 1, 0.000) Weight: 0.000 Link's trait id: 1 : (SENSOR id:001,
       [Link (
                1 ->
BIAS, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])->(NEURON id:004, OUTP,
                             inactive \rightarrow step: 0 = 0.000 [])]
SigmoidSteepenedActivation,
       [Link (
               2 -> 4) INNOV (
                                 2, 0.000) Weight: 0.000 Link's trait id: 2 : (SENSOR id:002,
INPT, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])->(NEURON id:004, OUTP,
SigmoidSteepenedActivation,
                             inactive -> step: 0 = 0.000 [])]
               3 -> 4) INNOV ( 3, 0.000) Weight: 0.000 Link's trait id: 3: (SENSOR id:003,
INPT, SigmoidSteepenedActivation, inactive -> step: 0 = 0.000 [])->(NEURON id:004, OUTP,
SigmoidSteepenedActivation.
                             inactive -> step: 0 = 0.000 [])]
Traits:
       GENOME END
INFO: 17:44:34 common.go:60:
>>>> Spawning new population
INFO: 17:44:34 common.go:66: 0K <<<<
INFO: 17:44:34 common.go:68: >>>> Verifying spawned population
INFO: 17:44:34 common.go:74: OK <<<<
INFO: 17:44:34 common.go:95: >>>> Generation: 0 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 1 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 2 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 3 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 4 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 5 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 6 Run: 0
```

```
INFO: 17:44:34 common.go:95: >>>> Generation:
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 9
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 10
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 11
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 12
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 13
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 14
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 15
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 16
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 17
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 18
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 19
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 20
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 21 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 22 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 23
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 24
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 25
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 26
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 27
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 28
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 29
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 30
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 31
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 32
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 33
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 34
                                                  Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 35
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 36
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 37 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 38
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 39
                                                 Run: 0
INFO: 17:44:34 common.go:95: >>>> Generation: 40 Run: 0
INFO: 17:44:34 XOR.go:162: >>>> Output activations: [6.296052e-10 9.956981e-01 9.730947e-01 7.633356e-06]
```

```
INFO: 17:44:34 XOR.go:90: Generation #40 winner dumped to: ./out/xor/0/xor winner 8-15
INFO: 17:44:34 common.go:124: >>>> The winner organism found in [40] generation. fitness: 15.751255
<<<<
INFO: 17:44:34 common.go:60:
>>>> Spawning new population
INFO: 17:44:34 common.go:66: 0K <<<<<</pre>
INFO: 17:44:34 common.go:68: >>>> Verifying spawned population
INFO: 17:44:34 common.go:74: 0K <<<<</pre>
INFO: 17:44:34 common.go:95: >>>> Generation: 0
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation:
                                              1 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 2 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation:
                                              3 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 4
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 6
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 8
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 9
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 10
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 11 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 12 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 13 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 14
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 15 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 16
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 17 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 18
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 19
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 20 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 21 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 22 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 23 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 24 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 25 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 26 Run: 1
```

```
INFO: 17:44:34 common.go:95: >>>> Generation: 27 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 28
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 29
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 30
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 31 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 32
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 33 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 34 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 35
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 36
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 37
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 38
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 39
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 40
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 41 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 42 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 43
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 44
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 45
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 46
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 47
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 48
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 49
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 50
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 51 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 52 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 53
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 54
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 55
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 56
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 57 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 58
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 59
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 60 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 61 Run: 1
```

```
INFO: 17:44:34 common.go:95: >>>> Generation: 62 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 63 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 64 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 65 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 66 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 67 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 68 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 69 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 70 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 71 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 72 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 73 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 74 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 75
                                                 Run: 1
INFO: 17:44:34 common.go:95: >>>> Generation: 76 Run: 1
INFO: 17:44:34 XOR.go:162: >>>> Output activations: [5.795481e-07 9.999999e-01 1.000000e+00 1.494668e-03]
INFO: 17:44:34 XOR.go:90: Generation #76 winner dumped to: ./out/xor/1/xor winner 9-22
INFO: 17:44:34 common.go:124: >>>> The winner organism found in [76] generation. fitness: 15.988040
<<<<
INFO: 17:44:34 common.go:60:
>>>> Spawning new population
INFO: 17:44:34 common.go:66: OK <<<<
INFO: 17:44:34 common.go:68: >>>> Verifying spawned population
INFO: 17:44:34 common.go:74: OK <<<<
INFO: 17:44:34 common.go:95: >>>> Generation: 0 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 1 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 2 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 4
                                                Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 5 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 6
                                                 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 8
                                                 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 10 Run: 2
```

```
INFO: 17:44:34 common.go:95: >>>> Generation: 11 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 12 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 13 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 14 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 15 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 16 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 17 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 18 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 19 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 20 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 21 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 22 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 23 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 24 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 25 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 26 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 27 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 28 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 29 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 30 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 31 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 32 Run: 2
INFO: 17:44:34 common.go:95: >>>> Generation: 33 Run: 2
INFO: 17:44:34 XOR.go:162: >>>> Output activations: [8.407905e-04 9.840221e-01 9.998501e-01 2.035510e-02]
INFO: 17:44:34 XOR.go:90: Generation #33 winner dumped to: ./out/xor/2/xor winner 7-12
INFO: 17:44:34 common.go:124: >>>> The winner organism found in [33] generation, fitness: 15.702804
<<<<
INFO: 17:44:34 common.go:60:
>>>> Spawning new population
INFO: 17:44:34 common.go:66: 0K <<<<
INFO: 17:44:34 common.go:68: >>>> Verifying spawned population
INFO: 17:44:34 common.go:74: 0K <<<<</pre>
INFO: 17:44:34 common.go:95: >>>> Generation: 0 Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 1 Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 2 Run: 3
```

```
INFO: 17:44:34 common.go:95: >>>> Generation:
                                              3 Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation:
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 9
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 10
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 11
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 12
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 13
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 14
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 15
                                                  Run: 3
INFO: 17:44:34 common.go:95: >>>> Generation: 16
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 17
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 18
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 19
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 20
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 21
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 22 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 23
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 24
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 25
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 26
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 27
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 28
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 29
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 30
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 31 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 32
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 33
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 34
                                                  Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 35
                                                 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 36
                                                 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 37 Run: 3
```

```
INFO: 17:44:35 common.go:95: >>>> Generation: 38 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 39 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 40 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 41 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 42 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 43 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 44 Run: 3
INFO: 17:44:35 common.go:95: >>>> Generation: 45 Run: 3
INFO: 17:44:35 XOR.go:162: >>> Output activations: [6.159046e-05 9.999000e-01 9.836049e-01 4.244003e-02]
INFO: 17:44:35 XOR.go:90: Generation #45 winner dumped to: ./out/xor/3/xor winner 7-13
INFO: 17:44:35 common.go:124: >>>> The winner organism found in [45] generation, fitness: 15.531507
<<<<
INFO: 17:44:35 common.go:60:
>>>> Spawning new population
INFO: 17:44:35 common.go:66: OK <<<<
INFO: 17:44:35 common.go:68: >>>> Verifying spawned population
INFO: 17:44:35 common.go:74: 0K <<<<
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation:
                                             2 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation:
                                              3 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 4 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 6
                                                Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 8
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 9
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 10
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 11 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 12
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 13 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 14 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 15 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 16 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 17 Run: 4
```

```
INFO: 17:44:35 common.go:95: >>>> Generation: 18 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 19
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 20 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 21 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 22 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 23 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 24 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 25 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 26
                                                 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 27 Run: 4
INFO: 17:44:35 common.go:95: >>>> Generation: 28 Run: 4
INFO: 17:44:35 XOR.go:162: >>> Output activations: [4.473933e-09 9.999998e-01 9.995682e-01 5.630682e-11]
INFO: 17:44:35 XOR.go:162: >>> Output activations: [4.473933e-09 9.999998e-01 9.995682e-01 5.630682e-11]
INFO: 17:44:35 XOR.go:162: >>> Output activations: [4.473933e-09 9.999998e-01 9.995682e-01 5.630682e-11]
INFO: 17:44:35 XOR.go:90: Generation #28 winner dumped to: ./out/xor/4/xor winner 8-19
INFO: 17:44:35 common.go:124: >>>> The winner organism found in [28] generation, fitness: 15.996544
<<<<
INFO: 17:44:35 common.go:60:
>>>> Spawning new population
INFO: 17:44:35 common.go:66: OK <<<<
INFO: 17:44:35 common.go:68: >>>> Verifying spawned population
INFO: 17:44:35 common.go:74: OK <<<<
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 2 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 4
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 6
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 8
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 10
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 11 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 12 Run: 5
```

```
INFO: 17:44:35 common.go:95: >>>> Generation: 13 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 14
INFO: 17:44:35 common.go:95: >>>> Generation: 15
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 16
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 17
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 18
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 19
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 20
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 21
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 22
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 23
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 24
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 25
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 26
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 27
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 28
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 29
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 30
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 31
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 32 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 33
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 34
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 35
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 36
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 37
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 38
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 39
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 40
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 41 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 42
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 43
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 44
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 45
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 46
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 47 Run: 5
```

```
INFO: 17:44:35 common.go:95: >>>> Generation: 48 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 49
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 50 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 51
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 52 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 53
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 54 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 55
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 56
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 57
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 58
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 59
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 60
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 61
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 62 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 63 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 64
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 65 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 66
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 67 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 68 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 69
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 70
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 71 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 72 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 73
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 74
                                                  Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 75
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 76
                                                 Run: 5
INFO: 17:44:35 common.go:95: >>>> Generation: 77
INFO: 17:44:35 common.go:95: >>>> Generation: 78 Run: 5
INFO: 17:44:35 XOR.go:162: >>>> Output activations: [2.000742e-05 1.0000000e+00 9.922099e-01 1.885761e-03]
INFO: 17:44:35 XOR.go:162: >>> Output activations: [2.619332e-03 1.000000e+00 9.775771e-01 6.804825e-03]
INFO: 17:44:35 XOR.go:162: >>> Output activations: [7.466733e-07 1.000000e+00 9.965319e-01 2.337262e-05]
INFO: 17:44:35 XOR.go:90: Generation #78 winner dumped to: ./out/xor/5/xor winner 6-9
```

```
INFO: 17:44:35 common.go:124: >>>> The winner organism found in [78] generation, fitness: 15.972075
<<<<
INFO: 17:44:35 common.go:60:
>>>> Spawning new population
INFO: 17:44:35 common.go:66: 0K <<<<<</pre>
INFO: 17:44:35 common.go:68: >>>> Verifying spawned population
INFO: 17:44:35 common.go:74: OK <<<<
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 4 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 8
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 9
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 10
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 11
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 12 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 13 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 14
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 15
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 16
                                                 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 17
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 18
                                                 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 19
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 20
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 21 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 22
                                                  Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 23 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 24 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 25 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 26 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 27 Run: 6
```

```
INFO: 17:44:35 common.go:95: >>>> Generation: 28 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 29
                                                 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 30 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 31 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 32 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 33 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 34 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 35 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 36 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 37
                                                 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 38 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 39 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 40 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 41 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 42 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 43 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 44 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 45 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 46 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 47 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 48 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 49 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 50 Run: 6
INFO: 17:44:35 common.go:95: >>>> Generation: 51 Run: 6
INFO: 17:44:35 XOR.go:162: >>> Output activations: [2.984004e-24 1.000000e+00 9.995584e-01 4.301991e-03]
INFO: 17:44:35 XOR.go:90: Generation #51 winner dumped to: ./out/xor/6/xor winner 8-18
INFO: 17:44:35 common.go:124: >>>> The winner organism found in [51] generation, fitness: 15.962074
<<<<
INFO: 17:44:35 common.go:60:
>>>> Spawning new population
INFO: 17:44:35 common.go:66: OK <<<<
INFO: 17:44:35 common.go:68: >>>> Verifying spawned population
INFO: 17:44:35 common.go:74: OK <<<<
INFO: 17:44:35 common.go:95: >>>> Generation: 0 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 1 Run: 7
```

```
INFO: 17:44:35 common.go:95: >>>> Generation:
                                              2 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation:
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 9
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 10
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 11
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 12
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 13
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 14
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 15
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 16
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 17
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 18
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 19
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 20
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 21 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 22 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 23
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 24
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 25
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 26
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 27
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 28
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 29
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 30
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 31
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 32
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 33
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 34 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 35
                                                  Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 36 Run: 7
```

```
INFO: 17:44:35 common.go:95: >>>> Generation: 37 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 38
                                                 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 39 Run: 7
INFO: 17:44:35 common.go:95: >>>> Generation: 40 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 41 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 42 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 43 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 44 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 45 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 46 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 47 Run: 7
INFO: 17:44:36 common.go:95: >>>> Generation: 48 Run: 7
INFO: 17:44:36 XOR.go:162: >>> Output activations: [1.242956e-07 1.0000000e+00 1.000000e+00 4.955078e-09]
INFO: 17:44:36 XOR.go:90: Generation #48 winner dumped to: ./out/xor/7/xor winner 8-17
INFO: 17:44:36 common.go:124: >>>> The winner organism found in [48] generation, fitness: 15.999999
<<<<
INFO: 17:44:36 common.go:60:
>>>> Spawning new population
INFO: 17:44:36 common.go:66: OK <<<<
INFO: 17:44:36 common.go:68: >>>> Verifying spawned population
INFO: 17:44:36 common.go:74: OK <<<<
INFO: 17:44:36 common.go:95: >>>> Generation: 0 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 2
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 4
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 5
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 6
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 9
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 10
                                                 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 11 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 12 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 13 Run: 8
```

```
INFO: 17:44:36 common.go:95: >>>> Generation: 14 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 15 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 16 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 17 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 18 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 19
                                                  Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 20 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 21 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 22 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 23 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 24 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 25 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 26 Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 27
                                                  Run: 8
INFO: 17:44:36 common.go:95: >>>> Generation: 28 Run: 8
INFO: 17:44:36 XOR.go:162: >>>> Output activations: [8.580785e-03 9.968729e-01 1.000000e+00 1.221234e-05]
INFO: 17:44:36 XOR.go:58: Dumped optimal genome to: ./out/xor/8/xor optimal 5-7
INFO: 17:44:36 XOR.go:90: Generation #28 winner dumped to: ./out/xor/8/xor winner 5-7
INFO: 17:44:36 common.go:124: >>>> The winner organism found in [28] generation, fitness: 15.906377
<<<<
INFO: 17:44:36 common.go:60:
>>>> Spawning new population
INFO: 17:44:36 common.go:66: OK <<<<
INFO: 17:44:36 common.go:68: >>>> Verifying spawned population
INFO: 17:44:36 common.go:74: 0K <<<<<</pre>
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                  Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation:
                                              6 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                  Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                  Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 9
                                                  Run: 9
```

```
INFO: 17:44:36 common.go:95: >>>> Generation: 10 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 11 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 12 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 13
                                                 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 14 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 15 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 16 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 17 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 18
                                                 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 19
                                                 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 20 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 21 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 22 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 23
                                                 Run: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 24 Run: 9
INFO: 17:44:36 XOR.go:162: >>>> Output activations: [1.249824e-08 9.999941e-01 9.594388e-01 8.201170e-04]
INFO: 17:44:36 XOR.go:90: Generation #24 winner dumped to: ./out/xor/9/xor_winner_6-10
INFO: 17:44:36 common.go:124: >>>> The winner organism found in [24] generation. fitness: 15.670615
<<<<
INFO: 17:44:36 common.go:60:
>>>> Spawning new population
INFO: 17:44:36 common.go:66: OK <<<<
INFO: 17:44:36 common.go:68: >>>> Verifying spawned population
INFO: 17:44:36 common.go:74: OK <<<<
INFO: 17:44:36 common.go:95: >>>> Generation: 0 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation:
                                              1 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 2
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 4
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 6
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 8
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 10 Run: 10
```

```
INFO: 17:44:36 common.go:95: >>>> Generation: 11 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 13 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 14
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 15 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 16 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 17 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 18 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 19
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 20
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 21 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 22 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 23 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 24
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 25
                                                Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 26 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 27 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 28
                                                Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 29
                                                 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 30 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 31 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 32 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 33 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 34 Run: 10
INFO: 17:44:36 common.go:95: >>>> Generation: 35 Run: 10
INFO: 17:44:36 XOR.go:162: >>>> Output activations: [6.270165e-07 9.999543e-01 9.731044e-01 1.564585e-08]
INFO: 17:44:36 XOR.go:90: Generation #35 winner dumped to: ./out/xor/10/xor winner 6-9
INFO: 17:44:36 common.go:124: >>>> The winner organism found in [35] generation, fitness: 15.785191
<<<<
INFO: 17:44:36 common.go:60:
>>>> Spawning new population
INFO: 17:44:36 common.go:66: OK <<<<
INFO: 17:44:36 common.go:68: >>>> Verifying spawned population
INFO: 17:44:36 common.go:74: OK <<<<
INFO: 17:44:36 common.go:95: >>>> Generation: 0 Run: 11
```

```
INFO: 17:44:36 common.go:95: >>>> Generation:
                                               1 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 9
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 10
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 11
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 12
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 13
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 14
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 15
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 16
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 17
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 18
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 19
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 20
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 21 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 22
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 23
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 24
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 25
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 26
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 27
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 28
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 29
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 30
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 31
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 32
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 33
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 34
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 35 Run: 11
```

```
INFO: 17:44:36 common.go:95: >>>> Generation: 36 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 37
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 38
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 39
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 40
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 41
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 42 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 43
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 44
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 45
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 46
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 47
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 48
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 49
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 50
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 51 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 52
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 53
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 54
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 55
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 56
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 57
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 58
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 59
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 60
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 61 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 62
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 63
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 64
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 65
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 66
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 67
                                                  Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 68
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 69
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 70 Run: 11
```

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INFO: 17:44:36 common.go:95: >>>> Generation: 71 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 72 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 73 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 74 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 75 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 76 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 77 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 78 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 79
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 80
                                                 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 81 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 82 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 83 Run: 11
INFO: 17:44:36 common.go:95: >>>> Generation: 84 Run: 11
INFO: 17:44:36 XOR.go:162: >>>> Output activations: [8.771221e-05 9.871578e-01 9.999945e-01 3.135655e-06]
INFO: 17:44:36 XOR.go:58: Dumped optimal genome to: ./out/xor/11/xor optimal 5-6
INFO: 17:44:36 XOR.go:162: >>> Output activations: [4.647343e-06 9.973162e-01 1.000000e+00 1.977831e-03]
INFO: 17:44:36 XOR.go:58: Dumped optimal genome to: ./out/xor/11/xor optimal 5-6
INFO: 17:44:36 XOR.go:90: Generation #84 winner dumped to: ./out/xor/11/xor winner 5-6
INFO: 17:44:36 common.go:124: >>>> The winner organism found in [84] generation, fitness: 15.962691
<<<<
INFO: 17:44:36 common.go:60:
>>>> Spawning new population
INFO: 17:44:36 common.go:66: OK <<<<
INFO: 17:44:36 common.go:68: >>>> Verifying spawned population
INFO: 17:44:36 common.go:74: 0K <<<<<</pre>
INFO: 17:44:36 common.go:95: >>>> Generation: 0 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation:
                                              1 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation:
                                              2 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 4
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation:
                                              5 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 6 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation:
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 8
                                                 Run: 12
```

```
INFO: 17:44:36 common.go:95: >>>> Generation: 9
INFO: 17:44:36 common.go:95: >>>> Generation: 10
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 11 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 12
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 13
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 14
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 15
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 16
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 17
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 18
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 19
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 20
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 21 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 22
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 23
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 24 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 25
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 26
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 27
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 28
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 29
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 30
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 31
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 32
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 33
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 34
                                                 Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 35
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 36
                                                  Run: 12
INFO: 17:44:36 common.go:95: >>>> Generation: 37
                                                 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 38
                                                  Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 39
                                                  Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 40
                                                  Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 41 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 42 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 43 Run: 12
```

```
INFO: 17:44:37 common.go:95: >>>> Generation: 44 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 45 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 46 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 47 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 48 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 49
                                                 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 50 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 51 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 52 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 53
                                                 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 54 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 55 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 56 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 57
                                                 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 58 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 59 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 60 Run: 12
INFO: 17:44:37 common.go:95: >>>> Generation: 61 Run: 12
INFO: 17:44:37 XOR.go:162: >>> Output activations: [1.136231e-06 9.999322e-01 1.000000e+00 2.685839e-11]
INFO: 17:44:37 XOR.go:90: Generation #61 winner dumped to: ./out/xor/12/xor winner 12-28
INFO: 17:44:37 common.go:124: >>>> The winner organism found in [61] generation, fitness: 15.999449
<<<<
INFO: 17:44:37 common.go:60:
>>>> Spawning new population
INFO: 17:44:37 common.go:66: OK <<<<
INFO: 17:44:37 common.go:68: >>>> Verifying spawned population
INFO: 17:44:37 common.go:74: OK <<<<
INFO: 17:44:37 common.go:95: >>>> Generation: 0
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                              1 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                             4 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                             5 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation:
                                             7 Run: 13
```

```
INFO: 17:44:37 common.go:95: >>>> Generation: 8 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 9
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 10 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 11 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 12 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 13
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 14 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 15 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 16
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 17
                                                 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 18 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 19 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 20 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 21 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 22 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 23 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 24 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 25 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 26 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 27 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 28 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 29 Run: 13
INFO: 17:44:37 common.go:95: >>>> Generation: 30 Run: 13
INFO: 17:44:37 XOR.go:162: >>>> Output activations: [7.455595e-12 9.999014e-01 9.882671e-01 1.033910e-02]
INFO: 17:44:37 XOR.go:90: Generation #30 winner dumped to: ./out/xor/13/xor_winner_6-10
INFO: 17:44:37 common.go:124: >>>> The winner organism found in [30] generation, fitness: 15.823127
<<<<
INFO: 17:44:37 common.go:60:
>>>> Spawning new population
INFO: 17:44:37 common.go:66: OK <<<<
INFO: 17:44:37 common.go:68: >>>> Verifying spawned population
INFO: 17:44:37 common.go:74: OK <<<<
INFO: 17:44:37 common.go:95: >>>> Generation: 0 Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 1 Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 2 Run: 14
```

```
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 9
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 10
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 11
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 12
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 13
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 14
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 15
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 16
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 17
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 18
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 19
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 20
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 21
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 22
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 23
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 24
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 25
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 26
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 27
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 28
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 29
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 30
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 31
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 32
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 33
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 34
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 35
                                                 Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 36
                                                  Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 37 Run: 14
```

```
INFO: 17:44:37 common.go:95: >>>> Generation: 38 Run: 14
INFO: 17:44:37 common.go:95: >>>> Generation: 39 Run: 14
INFO: 17:44:37 XOR.go:162: >>> Output activations: [4.562296e-07 9.489550e-01 1.000000e+00 7.671918e-09]
INFO: 17:44:37 XOR.go:90: Generation #39 winner dumped to: ./out/xor/14/xor winner 9-18
INFO: 17:44:37 common.go:124: >>>> The winner organism found in [39] generation, fitness: 15.594242
<<<<
INFO: 17:44:37 common.go:60:
>>>> Spawning new population
INFO: 17:44:37 common.go:66: OK <<<<
INFO: 17:44:37 common.go:68: >>>> Verifying spawned population
INFO: 17:44:37 common.go:74: 0K <<<<<</pre>
INFO: 17:44:37 common.go:95: >>>> Generation: 0 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 4
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 5
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 6
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 8
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 9
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 10
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 11
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 12 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 13
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 14 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 15
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 16
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 17 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 18
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 19
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 20 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 21 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 22 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 23 Run: 15
```

```
INFO: 17:44:37 common.go:95: >>>> Generation: 24 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 25
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 26
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 27
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 28
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 29
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 30
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 31 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 32
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 33
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 34
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 35
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 36
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 37
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 38
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 39
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 40
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 41
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 42
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 43
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 44
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 45
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 46
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 47
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 48
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 49
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 50
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 51 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 52
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 53
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 54
                                                  Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 55
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 56
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 57
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 58 Run: 15
```

```
INFO: 17:44:37 common.go:95: >>>> Generation: 59 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 60
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 61 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 62
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 63
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 64
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 65 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 66
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 67
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 68
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 69
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 70 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 71 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 72
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 73
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 74 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 75
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 76
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 77
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 78
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 79
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 80
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 81
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 82 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 83
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 84 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 85
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 86
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 87
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 88
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 89
                                                 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 90 Run: 15
INFO: 17:44:37 common.go:95: >>>> Generation: 91 Run: 15
INFO: 17:44:37 XOR.go:162: >>> Output activations: [1.620333e-11 1.000000e+00 9.999968e-01 2.763620e-02]
INFO: 17:44:37 XOR.go:58: Dumped optimal genome to: ./out/xor/15/xor optimal 5-6
```

```
INFO: 17:44:37 XOR.go:90: Generation #91 winner dumped to: ./out/xor/15/xor winner 5-6
INFO: 17:44:37 common.go:124: >>>> The winner organism found in [91] generation. fitness: 15.779649
<<<<
INFO: 17:44:37 common.go:60:
>>>> Spawning new population
INFO: 17:44:37 common.go:66: 0K <<<<<</pre>
INFO: 17:44:37 common.go:68: >>>> Verifying spawned population
INFO: 17:44:37 common.go:74: 0K <<<<<</pre>
INFO: 17:44:37 common.go:95: >>>> Generation: 0
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation:
                                               1 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation:
                                              2 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 4
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation:
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 8
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 9
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 10
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 11 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 12 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 13
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 14
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 15
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 16
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 17
                                                 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 18
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 19
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 20 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 21 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 22 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 23 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 24 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 25
                                                 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 26 Run: 16
```

```
INFO: 17:44:37 common.go:95: >>>> Generation: 27
INFO: 17:44:37 common.go:95: >>>> Generation: 28
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 29
                                                 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 30
                                                 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 31 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 32
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 33
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 34
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 35
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 36
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 37
                                                  Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 38
                                                 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 39
                                                 Run: 16
INFO: 17:44:37 common.go:95: >>>> Generation: 40
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 41 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 42 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 43
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 44
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 45
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 46
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 47
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 48
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 49
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 50
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 51 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 52
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 53
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 54
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 55
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 56
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 57
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 58
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 59
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 60
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 61 Run: 16
```

```
INFO: 17:44:38 common.go:95: >>>> Generation: 62 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 63
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 64
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 65
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 66
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 67
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 68
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 69
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 70
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 71
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 72
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 73
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 74
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 75
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 76
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 77
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 78
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 79
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 80
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 81 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 82
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 83
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 84
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 85
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 86
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 87
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 88
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 89
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 90
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 91
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 92
                                                  Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 93
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 94
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 95
                                                 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 96 Run: 16
```

```
INFO: 17:44:38 common.go:95: >>>> Generation: 97 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 98 Run: 16
INFO: 17:44:38 common.go:95: >>>> Generation: 99 Run: 16
INFO: 17:44:38 common.go:60:
>>>> Spawning new population
INFO: 17:44:38 common.go:66: 0K <<<<<</pre>
INFO: 17:44:38 common.go:68: >>>> Verifying spawned population
INFO: 17:44:38 common.go:74: OK <<<<
INFO: 17:44:38 common.go:95: >>>> Generation:
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 9
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 10
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 11 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 12 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 13
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 14
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 15
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 16
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 17
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 18
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 19
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 20
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 21
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 22
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 23
                                                  Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 24 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 25
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 26 Run: 17
```

```
INFO: 17:44:38 common.go:95: >>>> Generation: 27
INFO: 17:44:38 common.go:95: >>>> Generation: 28
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 29
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 30
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 31 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 32
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 33
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 34
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 35
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 36
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 37
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 38
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 39
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 40
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 41 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 42 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 43
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 44
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 45
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 46
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 47
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 48
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 49
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 50
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 51 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 52 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 53
                                                 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 54 Run: 17
INFO: 17:44:38 common.go:95: >>>> Generation: 55 Run: 17
INFO: 17:44:38 XOR.go:162: >>> Output activations: [1.313698e-02 9.999902e-01 1.000000e+00 2.437482e-06]
INFO: 17:44:38 XOR.go:90: Generation #55 winner dumped to: ./out/xor/17/xor winner 6-12
INFO: 17:44:38 common.go:124: >>>> The winner organism found in [55] generation, fitness: 15.894979
<<<<
INFO: 17:44:38 common.go:60:
>>>> Spawning new population
```

```
INFO: 17:44:38 common.go:66: OK <<<<
INFO: 17:44:38 common.go:68: >>>> Verifying spawned population
INFO: 17:44:38 common.go:74: 0K <<<<<</pre>
INFO: 17:44:38 common.go:95: >>>> Generation:
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 9
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 10
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 11
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 12 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 13
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 14
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 15
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 16
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 17
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 18
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 19
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 20
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 21 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 22
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 23
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 24
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 25
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 26
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 27
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 28
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 29
                                                  Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 30
                                                 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 31 Run: 18
```

```
INFO: 17:44:38 common.go:95: >>>> Generation: 32 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 33 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 34 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 35 Run: 18
INFO: 17:44:38 common.go:95: >>>> Generation: 36 Run: 18
INFO: 17:44:38 XOR.go:162: >>> Output activations: [6.204519e-05 9.988601e-01 9.645425e-01 7.841471e-05]
INFO: 17:44:38 XOR.go:90: Generation #36 winner dumped to: ./out/xor/18/xor winner 8-14
INFO: 17:44:38 common.go:124: >>>> The winner organism found in [36] generation, fitness: 15.707447
<<<<<
INFO: 17:44:38 common.go:60:
>>>> Spawning new population
INFO: 17:44:38 common.go:66: OK <<<<
INFO: 17:44:38 common.go:68: >>>> Verifying spawned population
INFO: 17:44:38 common.go:74: 0K <<<<<</pre>
INFO: 17:44:38 common.go:95: >>>> Generation: 0 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation:
                                              1 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 2 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation:
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 4
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation:
                                             5 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 6
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation:
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 8
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 9
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 10
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 11 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 12 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 13
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 14 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 15 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 16 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 17
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 18
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 19
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 20 Run: 19
```

```
INFO: 17:44:38 common.go:95: >>>> Generation: 21 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 22 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 23 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 24
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 25 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 26 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 27 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 28 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 29
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 30
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 31 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 32 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 33 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 34
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 35
                                                Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 36 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 37 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 38
                                                Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 39
                                                 Run: 19
INFO: 17:44:38 common.go:95: >>>> Generation: 40 Run: 19
INFO: 17:44:38 XOR.go:162: >>> Output activations: [3.644273e-04 9.997375e-01 9.968361e-01 1.917558e-04]
INFO: 17:44:38 XOR.go:90: Generation #40 winner dumped to: ./out/xor/19/xor winner 6-12
INFO: 17:44:38 common.go:124: >>>> The winner organism found in [40] generation, fitness: 15.968155
<<<<
INFO: 17:44:38 common.go:60:
>>>> Spawning new population
INFO: 17:44:38 common.go:66: 0K <<<<
INFO: 17:44:38 common.go:68: >>>> Verifying spawned population
INFO: 17:44:38 common.go:74: OK <<<<
INFO: 17:44:38 common.go:95: >>>> Generation: 0 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation:
                                             1 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation:
                                              2 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation:
                                             3 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 4
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 5 Run: 20
```

```
INFO: 17:44:38 common.go:95: >>>> Generation:
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 10
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 11
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 12
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 13
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 14
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 15
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 16
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 17
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 18
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 19
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 20
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 21 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 22
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 23
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 24
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 25
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 26
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 27
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 28
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 29
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 30
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 31
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 32
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 33
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 34
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 35
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 36
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 37
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 38
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 39
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 40 Run: 20
```

```
INFO: 17:44:38 common.go:95: >>>> Generation: 41 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 42
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 43
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 44
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 45
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 46
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 47
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 48
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 49
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 50
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 51 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 52
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 53
                                                 Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 54
                                                  Run: 20
INFO: 17:44:38 common.go:95: >>>> Generation: 55
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 56
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 57
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 58
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 59
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 60
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 61 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 62
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 63
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 64
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 65
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 66
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 67
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 68
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 69
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 70
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 71
                                                  Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 72
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 73
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 74
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 75 Run: 20
```

```
INFO: 17:44:39 common.go:95: >>>> Generation: 76 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 77
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 78
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 79
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 80
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 81 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 82 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 83 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 84
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 85
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 86 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 87 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 88
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 89
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 90
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 91 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 92 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 93
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 94
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 95 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 96 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 97
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 98
                                                 Run: 20
INFO: 17:44:39 common.go:95: >>>> Generation: 99 Run: 20
INFO: 17:44:39 common.go:60:
>>>> Spawning new population
INFO: 17:44:39 common.go:66: OK <<<<
INFO: 17:44:39 common.go:68: >>>> Verifying spawned population
INFO: 17:44:39 common.go:74: OK <<<<
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              1 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              2 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              3 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 5 Run: 21
```

```
INFO: 17:44:39 common.go:95: >>>> Generation: 6 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 8
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 9
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 10
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 11 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 12 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 13 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 14
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 15
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 16 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 17 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 18 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 19
                                                 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 20 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 21 Run: 21
INFO: 17:44:39 common.go:95: >>>> Generation: 22 Run: 21
INFO: 17:44:39 XOR.go:162: >>> Output activations: [1.471243e-06 9.999063e-01 9.988012e-01 1.998827e-02]
INFO: 17:44:39 XOR.go:90: Generation #22 winner dumped to: ./out/xor/21/xor winner 6-9
INFO: 17:44:39 common.go:124: >>>> The winner organism found in [22] generation, fitness: 15.830194
<<<<
INFO: 17:44:39 common.go:60:
>>>> Spawning new population
INFO: 17:44:39 common.go:66: OK <<<<
INFO: 17:44:39 common.go:68: >>>> Verifying spawned population
INFO: 17:44:39 common.go:74: 0K <<<<<</pre>
INFO: 17:44:39 common.go:95: >>>> Generation: 0 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              1 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              2 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 4
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              5 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              6 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 8
                                                 Run: 22
```

```
INFO: 17:44:39 common.go:95: >>>> Generation: 9
INFO: 17:44:39 common.go:95: >>>> Generation: 10
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 11 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 12
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 13
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 14
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 15
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 16
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 17
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 18
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 19
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 20
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 21 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 22
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 23
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 24 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 25
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 26
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 27
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 28
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 29
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 30
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 31
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 32
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 33
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 34
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 35
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 36
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 37
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 38
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 39
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 40
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 41 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 42 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 43 Run: 22
```

```
INFO: 17:44:39 common.go:95: >>>> Generation: 44 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 45
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 46
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 47
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 48
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 49
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 50
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 51 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 52
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 53
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 54
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 55
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 56
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 57
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 58
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 59
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 60
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 61 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 62
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 63
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 64
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 65
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 66
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 67
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 68
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 69
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 70
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 71
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 72
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 73
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 74
                                                  Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 75
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 76
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 77
                                                 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 78 Run: 22
```

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INFO: 17:44:39 common.go:95: >>>> Generation: 79 Run: 22
INFO: 17:44:39 common.go:95: >>>> Generation: 80 Run: 22
INFO: 17:44:39 XOR.go:162: >>> Output activations: [1.659700e-07 9.999885e-01 1.000000e+00 1.091406e-04]
INFO: 17:44:39 XOR.go:90: Generation #80 winner dumped to: ./out/xor/22/xor winner 6-12
INFO: 17:44:39 common.go:124: >>>> The winner organism found in [80] generation, fitness: 15.999034
<<<<
INFO: 17:44:39 common.go:60:
>>>> Spawning new population
INFO: 17:44:39 common.go:66: OK <<<<
INFO: 17:44:39 common.go:68: >>>> Verifying spawned population
INFO: 17:44:39 common.go:74: OK <<<<
INFO: 17:44:39 common.go:95: >>>> Generation: 0 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation:
                                             1 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 4 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 5 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 6
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 8
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 9
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 10
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 11
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 12 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 13
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 14 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 15 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 16
                                                Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 17
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 18
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 19
                                                 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 20 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 21 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 22 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 23 Run: 23
```

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INFO: 17:44:39 common.go:95: >>>> Generation: 24 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 25 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 26 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 27 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 28 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 29 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 30 Run: 23
INFO: 17:44:39 common.go:95: >>>> Generation: 31 Run: 23
INFO: 17:44:39 XOR.go:162: >>> Output activations: [2.715149e-16 9.952060e-01 9.981436e-01 2.992990e-03]
INFO: 17:44:39 XOR.go:90: Generation #31 winner dumped to: ./out/xor/23/xor winner 8-17
INFO: 17:44:39 common.go:124: >>>> The winner organism found in [31] generation, fitness: 15.922946
<<<<
INFO: 17:44:39 common.go:60:
>>>> Spawning new population
INFO: 17:44:39 common.go:66: OK <<<<
INFO: 17:44:39 common.go:68: >>>> Verifying spawned population
INFO: 17:44:39 common.go:74: 0K <<<<
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              1 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation:
                                             2 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation:
                                              3 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 4 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 6
                                                Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation:
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 8
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 9
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 10
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 11 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 12
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 13 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 14 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 15 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 16 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 17 Run: 24
```

```
INFO: 17:44:39 common.go:95: >>>> Generation: 18 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 19
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 20
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 21
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 22
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 23
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 24
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 25
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 26
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 27
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 28
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 29
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 30
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 31
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 32
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 33
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 34
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 35
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 36
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 37
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 38
                                                 Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 39
                                                  Run: 24
INFO: 17:44:39 common.go:95: >>>> Generation: 40
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 41 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 42
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 43
                                                 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 44
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 45
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 46
                                                 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 47
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 48
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 49
                                                  Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 50
                                                 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 51 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 52 Run: 24
```

```
INFO: 17:44:40 common.go:95: >>>> Generation: 53 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 54 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 55 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 56 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 57 Run: 24
INFO: 17:44:40 common.go:95: >>>> Generation: 58 Run: 24
INFO: 17:44:40 XOR.go:162: >>>> Output activations: [1.200199e-05 9.918304e-01 9.999984e-01 9.384015e-03]
INFO: 17:44:40 XOR.go:90: Generation #58 winner dumped to: ./out/xor/24/xor_winner_7-18
INFO: 17:44:40 common.go:124: >>>> The winner organism found in [58] generation, fitness: 15.859771
<<<<
INFO: 17:44:40 common.go:60:
>>>> Spawning new population
INFO: 17:44:40 common.go:66: OK <<<<<</pre>
INFO: 17:44:40 common.go:68: >>>> Verifying spawned population
INFO: 17:44:40 common.go:74: OK <<<<
INFO: 17:44:40 common.go:95: >>>> Generation: 0
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                              1 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 8
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 9
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 10
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 11
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 12
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 13 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 14
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 15 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 16 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 17
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 18
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 19 Run: 25
```

```
INFO: 17:44:40 common.go:95: >>>> Generation: 20 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 21 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 22 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 23
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 24
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 25
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 26
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 27
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 28
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 29
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 30
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 31 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 32 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 33
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 34
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 35
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 36
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 37
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 38
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 39
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 40
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 41
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 42
                                                  Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 43
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 44
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 45
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 46
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 47
                                                 Run: 25
INFO: 17:44:40 common.go:95: >>>> Generation: 48 Run: 25
INFO: 17:44:40 XOR.go:162: >>>> Output activations: [7.309487e-28 9.988705e-01 1.000000e+00 5.534292e-04]
INFO: 17:44:40 XOR.go:90: Generation #48 winner dumped to: ./out/xor/25/xor winner 7-13
INFO: 17:44:40 common.go:124: >>>> The winner organism found in [48] generation, fitness: 15.986539
<<<<
INFO: 17:44:40 common.go:60:
>>>> Spawning new population
```

```
INFO: 17:44:40 common.go:66: OK <<<<
INFO: 17:44:40 common.go:68: >>>> Verifying spawned population
INFO: 17:44:40 common.go:74: 0K <<<<<</pre>
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 9
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 10
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 11
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 12 Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 13
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 14
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 15
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 16
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 17
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 18
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 19
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 20
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 21
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 22
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 23
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 24
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 25
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 26
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 27
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 28
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 29
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 30
                                                 Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 31 Run: 26
```

```
INFO: 17:44:40 common.go:95: >>>> Generation: 32 Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 33
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 34
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 35
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 36
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 37
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 38
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 39
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 40
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 41
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 42
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 43
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 44
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 45
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 46
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 47
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 48
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 49
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 50
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 51 Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 52
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 53
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 54
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 55
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 56
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 57
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 58
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 59
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 60
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 61
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 62
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 63
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 64
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 65
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 66 Run: 26
```

```
INFO: 17:44:40 common.go:95: >>>> Generation: 67
INFO: 17:44:40 common.go:95: >>>> Generation: 68
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 69
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 70
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 71
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 72
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 73
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 74
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 75
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 76
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 77
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 78
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 79
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 80
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 81 Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 82
                                                 Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 83
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 84
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 85
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 86
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 87
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 88
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 89
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 90
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 91
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 92
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 93
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 94
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 95
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 96
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 97
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 98
                                                  Run: 26
INFO: 17:44:40 common.go:95: >>>> Generation: 99 Run: 26
INFO: 17:44:40 common.go:60:
>>>> Spawning new population
```

```
INFO: 17:44:40 common.go:66: OK <<<<
INFO: 17:44:40 common.go:68: >>>> Verifying spawned population
INFO: 17:44:40 common.go:74: 0K <<<<<</pre>
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 4
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 8
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 9
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 10
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 11 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 12 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 13
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 14
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 15
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 16
                                                 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 17 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 18
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 19
                                                  Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 20
                                                 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 21 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 22 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 23 Run: 27
INFO: 17:44:40 common.go:95: >>>> Generation: 24 Run: 27
INFO: 17:44:40 XOR.go:162: >>> Output activations: [7.266205e-03 9.781913e-01 9.996138e-01 3.674021e-25]
INFO: 17:44:40 XOR.go:90: Generation #24 winner dumped to: ./out/xor/27/xor winner 6-12
INFO: 17:44:40 common.go:124: >>>> The winner organism found in [24] generation, fitness: 15.765179
<<<<
INFO: 17:44:40 common.go:60:
>>>> Spawning new population
INFO: 17:44:40 common.go:66: 0K <<<<
```

```
INFO: 17:44:40 common.go:68: >>>> Verifying spawned population
INFO: 17:44:40 common.go:74: 0K <<<<
INFO: 17:44:40 common.go:95: >>>> Generation:
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 8
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 9
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 10
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 11
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 12
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 13
                                                 Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 14
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 15
                                                 Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 16
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 17
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 18
                                                 Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 19
                                                  Run: 28
INFO: 17:44:40 common.go:95: >>>> Generation: 20
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 21 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 22
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 23
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 24
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 25
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 26
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 27
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 28
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 29
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 30
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 31 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 32 Run: 28
```

```
INFO: 17:44:41 common.go:95: >>>> Generation: 33 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 34
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 35
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 36
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 37
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 38
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 39
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 40
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 41
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 42
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 43
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 44
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 45
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 46
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 47
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 48
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 49
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 50
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 51
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 52 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 53
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 54
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 55
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 56
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 57
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 58
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 59
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 60
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 61 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 62
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 63
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 64
                                                  Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 65
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 66
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 67 Run: 28
```

```
INFO: 17:44:41 common.go:95: >>>> Generation: 68 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 69
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 70 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 71 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 72 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 73 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 74 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 75 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 76
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 77
                                                 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 78 Run: 28
INFO: 17:44:41 common.go:95: >>>> Generation: 79 Run: 28
INFO: 17:44:41 XOR.go:162: >>> Output activations: [5.663095e-02 9.953363e-01 9.995791e-01 1.247374e-04]
INFO: 17:44:41 XOR.go:90: Generation #79 winner dumped to: ./out/xor/28/xor winner 6-9
INFO: 17:44:41 common.go:124: >>>> The winner organism found in [79] generation, fitness: 15.509102
<<<<
INFO: 17:44:41 common.go:60:
>>>> Spawning new population
INFO: 17:44:41 common.go:66: OK <<<<
INFO: 17:44:41 common.go:68: >>>> Verifying spawned population
INFO: 17:44:41 common.go:74: 0K <<<<</pre>
INFO: 17:44:41 common.go:95: >>>> Generation: 0 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 2 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation:
                                             3 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 4 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 5 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 6 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation:
                                              7 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 8 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 9
                                                 Run: 29
INFO: 17:44:41 common.go:95: >>>> Generation: 10 Run: 29
INFO: 17:44:41 XOR.go:162: >>> Output activations: [1.126243e-03 9.907781e-01 9.998350e-01 5.577641e-04]
INFO: 17:44:41 XOR.go:90: Generation #10 winner dumped to: ./out/xor/29/xor_winner_7-11
INFO: 17:44:41 common.go:124: >>>> The winner organism found in [10] generation, fitness: 15.911555
```

```
<<<<<
INFO: 17:44:41 common.go:60:
>>>> Spawning new population
INFO: 17:44:41 common.go:66: OK <<<<
INFO: 17:44:41 common.go:68: >>>> Verifying spawned population
INFO: 17:44:41 common.go:74: 0K <<<<
INFO: 17:44:41 common.go:95: >>>> Generation: 0 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 1 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 2
                                                 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 4 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 5 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 6
                                                Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 8 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 9 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 10 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 11 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 12 Run: 30
INFO: 17:44:41 common.go:95: >>>> Generation: 13 Run: 30
INFO: 17:44:41 XOR.go:162: >>> Output activations: [4.908789e-03 9.947442e-01 9.988738e-01 1.801070e-05]
INFO: 17:44:41 XOR.go:90: Generation #13 winner dumped to: ./out/xor/30/xor winner 7-11
INFO: 17:44:41 common.go:124: >>>> The winner organism found in [13] generation, fitness: 15.909658
<<<<
INFO: 17:44:41 common.go:60:
>>>> Spawning new population
INFO: 17:44:41 common.go:66: OK <<<<
INFO: 17:44:41 common.go:68: >>>> Verifying spawned population
INFO: 17:44:41 common.go:74: OK <<<<
INFO: 17:44:41 common.go:95: >>>> Generation: 0
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 1 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 2 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 3 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 4 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 5 Run: 31
```

```
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 10
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 11
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 12
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 13
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 14
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 15
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 16
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 17
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 18
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 19
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 20
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 21 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 22
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 23
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 24
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 25
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 26
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 27
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 28
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 29
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 30
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 31
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 32
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 33
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 34
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 35
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 36
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 37
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 38
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 39
                                                  Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 40 Run: 31
```

```
INFO: 17:44:41 common.go:95: >>>> Generation: 41 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 42
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 43 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 44
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 45 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 46 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 47 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 48
                                                Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 49
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 50
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 51 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 52 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 53
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 54
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 55
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 56 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 57 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 58
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 59
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 60 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 61 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 62 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 63
                                                 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 64 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 65 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 66 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 67 Run: 31
INFO: 17:44:41 common.go:95: >>>> Generation: 68 Run: 31
INFO: 17:44:41 XOR.go:162: >>> Output activations: [2.439271e-16 9.999794e-01 9.993880e-01 3.137682e-02]
INFO: 17:44:41 XOR.go:90: Generation #68 winner dumped to: ./out/xor/31/xor winner 6-11
INFO: 17:44:41 common.go:124: >>>> The winner organism found in [68] generation, fitness: 15.744949
<<<<
INFO: 17:44:41 common.go:60:
>>>> Spawning new population
INFO: 17:44:41 common.go:66: OK <<<<
```

```
INFO: 17:44:41 common.go:68: >>>> Verifying spawned population
INFO: 17:44:41 common.go:74: 0K <<<<<</pre>
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation:
                                              1 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 2
                                                 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 4 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 5 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 6 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 8 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 9 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 10 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 11 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 12 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 13 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 14 Run: 32
INFO: 17:44:41 common.go:95: >>>> Generation: 15 Run: 32
INFO: 17:44:41 XOR.go:162: >>> Output activations: [2.644308e-02 9.999472e-01 9.885657e-01 5.170255e-03]
INFO: 17:44:41 XOR.go:58: Dumped optimal genome to: ./out/xor/32/xor optimal 5-7
INFO: 17:44:41 XOR.go:90: Generation #15 winner dumped to: ./out/xor/32/xor winner 5-7
INFO: 17:44:41 common.go:124: >>>> The winner organism found in [15] generation, fitness: 15.657054
<<<<
INFO: 17:44:41 common.go:60:
>>>> Spawning new population
INFO: 17:44:41 common.go:66: OK <<<<<</pre>
INFO: 17:44:41 common.go:68: >>>> Verifying spawned population
INFO: 17:44:41 common.go:74: OK <<<<
INFO: 17:44:41 common.go:95: >>>> Generation: 0 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation:
                                              1 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 2 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation:
                                              3 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 4 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 6 Run: 33
```

```
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation:
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 9
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 10
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 11
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 12
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 13
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 14
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 15
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 16
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 17
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 18
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 19
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 20
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 21
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 22
                                                 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 23
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 24
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 25
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 26
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 27
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 28
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 29
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 30
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 31
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 32
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 33
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 34
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 35
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 36
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 37
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 38
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 39
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 40
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 41 Run: 33
```

```
INFO: 17:44:41 common.go:95: >>>> Generation: 42 Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 43
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 44
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 45
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 46
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 47
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 48
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 49
                                                  Run: 33
INFO: 17:44:41 common.go:95: >>>> Generation: 50
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 51
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 52
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 53
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 54
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 55
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 56
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 57
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 58
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 59
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 60
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 61 Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 62
                                                 Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 63
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 64
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 65
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 66
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 67
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 68
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 69
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 70
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 71
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 72
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 73
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 74
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 75
                                                  Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 76 Run: 33
```

```
INFO: 17:44:42 common.go:95: >>>> Generation: 77 Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 78
INFO: 17:44:42 common.go:95: >>>> Generation: 79 Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 80 Run: 33
INFO: 17:44:42 common.go:95: >>>> Generation: 81 Run: 33
INFO: 17:44:42 XOR.go:162: >>> Output activations: [3.862093e-20 9.999305e-01 9.999890e-01 1.762668e-02]
INFO: 17:44:42 XOR.go:90: Generation #81 winner dumped to: ./out/xor/33/xor winner 6-12
INFO: 17:44:42 common.go:124: >>>> The winner organism found in [81] generation, fitness: 15.858656
<<<<<
INFO: 17:44:42 common.go:60:
>>>> Spawning new population
INFO: 17:44:42 common.go:66: OK <<<<
INFO: 17:44:42 common.go:68: >>>> Verifying spawned population
INFO: 17:44:42 common.go:74: 0K <<<<
INFO: 17:44:42 common.go:95: >>>> Generation: 0 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation:
                                             1 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 2 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 4
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation:
                                             5 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 6
                                                Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 8
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 9
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 10
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 11 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 12 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 13
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 14 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 15 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 16 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 17
                                                Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 18 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 19 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 20 Run: 34
```

```
INFO: 17:44:42 common.go:95: >>>> Generation: 21 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 22
INFO: 17:44:42 common.go:95: >>>> Generation: 23
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 24
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 25
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 26
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 27
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 28
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 29
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 30
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 31
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 32
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 33
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 34
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 35
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 36
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 37
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 38
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 39
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 40
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 41
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 42
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 43
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 44
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 45
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 46
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 47
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 48
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 49
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 50
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 51
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 52
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 53
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 54 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 55 Run: 34
```

```
INFO: 17:44:42 common.go:95: >>>> Generation: 56 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 57
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 58
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 59
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 60
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 61
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 62 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 63
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 64
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 65
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 66
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 67
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 68
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 69
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 70
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 71 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 72
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 73
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 74
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 75
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 76
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 77
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 78
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 79
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 80
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 81
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 82
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 83
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 84
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 85
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 86
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 87
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 88
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 89
                                                  Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 90 Run: 34
```

```
INFO: 17:44:42 common.go:95: >>>> Generation: 91 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 92 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 93 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 94
                                                 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 95 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 96 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 97 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 98 Run: 34
INFO: 17:44:42 common.go:95: >>>> Generation: 99 Run: 34
INFO: 17:44:42 common.go:60:
>>>> Spawning new population
INFO: 17:44:42 common.go:66: OK <<<<
INFO: 17:44:42 common.go:68: >>>> Verifying spawned population
INFO: 17:44:42 common.go:74: 0K <<<<
INFO: 17:44:42 common.go:95: >>>> Generation: 0
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation:
                                              1 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation:
                                             2 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 4
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation:
                                             5 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 6
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 8
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 9
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 10
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 11 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 12 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 13
                                                 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 14 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 15 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 16 Run: 35
INFO: 17:44:42 common.go:95: >>>> Generation: 17 Run: 35
INFO: 17:44:42 XOR.go:162: >>> Output activations: [1.350973e-03 9.901581e-01 9.999971e-01 2.814385e-02]
INFO: 17:44:42 XOR.go:90: Generation #17 winner dumped to: ./out/xor/35/xor_winner_6-10
INFO: 17:44:42 common.go:124: >>>> The winner organism found in [17] generation, fitness: 15.686831
```

```
<<<<<
INFO: 17:44:42 common.go:60:
>>>> Spawning new population
INFO: 17:44:42 common.go:66: OK <<<<
INFO: 17:44:42 common.go:68: >>>> Verifying spawned population
INFO: 17:44:42 common.go:74: 0K <<<<
INFO: 17:44:42 common.go:95: >>>> Generation: 0
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 4
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation:
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 9
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 10
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 11
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 12
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 13
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 14
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 15
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 16
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 17
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 18
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 19
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 20
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 21 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 22 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 23
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 24
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 25
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 26
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 27
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 28 Run: 36
```

```
INFO: 17:44:42 common.go:95: >>>> Generation: 29
INFO: 17:44:42 common.go:95: >>>> Generation: 30
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 31 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 32
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 33
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 34
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 35
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 36
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 37
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 38
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 39
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 40
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 41 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 42
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 43
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 44
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 45
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 46
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 47
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 48
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 49
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 50
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 51
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 52
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 53
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 54
                                                 Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 55
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 56
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 57
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 58
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 59
                                                  Run: 36
INFO: 17:44:42 common.go:95: >>>> Generation: 60
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 61 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 62 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 63 Run: 36
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 64 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 65
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 66
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 67
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 68
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 69
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 70
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 71 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 72
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 73
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 74
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 75
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 76
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 77
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 78
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 79
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 80
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 81
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 82
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 83
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 84
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 85
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 86
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 87
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 88
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 89
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 90
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 91
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 92
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 93
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 94
                                                  Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 95
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 96
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 97
                                                 Run: 36
INFO: 17:44:43 common.go:95: >>>> Generation: 98 Run: 36
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 99 Run: 36
INFO: 17:44:43 common.go:60:
>>>> Spawning new population
INFO: 17:44:43 common.go:66: OK <<<<
INFO: 17:44:43 common.go:68: >>>> Verifying spawned population
INFO: 17:44:43 common.go:74: 0K <<<<
INFO: 17:44:43 common.go:95: >>>> Generation: 0
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 4
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 8
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 9
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 10
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 11
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 12
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 13
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 14 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 15
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 16
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 17
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 18
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 19
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 20
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 21 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 22 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 23
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 24 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 25
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 26
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 27
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 28 Run: 37
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 29
INFO: 17:44:43 common.go:95: >>>> Generation: 30
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 31 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 32
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 33
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 34
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 35
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 36
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 37
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 38
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 39
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 40
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 41 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 42
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 43
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 44
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 45
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 46
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 47
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 48
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 49
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 50
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 51
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 52
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 53
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 54
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 55
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 56
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 57
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 58
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 59
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 60
                                                  Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 61 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 62 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 63 Run: 37
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 64 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 65 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 66 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 67 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 68 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 69
                                                 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 70 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 71 Run: 37
INFO: 17:44:43 common.go:95: >>>> Generation: 72 Run: 37
INFO: 17:44:43 XOR.go:162: >>> Output activations: [3.567950e-08 1.000000e+00 9.439930e-01 9.371521e-04]
INFO: 17:44:43 XOR.go:90: Generation #72 winner dumped to: ./out/xor/37/xor winner 8-22
INFO: 17:44:43 common.go:124: >>>> The winner organism found in [72] generation, fitness: 15.547689
<<<<
INFO: 17:44:43 common.go:60:
>>>> Spawning new population
INFO: 17:44:43 common.go:66: OK <<<<
INFO: 17:44:43 common.go:68: >>>> Verifying spawned population
INFO: 17:44:43 common.go:74: 0K <<<<
INFO: 17:44:43 common.go:95: >>>> Generation: 0
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation:
                                               1 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation:
                                              2 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 4
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation:
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 8
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 9
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 10
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 11 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 12 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 13 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 14 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 15 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 16 Run: 38
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 17
INFO: 17:44:43 common.go:95: >>>> Generation: 18
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 19
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 20
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 21
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 22
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 23
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 24
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 25
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 26
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 27
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 28
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 29
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 30
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 31
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 32
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 33
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 34
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 35
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 36
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 37
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 38
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 39
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 40
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 41
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 42
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 43
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 44
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 45
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 46
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 47
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 48
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 49
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 50 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 51 Run: 38
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 52 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 53
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 54
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 55
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 56
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 57
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 58
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 59
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 60
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 61
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 62
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 63
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 64
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 65
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 66
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 67
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 68
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 69
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 70
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 71
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 72
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 73
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 74
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 75
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 76
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 77
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 78
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 79
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 80
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 81
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 82
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 83
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 84
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 85
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 86 Run: 38
```

```
INFO: 17:44:43 common.go:95: >>>> Generation: 87 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 88
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 89
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 90
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 91 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 92 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 93
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 94
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 95
                                                 Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 96
                                                  Run: 38
INFO: 17:44:43 common.go:95: >>>> Generation: 97
                                                 Run: 38
INFO: 17:44:44 common.go:95: >>>> Generation: 98
                                                 Run: 38
INFO: 17:44:44 common.go:95: >>>> Generation: 99 Run: 38
INFO: 17:44:44 common.go:60:
>>>> Spawning new population
INFO: 17:44:44 common.go:66: OK <<<<
INFO: 17:44:44 common.go:68: >>>> Verifying spawned population
INFO: 17:44:44 common.go:74: 0K <<<<
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                               1 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 8
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 9
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 10
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 11
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 12
                                                  Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 13
                                                 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 14 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 15
                                                 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 16 Run: 39
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 17 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 18
                                                 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 19
                                                 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 20 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 21 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 22 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 23 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 24 Run: 39
INFO: 17:44:44 common.go:95: >>>> Generation: 25 Run: 39
INFO: 17:44:44 XOR.go:162: >>> Output activations: [7.563509e-05 9.787283e-01 1.000000e+00 3.081329e-02]
INFO: 17:44:44 XOR.go:90: Generation #25 winner dumped to: ./out/xor/39/xor_winner_6-8
INFO: 17:44:44 common.go:124: >>>> The winner organism found in [25] generation, fitness: 15.585436
<<<<
INFO: 17:44:44 common.go:60:
>>>> Spawning new population
INFO: 17:44:44 common.go:66: OK <<<<
INFO: 17:44:44 common.go:68: >>>> Verifying spawned population
INFO: 17:44:44 common.go:74: 0K <<<<<</pre>
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation:
                                               1 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation:
                                              2 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 4
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 8
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 9
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 10
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 11 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 12 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 13 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 14 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 15 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 16 Run: 40
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 17
INFO: 17:44:44 common.go:95: >>>> Generation: 18
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 19
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 20
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 21
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 22
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 23
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 24
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 25
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 26
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 27
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 28
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 29
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 30
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 31
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 32
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 33
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 34
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 35
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 36
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 37
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 38
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 39
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 40
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 41
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 42
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 43
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 44
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 45
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 46
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 47
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 48
                                                  Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 49
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 50
                                                 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 51 Run: 40
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 52 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 53 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 54 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 55 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 56 Run: 40
INFO: 17:44:44 common.go:95: >>>> Generation: 57 Run: 40
INFO: 17:44:44 XOR.go:162: >>>> Output activations: [5.364733e-04 9.534760e-01 1.000000e+00 1.219839e-03]
INFO: 17:44:44 XOR.go:90: Generation #57 winner dumped to: ./out/xor/40/xor_winner_10-25
INFO: 17:44:44 common.go:124: >>>> The winner organism found in [57] generation, fitness: 15.616089
<<<<
INFO: 17:44:44 common.go:60:
>>>> Spawning new population
INFO: 17:44:44 common.go:66: OK <<<<<</pre>
INFO: 17:44:44 common.go:68: >>>> Verifying spawned population
INFO: 17:44:44 common.go:74: OK <<<<
INFO: 17:44:44 common.go:95: >>>> Generation: 0 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation:
                                              1 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 2
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation:
                                              4 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 8
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 9
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 10
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 11
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 12
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 13 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 14
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 15 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 16 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 17 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 18 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 19 Run: 41
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 20 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 21 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 22
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 23
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 24
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 25
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 26
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 27
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 28
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 29
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 30
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 31 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 32
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 33
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 34
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 35
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 36
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 37
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 38
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 39
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 40
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 41
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 42
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 43
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 44
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 45
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 46
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 47
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 48
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 49
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 50
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 51 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 52 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 53
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 54 Run: 41
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 55 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 56
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 57
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 58
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 59
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 60
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 61 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 62 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 63
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 64
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 65
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 66
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 67
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 68
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 69
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 70
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 71
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 72
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 73
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 74
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 75
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 76
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 77
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 78
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 79
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 80
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 81
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 82
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 83
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 84
                                                  Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 85
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 86
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 87
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 88
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 89 Run: 41
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 90 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 91 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 92 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 93
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 94 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 95
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 96
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 97
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 98
                                                 Run: 41
INFO: 17:44:44 common.go:95: >>>> Generation: 99
                                                 Run: 41
INFO: 17:44:44 common.go:60:
>>>> Spawning new population
INFO: 17:44:44 common.go:66: 0K <<<<<</pre>
INFO: 17:44:44 common.go:68: >>>> Verifying spawned population
INFO: 17:44:44 common.go:74: OK <<<<
INFO: 17:44:44 common.go:95: >>>> Generation: 0
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                              1 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation:
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 9
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 10
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 11
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 12
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 13
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 14
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 15
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 16 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 17
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 18
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 19 Run: 42
```

```
INFO: 17:44:44 common.go:95: >>>> Generation: 20 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 21 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 22
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 23
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 24
                                                 Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 25
                                                  Run: 42
INFO: 17:44:44 common.go:95: >>>> Generation: 26
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 27
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 28
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 29
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 30
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 31 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 32
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 33
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 34
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 35
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 36
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 37
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 38
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 39
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 40
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 41
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 42
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 43
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 44
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 45
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 46
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 47
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 48
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 49
                                                  Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 50
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 51 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 52 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 53
                                                 Run: 42
INFO: 17:44:45 common.go:95: >>>> Generation: 54 Run: 42
```

```
INFO: 17:44:45 common.go:95: >>>> Generation: 55 Run: 42
INFO: 17:44:45 XOR.go:162: >>>> Output activations: [3.947966e-07 9.435423e-01 1.000000e+00 9.038482e-05]
INFO: 17:44:45 XOR.go:90: Generation #55 winner dumped to: ./out/xor/42/xor winner 9-21
INFO: 17:44:45 common.go:124: >>>> The winner organism found in [55] generation, fitness: 15.550810
<<<<
INFO: 17:44:45 common.go:60:
>>>> Spawning new population
INFO: 17:44:45 common.go:66: OK <<<<
INFO: 17:44:45 common.go:68: >>>> Verifying spawned population
INFO: 17:44:45 common.go:74: OK <<<<
INFO: 17:44:45 common.go:95: >>>> Generation: 0 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation:
                                              1 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 2
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 9
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 10 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 11 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 12
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 13
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 14
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 15 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 16
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 17
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 18
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 19
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 20 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 21 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 22 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 23
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 24 Run: 43
```

```
INFO: 17:44:45 common.go:95: >>>> Generation: 25 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 26 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 27 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 28
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 29
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 30 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 31 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 32 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 33 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 34
                                                 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 35 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 36 Run: 43
INFO: 17:44:45 common.go:95: >>>> Generation: 37 Run: 43
INFO: 17:44:45 XOR.go:162: >>>> Output activations: [1.553987e-07 1.000000e+00 9.610187e-01 4.814337e-03]
INFO: 17:44:45 XOR.go:90: Generation #37 winner dumped to: ./out/xor/43/xor winner 7-16
INFO: 17:44:45 common.go:124: >>>> The winner organism found in [37] generation, fitness: 15.651552
<<<<
INFO: 17:44:45 common.go:60:
>>>> Spawning new population
INFO: 17:44:45 common.go:66: OK <<<<
INFO: 17:44:45 common.go:68: >>>> Verifying spawned population
INFO: 17:44:45 common.go:74: OK <<<<
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation:
                                              1 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation:
                                              2 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 4
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 6
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 8
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 10
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 11 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 12 Run: 44
```

```
INFO: 17:44:45 common.go:95: >>>> Generation: 13 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 14
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 15
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 16
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 17
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 18
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 19
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 20
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 21
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 22
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 23
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 24
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 25
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 26
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 27
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 28
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 29
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 30
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 31
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 32 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 33 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 34
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 35
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 36
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 37
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 38
                                                 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 39
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 40
                                                  Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 41 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 42 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 43 Run: 44
INFO: 17:44:45 common.go:95: >>>> Generation: 44 Run: 44
INFO: 17:44:45 XOR.go:162: >>> Output activations: [5.169466e-06 9.995343e-01 9.999969e-01 2.799419e-04]
INFO: 17:44:45 XOR.go:90: Generation #44 winner dumped to: ./out/xor/44/xor winner 9-20
INFO: 17:44:45 common.go:124: >>>> The winner organism found in [44] generation, fitness: 15.993969
```

```
<<<<<
INFO: 17:44:45 common.go:60:
>>>> Spawning new population
INFO: 17:44:45 common.go:66: OK <<<<
INFO: 17:44:45 common.go:68: >>>> Verifying spawned population
INFO: 17:44:45 common.go:74: 0K <<<<
INFO: 17:44:45 common.go:95: >>>> Generation: 0
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 4
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 9
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 10
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 11
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 12
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 13
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 14
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 15
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 16
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 17
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 18
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 19
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 20
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 21 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 22 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 23
                                                  Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 24
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 25
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 26
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 27
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 28 Run: 45
```

```
INFO: 17:44:45 common.go:95: >>>> Generation: 29 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 30
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 31 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 32
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 33 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 34
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 35 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 36
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 37
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 38
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 39
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 40 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 41 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 42
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 43
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 44 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 45
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 46
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 47
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 48
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 49 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 50 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 51 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 52 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 53
                                                 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 54 Run: 45
INFO: 17:44:45 common.go:95: >>>> Generation: 55 Run: 45
INFO: 17:44:45 XOR.go:162: >>>> Output activations: [9.208810e-25 1.000000e+00 9.998907e-01 6.758310e-06]
INFO: 17:44:45 XOR.go:90: Generation #55 winner dumped to: ./out/xor/45/xor winner 7-18
INFO: 17:44:45 common.go:124: >>>> The winner organism found in [55] generation, fitness: 15.999071
<<<<
INFO: 17:44:45 common.go:60:
>>>> Spawning new population
INFO: 17:44:45 common.go:66: OK <<<<
INFO: 17:44:45 common.go:68: >>>> Verifying spawned population
```

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INFO: 17:44:45 common.go:74: OK <<<<
INFO: 17:44:45 common.go:95: >>>> Generation:
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 9
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 10
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 11
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 12
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 13
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 14
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 15
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 16
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 17
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 18
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 19
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 20
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 21
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 22
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 23
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 24
                                                 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 25
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 26
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 27
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 28
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 29
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 30
                                                  Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 31 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 32 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 33 Run: 46
```

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INFO: 17:44:45 common.go:95: >>>> Generation: 34 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 35 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 36 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 37 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 38 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 39 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 40 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 41 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 42 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 43
                                                 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 44 Run: 46
INFO: 17:44:45 common.go:95: >>>> Generation: 45 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 46 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 47
                                                 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 48
                                                Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 49 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 50 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 51 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 52 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 53 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 54 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 55 Run: 46
INFO: 17:44:46 common.go:95: >>>> Generation: 56 Run: 46
INFO: 17:44:46 XOR.go:162: >>>> Output activations: [1.244032e-15 1.000000e+00 1.000000e+00 9.803564e-04]
INFO: 17:44:46 XOR.go:90: Generation #56 winner dumped to: ./out/xor/46/xor winner 8-21
INFO: 17:44:46 common.go:124: >>>> The winner organism found in [56] generation, fitness: 15.992158
<<<<
INFO: 17:44:46 common.go:60:
>>>> Spawning new population
INFO: 17:44:46 common.go:66: OK <<<<
INFO: 17:44:46 common.go:68: >>>> Verifying spawned population
INFO: 17:44:46 common.go:74: OK <<<<
INFO: 17:44:46 common.go:95: >>>> Generation: 0 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 1 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 2 Run: 47
```

```
INFO: 17:44:46 common.go:95: >>>> Generation: 3 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 9
                                                 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 10 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 11 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 12
                                                 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 13 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 14 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 15 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 16 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 17 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 18 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 19 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 20 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 21 Run: 47
INFO: 17:44:46 common.go:95: >>>> Generation: 22 Run: 47
INFO: 17:44:46 XOR.go:162: >>> Output activations: [1.523504e-12 9.918928e-01 9.998290e-01 3.266128e-02]
INFO: 17:44:46 XOR.go:90: Generation #22 winner dumped to: ./out/xor/47/xor winner 6-9
INFO: 17:44:46 common.go:124: >>>> The winner organism found in [22] generation, fitness: 15.674160
<<<<
INFO: 17:44:46 common.go:60:
>>>> Spawning new population
INFO: 17:44:46 common.go:66: OK <<<<
INFO: 17:44:46 common.go:68: >>>> Verifying spawned population
INFO: 17:44:46 common.go:74: OK <<<<
INFO: 17:44:46 common.go:95: >>>> Generation: 0
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation:
                                              1 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation:
                                              2 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation:
                                              3 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 4
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 5 Run: 48
```

```
INFO: 17:44:46 common.go:95: >>>> Generation: 6 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 8
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 9
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 10
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 11 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 12 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 13 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 14
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 15
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 16 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 17 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 18
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 19
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 20
                                                 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 21 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 22 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 23 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 24
                                                Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 25 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 26 Run: 48
INFO: 17:44:46 common.go:95: >>>> Generation: 27 Run: 48
INFO: 17:44:46 XOR.go:162: >>> Output activations: [1.365438e-09 9.999671e-01 9.945705e-01 2.191784e-06]
INFO: 17:44:46 XOR.go:90: Generation #27 winner dumped to: ./out/xor/48/xor winner 6-11
INFO: 17:44:46 common.go:124: >>>> The winner organism found in [27] generation, fitness: 15.956313
<<<<
INFO: 17:44:46 common.go:60:
>>>> Spawning new population
INFO: 17:44:46 common.go:66: 0K <<<<
INFO: 17:44:46 common.go:68: >>>> Verifying spawned population
INFO: 17:44:46 common.go:74: OK <<<<
INFO: 17:44:46 common.go:95: >>>> Generation: 0 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation:
                                             1 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation:
                                             2 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 3 Run: 49
```

```
INFO: 17:44:46 common.go:95: >>>> Generation:
                                               4 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 10
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 11
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 12
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 13
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 14
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 15
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 16
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 17
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 18
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 19
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 20
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 21
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 22
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 23
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 24
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 25
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 26
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 27
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 28
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 29
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 30
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 31
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 32
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 33
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 34
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 35
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 36
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 37
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 38
```

```
INFO: 17:44:46 common.go:95: >>>> Generation: 39
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 40
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 41 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 42
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 43
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 44
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 45
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 46
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 47
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 48
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 49
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 50
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 51 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 52
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 53
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 54
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 55
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 56
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 57
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 58
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 59
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 60
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 61
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 62
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 63
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 64
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 65
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 66
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 67
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 68
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 69
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 70
                                                  Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 71 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 72 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 73 Run: 49
```

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INFO: 17:44:46 common.go:95: >>>> Generation: 74 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 75 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 76 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 77 Run: 49
INFO: 17:44:46 common.go:95: >>>> Generation: 78 Run: 49
INFO: 17:44:46 XOR.go:162: >>> Output activations: [7.326158e-04 9.999998e-01 9.741637e-01 4.994435e-04]
INFO: 17:44:46 XOR.go:58: Dumped optimal genome to: ./out/xor/49/xor optimal 5-7
INFO: 17:44:46 XOR.go:90: Generation #78 winner dumped to: ./out/xor/49/xor winner 5-7
INFO: 17:44:46 common.go:124: >>>> The winner organism found in [78] generation, fitness: 15.784184
<<<<
INFO: 17:44:46 common.go:60:
>>>> Spawning new population
INFO: 17:44:46 common.go:66: OK <<<<<</pre>
INFO: 17:44:46 common.go:68: >>>> Verifying spawned population
INFO: 17:44:46 common.go:74: OK <<<<
INFO: 17:44:46 common.go:95: >>>> Generation: 0 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation:
                                              1 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 2
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation:
                                              4 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 8
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 9
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 10
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 11
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 12
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 13 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 14 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 15 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 16 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 17 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 18
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 19 Run: 50
```

```
INFO: 17:44:46 common.go:95: >>>> Generation: 20 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 21 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 22 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 23
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 24 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 25 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 26 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 27 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 28
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 29
                                                 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 30 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 31 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 32 Run: 50
INFO: 17:44:46 common.go:95: >>>> Generation: 33 Run: 50
INFO: 17:44:46 XOR.go:162: >>>> Output activations: [1.371117e-11 9.999043e-01 9.888574e-01 3.969028e-03]
INFO: 17:44:46 XOR.go:90: Generation #33 winner dumped to: ./out/xor/50/xor winner 6-10
INFO: 17:44:46 common.go:124: >>>> The winner organism found in [33] generation, fitness: 15.878572
<<<<
INFO: 17:44:46 common.go:60:
>>>> Spawning new population
INFO: 17:44:46 common.go:66: OK <<<<
INFO: 17:44:46 common.go:68: >>>> Verifying spawned population
INFO: 17:44:46 common.go:74: OK <<<<
INFO: 17:44:46 common.go:95: >>>> Generation: 0
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation:
                                              1 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 2
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 4
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation:
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 9
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 10
                                                 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 11 Run: 51
```

```
INFO: 17:44:46 common.go:95: >>>> Generation: 12 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 13
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 14
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 15
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 16
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 17
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 18
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 19
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 20
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 21
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 22
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 23
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 24
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 25
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 26
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 27
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 28
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 29
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 30
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 31 Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 32
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 33
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 34
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 35
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 36
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 37
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 38
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 39
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 40
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 41
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 42
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 43
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 44
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 45
                                                  Run: 51
INFO: 17:44:46 common.go:95: >>>> Generation: 46 Run: 51
```

```
INFO: 17:44:46 common.go:95: >>>> Generation: 47 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 48
                                                 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 49 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 50 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 51 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 52 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 53 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 54 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 55 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 56 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 57 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 58 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 59 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 60 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 61 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 62 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 63 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 64 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 65 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 66 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 67 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 68 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 69
                                                 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 70 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 71 Run: 51
INFO: 17:44:47 common.go:95: >>>> Generation: 72 Run: 51
INFO: 17:44:47 XOR.go:162: >>> Output activations: [1.202466e-08 9.998926e-01 1.000000e+00 1.092980e-04]
INFO: 17:44:47 XOR.go:90: Generation #72 winner dumped to: ./out/xor/51/xor winner 9-22
INFO: 17:44:47 common.go:124: >>>> The winner organism found in [72] generation, fitness: 15.998266
<<<<
INFO: 17:44:47 common.go:60:
>>>> Spawning new population
INFO: 17:44:47 common.go:66: OK <<<<
INFO: 17:44:47 common.go:68: >>>> Verifying spawned population
INFO: 17:44:47 common.go:74: OK <<<<
```

```
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 9
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 10
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 11
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 12
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 13
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 14
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 15
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 16
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 17
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 18
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 19
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 20
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 21
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 22
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 23
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 24
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 25
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 26
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 27
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 28
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 29
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 30
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 31
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 32 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 33
                                                  Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 34 Run: 52
```

```
INFO: 17:44:47 common.go:95: >>>> Generation: 35 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 36 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 37 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 38
                                                 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 39
                                                 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 40 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 41 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 42 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 43 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 44
                                                 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 45 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 46 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 47 Run: 52
INFO: 17:44:47 common.go:95: >>>> Generation: 48 Run: 52
INFO: 17:44:47 XOR.go:162: >>>> Output activations: [1.367776e-16 9.993962e-01 9.999421e-01 8.534262e-03]
INFO: 17:44:47 XOR.go:90: Generation #48 winner dumped to: ./out/xor/52/xor winner 6-12
INFO: 17:44:47 common.go:124: >>>> The winner organism found in [48] generation, fitness: 15.926517
<<<<
INFO: 17:44:47 common.go:60:
>>>> Spawning new population
INFO: 17:44:47 common.go:66: 0K <<<<</pre>
INFO: 17:44:47 common.go:68: >>>> Verifying spawned population
INFO: 17:44:47 common.go:74: 0K <<<<</pre>
INFO: 17:44:47 common.go:95: >>>> Generation: 0
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation:
                                              1 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 2
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 4
                                                  Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 8
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 9
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 10
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 11 Run: 53
```

```
INFO: 17:44:47 common.go:95: >>>> Generation: 12 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 13
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 14 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 15
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 16
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 17
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 18
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 19
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 20
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 21 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 22 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 23 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 24 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 25
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 26 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 27 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 28
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 29
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 30
                                                 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 31 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 32 Run: 53
INFO: 17:44:47 common.go:95: >>>> Generation: 33 Run: 53
INFO: 17:44:47 XOR.go:162: >>> Output activations: [7.970224e-03 9.986529e-01 9.753648e-01 3.106920e-08]
INFO: 17:44:47 XOR.go:90: Generation #33 winner dumped to: ./out/xor/53/xor winner 6-12
INFO: 17:44:47 common.go:124: >>>> The winner organism found in [33] generation, fitness: 15.729533
<<<<
INFO: 17:44:47 common.go:60:
>>>> Spawning new population
INFO: 17:44:47 common.go:66: 0K <<<<</pre>
INFO: 17:44:47 common.go:68: >>>> Verifying spawned population
INFO: 17:44:47 common.go:74: 0K <<<<</pre>
INFO: 17:44:47 common.go:95: >>>> Generation: 0 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 1 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 2 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 3 Run: 54
```

```
INFO: 17:44:47 common.go:95: >>>> Generation: 4 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 10
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 11 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 12
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 13
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 14
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 15
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 16
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 17
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 18
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 19
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 20
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 21 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 22
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 23
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 24 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 25
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 26
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 27
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 28
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 29
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 30
                                                  Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 31 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 32 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 33
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 34
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 35
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 36
                                                 Run: 54
INFO: 17:44:47 common.go:95: >>>> Generation: 37 Run: 54
INFO: 17:44:47 XOR.go:162: >>>> Output activations: [1.263951e-04 9.618570e-01 9.970151e-01 1.356062e-02]
```

```
INFO: 17:44:47 XOR.go:90: Generation #37 winner dumped to: ./out/xor/54/xor winner 7-10
INFO: 17:44:47 common.go:124: >>>> The winner organism found in [37] generation. fitness: 15.564485
<<<<
INFO: 17:44:47 common.go:60:
>>>> Spawning new population
INFO: 17:44:47 common.go:66: 0K <<<<<</pre>
INFO: 17:44:47 common.go:68: >>>> Verifying spawned population
INFO: 17:44:47 common.go:74: 0K <<<<</pre>
INFO: 17:44:47 common.go:95: >>>> Generation: 0
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation:
                                              2 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 4
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 8
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 9
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 10
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 11 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 12 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 13
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 14
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 15
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 16
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 17
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 18
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 19
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 20
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 21
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 22 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 23
                                                  Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 24 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 25
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 26 Run: 55
```

```
INFO: 17:44:47 common.go:95: >>>> Generation: 27 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 28
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 29
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 30 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 31 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 32 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 33 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 34 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 35 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 36
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 37 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 38 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 39 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 40
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 41 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 42 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 43 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 44 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 45
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 46 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 47 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 48
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 49
                                                 Run: 55
INFO: 17:44:47 common.go:95: >>>> Generation: 50 Run: 55
INFO: 17:44:47 XOR.go:162: >>> Output activations: [7.133130e-10 9.999755e-01 9.448004e-01 3.955689e-03]
INFO: 17:44:47 XOR.go:90: Generation #50 winner dumped to: ./out/xor/55/xor winner 7-15
INFO: 17:44:47 common.go:124: >>>> The winner organism found in [50] generation, fitness: 15.530064
<<<<
INFO: 17:44:47 common.go:60:
>>>> Spawning new population
INFO: 17:44:47 common.go:66: 0K <<<<</pre>
INFO: 17:44:47 common.go:68: >>>> Verifying spawned population
INFO: 17:44:47 common.go:74: 0K <<<<</pre>
INFO: 17:44:47 common.go:95: >>>> Generation: 0 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 1 Run: 56
```

```
INFO: 17:44:47 common.go:95: >>>> Generation:
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 9
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 10
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 11
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 12
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 13
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 14
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 15
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 16
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 17
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 18
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 19
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 20
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 21
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 22
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 23
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 24
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 25
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 26
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 27
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 28
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 29
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 30
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 31
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 32
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 33
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 34
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 35
                                                  Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 36 Run: 56
```

```
INFO: 17:44:47 common.go:95: >>>> Generation: 37 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 38
                                                 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 39
                                                 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 40 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 41 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 42 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 43 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 44 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 45 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 46
                                                 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 47 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 48 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 49 Run: 56
INFO: 17:44:47 common.go:95: >>>> Generation: 50 Run: 56
INFO: 17:44:48 common.go:95: >>>> Generation: 51 Run: 56
INFO: 17:44:48 common.go:95: >>>> Generation: 52 Run: 56
INFO: 17:44:48 common.go:95: >>>> Generation: 53 Run: 56
INFO: 17:44:48 common.go:95: >>>> Generation: 54 Run: 56
INFO: 17:44:48 common.go:95: >>>> Generation: 55 Run: 56
INFO: 17:44:48 XOR.go:162: >>> Output activations: [1.228853e-03 9.999998e-01 1.000000e+00 2.213305e-04]
INFO: 17:44:48 XOR.go:90: Generation #55 winner dumped to: ./out/xor/56/xor winner 7-14
INFO: 17:44:48 common.go:124: >>>> The winner organism found in [55] generation, fitness: 15.988399
<<<<
INFO: 17:44:48 common.go:60:
>>>> Spawning new population
INFO: 17:44:48 common.go:66: OK <<<<
INFO: 17:44:48 common.go:68: >>>> Verifying spawned population
INFO: 17:44:48 common.go:74: OK <<<<
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              1 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 4 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 6 Run: 57
```

```
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 9
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 10
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 11
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 12
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 13
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 14
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 15
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 16
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 17
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 18
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 19
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 20
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 21 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 22 Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 23
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 24
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 25
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 26
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 27
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 28
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 29
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 30
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 31
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 32
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 33
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 34
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 35
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 36
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 37
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 38
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 39
                                                  Run: 57
INFO: 17:44:48 common.go:95: >>>> Generation: 40 Run: 57
INFO: 17:44:48 XOR.go:162: >>>> Output activations: [1.708560e-16 9.752260e-01 1.000000e+00 2.430183e-03]
```

```
INFO: 17:44:48 XOR.go:90: Generation #40 winner dumped to: ./out/xor/57/xor winner 9-17
INFO: 17:44:48 common.go:124: >>>> The winner organism found in [40] generation. fitness: 15.783107
<<<<
INFO: 17:44:48 common.go:60:
>>>> Spawning new population
INFO: 17:44:48 common.go:66: OK <<<<
INFO: 17:44:48 common.go:68: >>>> Verifying spawned population
INFO: 17:44:48 common.go:74: OK <<<<
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              2 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 4
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 8
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 9
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 10
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 11 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 12 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 13
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 14
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 15
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 16
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 17
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 18
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 19
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 20 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 21 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 22 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 23
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 24 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 25
                                                 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 26 Run: 58
```

```
INFO: 17:44:48 common.go:95: >>>> Generation: 27 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 28
INFO: 17:44:48 common.go:95: >>>> Generation: 29 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 30 Run: 58
INFO: 17:44:48 common.go:95: >>>> Generation: 31 Run: 58
INFO: 17:44:48 XOR.go:162: >>> Output activations: [1.346016e-02 9.525920e-01 9.997465e-01 2.343895e-07]
INFO: 17:44:48 XOR.go:90: Generation #31 winner dumped to: ./out/xor/58/xor winner 7-12
INFO: 17:44:48 common.go:124: >>>> The winner organism found in [31] generation, fitness: 15.514760
<<<<<
INFO: 17:44:48 common.go:60:
>>>> Spawning new population
INFO: 17:44:48 common.go:66: OK <<<<
INFO: 17:44:48 common.go:68: >>>> Verifying spawned population
INFO: 17:44:48 common.go:74: 0K <<<<
INFO: 17:44:48 common.go:95: >>>> Generation: 0
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              1 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation:
                                             2 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 4
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              5 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 8
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 9
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 10
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 11 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 12
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 13
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 14 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 15
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 16 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 17
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 18
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 19
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 20 Run: 59
```

```
INFO: 17:44:48 common.go:95: >>>> Generation: 21 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 22
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 23
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 24
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 25
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 26
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 27
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 28
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 29
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 30
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 31
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 32
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 33
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 34
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 35
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 36
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 37
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 38
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 39
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 40
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 41
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 42
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 43
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 44
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 45
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 46
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 47
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 48
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 49
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 50
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 51
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 52
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 53
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 54
                                                  Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 55 Run: 59
```

```
INFO: 17:44:48 common.go:95: >>>> Generation: 56 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 57 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 58
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 59
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 60 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 61 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 62 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 63 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 64
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 65
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 66 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 67 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 68 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 69
                                                 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 70 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 71 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 72 Run: 59
INFO: 17:44:48 common.go:95: >>>> Generation: 73 Run: 59
INFO: 17:44:48 XOR.go:162: >>>> Output activations: [5.134426e-08 1.000000e+00 1.000000e+00 7.252731e-04]
INFO: 17:44:48 XOR.go:90: Generation #73 winner dumped to: ./out/xor/59/xor winner 9-20
INFO: 17:44:48 common.go:124: >>>> The winner organism found in [73] generation, fitness: 15.994198
<<<<
INFO: 17:44:48 common.go:60:
>>>> Spawning new population
INFO: 17:44:48 common.go:66: OK <<<<
INFO: 17:44:48 common.go:68: >>>> Verifying spawned population
INFO: 17:44:48 common.go:74: OK <<<<
INFO: 17:44:48 common.go:95: >>>> Generation: 0
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              1 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              4 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              5 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation:
                                              7 Run: 60
```

```
INFO: 17:44:48 common.go:95: >>>> Generation: 8
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 9
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 10
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 11
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 12
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 13
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 14
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 15
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 16
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 17
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 18
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 19
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 20
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 21
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 22
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 23
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 24
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 25
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 26
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 27
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 28
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 29
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 30
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 31 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 32
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 33
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 34
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 35
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 36
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 37
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 38
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 39
                                                  Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 40
                                                 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 41 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 42 Run: 60
```

```
INFO: 17:44:48 common.go:95: >>>> Generation: 43 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 44 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 45 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 46 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 47 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 48 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 49 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 50 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 51 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 52 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 53 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 54 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 55 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 56 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 57 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 58 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 59 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 60 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 61 Run: 60
INFO: 17:44:48 common.go:95: >>>> Generation: 62 Run: 60
INFO: 17:44:48 XOR.go:162: >>> Output activations: [4.455480e-02 9.999514e-01 9.999990e-01 1.918877e-11]
INFO: 17:44:48 XOR.go:90: Generation #62 winner dumped to: ./out/xor/60/xor winner 8-15
INFO: 17:44:48 common.go:124: >>>> The winner organism found in [62] generation, fitness: 15.645154
<<<<
INFO: 17:44:48 common.go:60:
>>>> Spawning new population
INFO: 17:44:48 common.go:66: OK <<<<
INFO: 17:44:48 common.go:68: >>>> Verifying spawned population
INFO: 17:44:48 common.go:74: OK <<<<
INFO: 17:44:48 common.go:95: >>>> Generation: 0 Run: 61
INFO: 17:44:48 common.go:95: >>>> Generation:
                                             1 Run: 61
INFO: 17:44:48 common.go:95: >>>> Generation:
                                             2 Run: 61
INFO: 17:44:48 common.go:95: >>>> Generation:
                                             3 Run: 61
INFO: 17:44:48 common.go:95: >>>> Generation: 4
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 5 Run: 61
```

```
INFO: 17:44:49 common.go:95: >>>> Generation: 6 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 8
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 9
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 10
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 11 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 12 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 13 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 14 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 15
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 16 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 17 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 18 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 19
                                                 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 20 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 21 Run: 61
INFO: 17:44:49 common.go:95: >>>> Generation: 22 Run: 61
INFO: 17:44:49 XOR.go:162: >>>> Output activations: [3.672218e-07 9.999998e-01 9.999999e-01 5.089464e-04]
INFO: 17:44:49 XOR.go:90: Generation #22 winner dumped to: ./out/xor/61/xor winner 8-16
INFO: 17:44:49 common.go:124: >>>> The winner organism found in [22] generation, fitness: 15.995923
<<<<
INFO: 17:44:49 common.go:60:
>>>> Spawning new population
INFO: 17:44:49 common.go:66: OK <<<<
INFO: 17:44:49 common.go:68: >>>> Verifying spawned population
INFO: 17:44:49 common.go:74: 0K <<<<<</pre>
INFO: 17:44:49 common.go:95: >>>> Generation: 0 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation:
                                              1 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation:
                                              2 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 4
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation:
                                              5 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation:
                                              6 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 8
                                                 Run: 62
```

```
INFO: 17:44:49 common.go:95: >>>> Generation: 9
INFO: 17:44:49 common.go:95: >>>> Generation: 10
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 11 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 12 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 13 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 14
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 15 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 16 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 17
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 18
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 19
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 20 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 21 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 22 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 23 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 24 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 25 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 26 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 27
                                                 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 28 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 29 Run: 62
INFO: 17:44:49 common.go:95: >>>> Generation: 30 Run: 62
INFO: 17:44:49 XOR.go:162: >>> Output activations: [2.030674e-07 9.784150e-01 9.650892e-01 4.009988e-04]
INFO: 17:44:49 XOR.go:90: Generation #30 winner dumped to: ./out/xor/62/xor winner 6-8
INFO: 17:44:49 common.go:124: >>>> The winner organism found in [30] generation, fitness: 15.548061
<<<<
INFO: 17:44:49 common.go:60:
>>>> Spawning new population
INFO: 17:44:49 common.go:66: OK <<<<
INFO: 17:44:49 common.go:68: >>>> Verifying spawned population
INFO: 17:44:49 common.go:74: OK <<<<</pre>
INFO: 17:44:49 common.go:95: >>>> Generation: 0 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 1 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 2 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 3 Run: 63
```

```
INFO: 17:44:49 common.go:95: >>>> Generation:
                                              4 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 10
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 11
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 12
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 13
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 14
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 15
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 16
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 17
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 18
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 19
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 20
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 21
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 22
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 23
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 24
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 25
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 26
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 27
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 28
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 29
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 30
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 31
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 32
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 33
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 34
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 35
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 36
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 37
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 38 Run: 63
```

```
INFO: 17:44:49 common.go:95: >>>> Generation: 39
INFO: 17:44:49 common.go:95: >>>> Generation: 40
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 41 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 42
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 43
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 44
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 45
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 46
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 47
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 48
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 49
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 50
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 51 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 52
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 53
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 54
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 55
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 56
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 57
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 58
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 59
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 60
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 61
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 62
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 63
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 64
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 65
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 66
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 67
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 68
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 69
                                                  Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 70
                                                 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 71 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 72 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 73 Run: 63
```

```
INFO: 17:44:49 common.go:95: >>>> Generation: 74 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 75 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 76 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 77 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 78 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 79 Run: 63
INFO: 17:44:49 common.go:95: >>>> Generation: 80 Run: 63
INFO: 17:44:49 XOR.go:162: >>> Output activations: [2.083757e-14 1.000000e+00 9.680220e-01 2.371772e-03]
INFO: 17:44:49 XOR.go:162: >>> Output activations: [2.464073e-10 9.996439e-01 9.999999e-01 9.082831e-05]
INFO: 17:44:49 XOR.go:90: Generation #80 winner dumped to: ./out/xor/63/xor winner 8-21
INFO: 17:44:49 common.go:124: >>>> The winner organism found in [80] generation, fitness: 15.996424
<<<<
INFO: 17:44:49 common.go:60:
>>>> Spawning new population
INFO: 17:44:49 common.go:66: OK <<<<
INFO: 17:44:49 common.go:68: >>>> Verifying spawned population
INFO: 17:44:49 common.go:74: 0K <<<<<</pre>
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation:
                                              2 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation:
                                               3 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 4 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 6
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation:
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 8
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 9
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 10
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 11 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 12
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 13 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 14 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 15 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 16 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 17 Run: 64
```

```
INFO: 17:44:49 common.go:95: >>>> Generation: 18 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 19
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 20
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 21
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 22
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 23
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 24
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 25
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 26
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 27
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 28
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 29
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 30
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 31
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 32
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 33
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 34
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 35
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 36
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 37
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 38
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 39
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 40
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 41
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 42
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 43
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 44
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 45
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 46
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 47
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 48
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 49
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 50
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 51 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 52 Run: 64
```

```
INFO: 17:44:49 common.go:95: >>>> Generation: 53 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 54
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 55
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 56
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 57
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 58
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 59
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 60
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 61
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 62
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 63
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 64
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 65
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 66
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 67
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 68
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 69
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 70
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 71
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 72
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 73
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 74
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 75
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 76
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 77
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 78
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 79
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 80
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 81 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 82
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 83
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 84
                                                  Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 85
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 86
                                                 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 87 Run: 64
```

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INFO: 17:44:49 common.go:95: >>>> Generation: 88 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 89 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 90 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 91 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 92 Run: 64
INFO: 17:44:49 common.go:95: >>>> Generation: 93 Run: 64
INFO: 17:44:49 XOR.go:162: >>>> Output activations: [1.443564e-09 1.000000e+00 9.977368e-01 1.322376e-02]
INFO: 17:44:50 XOR.go:90: Generation #93 winner dumped to: ./out/xor/64/xor winner 6-9
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [93] generation, fitness: 15.876344
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: 0K <<<<<</pre>
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
INFO: 17:44:50 common.go:74: OK <<<<
INFO: 17:44:50 common.go:95: >>>> Generation: 0
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation:
                                              1 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 2
                                                  Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                  Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                  Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 8
                                                  Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                  Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 11
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 12
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 13
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 14
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 15 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 16 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 17 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 18
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 19 Run: 65
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 20 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 21 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 22 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 23
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 24 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 25
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 26
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 27
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 28
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 29
                                                 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 30 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 31 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 32 Run: 65
INFO: 17:44:50 common.go:95: >>>> Generation: 33 Run: 65
INFO: 17:44:50 XOR.go:162: >>>> Output activations: [1.107055e-09 1.000000e+00 9.999361e-01 1.061423e-02]
INFO: 17:44:50 XOR.go:90: Generation #33 winner dumped to: ./out/xor/65/xor winner 8-16
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [33] generation, fitness: 15.914689
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: OK <<<<
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
INFO: 17:44:50 common.go:74: 0K <<<<</pre>
INFO: 17:44:50 common.go:95: >>>> Generation: 0
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation:
                                              1 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 2
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 4
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 11 Run: 66
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 12 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 13
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 14
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 15
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 16
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 17
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 18
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 19
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 20
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 21
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 22
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 23
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 24
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 25
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 26
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 27
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 28
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 29
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 30
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 31
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 32
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 33
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 34
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 35
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 36
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 37
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 38
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 39
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 40
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 41
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 42
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 43
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 44
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 45
                                                  Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 46 Run: 66
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 47 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 48
                                                 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 49 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 50 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 51 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 52 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 53 Run: 66
INFO: 17:44:50 common.go:95: >>>> Generation: 54 Run: 66
INFO: 17:44:50 XOR.go:162: >>> Output activations: [1.044981e-03 9.962373e-01 9.995797e-01 1.201445e-04]
INFO: 17:44:50 XOR.go:58: Dumped optimal genome to: ./out/xor/66/xor optimal 5-7
INFO: 17:44:50 XOR.go:90: Generation #54 winner dumped to: ./out/xor/66/xor_winner_5-7
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [54] generation, fitness: 15.957244
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: OK <<<<
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
INFO: 17:44:50 common.go:74: 0K <<<<
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation:
                                               1 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation:
                                              2 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 4
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 8
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 11 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 12 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 13
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 14 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 15 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 16 Run: 67
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 17 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 18
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 19
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 20
                                                 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 21 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 22 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 23 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 24 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 25 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 26 Run: 67
INFO: 17:44:50 common.go:95: >>>> Generation: 27 Run: 67
INFO: 17:44:50 XOR.go:162: >>> Output activations: [3.927241e-03 1.000000e+00 9.892784e-01 4.051398e-02]
INFO: 17:44:50 XOR.go:58: Dumped optimal genome to: ./out/xor/67/xor optimal 5-7
INFO: 17:44:50 XOR.go:90: Generation #27 winner dumped to: ./out/xor/67/xor winner 5-7
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [27] generation, fitness: 15.561741
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: 0K <<<<
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
INFO: 17:44:50 common.go:74: OK <<<<
INFO: 17:44:50 common.go:95: >>>> Generation: 0 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 4
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 11 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 12 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 13 Run: 68
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 14 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 15 Run: 68
INFO: 17:44:50 common.go:95: >>>> Generation: 16 Run: 68
INFO: 17:44:50 XOR.go:162: >>>> Output activations: [1.642340e-03 9.912333e-01 9.996511e-01 4.528509e-02]
INFO: 17:44:50 XOR.go:90: Generation #16 winner dumped to: ./out/xor/68/xor winner 6-9
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [16] generation, fitness: 15.554796
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: OK <<<<
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
INFO: 17:44:50 common.go:74: OK <<<<
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 8
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 11 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 12 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 13
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 14
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 15
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 16 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 17
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 18
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 19
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 20
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 21 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 22 Run: 69
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 23 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 24
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 25
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 26
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 27
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 28
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 29
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 30 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 31 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 32
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 33 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 34 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 35
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 36
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 37
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 38 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 39
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 40
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 41 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 42 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 43 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 44
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 45
                                                 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 46 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 47 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 48 Run: 69
INFO: 17:44:50 common.go:95: >>>> Generation: 49 Run: 69
INFO: 17:44:50 XOR.go:162: >>> Output activations: [3.429135e-15 9.999694e-01 9.999991e-01 2.101700e-12]
INFO: 17:44:50 XOR.go:90: Generation #49 winner dumped to: ./out/xor/69/xor winner 7-14
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [49] generation, fitness: 15.999748
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: OK <<<<
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
```

```
INFO: 17:44:50 common.go:74: OK <<<<
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 11
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 12
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 13
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 14
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 15
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 16
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 17
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 18
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 19
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 20
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 21
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 22
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 23
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 24
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 25
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 26
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 27
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 28
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 29
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 30
                                                  Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 31 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 32 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 33 Run: 70
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 34 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 35 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 36 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 37 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 38
                                                Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 39
                                                 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 40 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 41 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 42 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 43
                                                 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 44 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 45 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 46 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 47
                                                 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 48
                                                Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 49 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 50 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 51 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 52 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 53 Run: 70
INFO: 17:44:50 common.go:95: >>>> Generation: 54 Run: 70
INFO: 17:44:50 XOR.go:162: >>> Output activations: [4.029766e-04 1.000000e+00 9.999970e-01 2.715419e-03]
INFO: 17:44:50 XOR.go:90: Generation #54 winner dumped to: ./out/xor/70/xor winner 6-12
INFO: 17:44:50 common.go:124: >>>> The winner organism found in [54] generation, fitness: 15.975038
<<<<
INFO: 17:44:50 common.go:60:
>>>> Spawning new population
INFO: 17:44:50 common.go:66: OK <<<<
INFO: 17:44:50 common.go:68: >>>> Verifying spawned population
INFO: 17:44:50 common.go:74: OK <<<<
INFO: 17:44:50 common.go:95: >>>> Generation: 0
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation:
                                             1 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 2 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation:
                                              3 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 4 Run: 71
```

```
INFO: 17:44:50 common.go:95: >>>> Generation: 5 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 6
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation:
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 8
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 9
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 10
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 11 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 12 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 13
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 14
                                                 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 15 Run: 71
INFO: 17:44:50 common.go:95: >>>> Generation: 16
                                                 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 17 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 18
                                                 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 19
                                                 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 20 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 21 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 22 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 23 Run: 71
INFO: 17:44:51 common.go:95: >>>> Generation: 24 Run: 71
INFO: 17:44:51 XOR.go:162: >>> Output activations: [2.620126e-07 9.991406e-01 9.974126e-01 2.952908e-02]
INFO: 17:44:51 XOR.go:58: Dumped optimal genome to: ./out/xor/71/xor optimal 5-6
INFO: 17:44:51 XOR.go:90: Generation #24 winner dumped to: ./out/xor/71/xor winner 5-6
INFO: 17:44:51 common.go:124: >>>> The winner organism found in [24] generation, fitness: 15.737278
<<<<
INFO: 17:44:51 common.go:60:
>>>> Spawning new population
INFO: 17:44:51 common.go:66: OK <<<<
INFO: 17:44:51 common.go:68: >>>> Verifying spawned population
INFO: 17:44:51 common.go:74: 0K <<<<</pre>
INFO: 17:44:51 common.go:95: >>>> Generation: 0
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation:
                                              1 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 2 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation:
                                              3 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 4 Run: 72
```

```
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 9
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 10
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 11
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 12
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 13
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 14
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 15
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 16
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 17
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 18
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 19
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 20
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 21
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 22
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 23
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 24
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 25
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 26
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 27
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 28
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 29
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 30
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 31
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 32
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 33
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 34
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 35
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 36
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 37
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 38
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 39 Run: 72
```

```
INFO: 17:44:51 common.go:95: >>>> Generation: 40
INFO: 17:44:51 common.go:95: >>>> Generation: 41 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 42
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 43
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 44
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 45
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 46
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 47
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 48
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 49
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 50
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 51 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 52
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 53
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 54
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 55
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 56
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 57
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 58
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 59
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 60
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 61
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 62
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 63
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 64
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 65
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 66
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 67
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 68
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 69
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 70
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 71
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 72 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 73
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 74 Run: 72
```

```
INFO: 17:44:51 common.go:95: >>>> Generation: 75 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 76
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 77
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 78
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 79
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 80
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 81 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 82
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 83
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 84
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 85
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 86
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 87
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 88
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 89
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 90 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 91 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 92
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 93
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 94
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 95
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 96
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 97
                                                  Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 98
                                                 Run: 72
INFO: 17:44:51 common.go:95: >>>> Generation: 99 Run: 72
INFO: 17:44:51 common.go:60:
>>>> Spawning new population
INFO: 17:44:51 common.go:66: OK <<<<
INFO: 17:44:51 common.go:68: >>>> Verifying spawned population
INFO: 17:44:51 common.go:74: 0K <<<<</pre>
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation:
                                              1 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation:
                                              2 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 4 Run: 73
```

```
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 9
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 10
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 11 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 12
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 13
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 14
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 15
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 16
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 17
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 18
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 19
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 20
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 21
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 22
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 23
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 24
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 25
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 26
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 27
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 28
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 29
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 30
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 31
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 32
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 33
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 34
                                                  Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 35
                                                 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 36 Run: 73
INFO: 17:44:51 common.go:95: >>>> Generation: 37 Run: 73
INFO: 17:44:51 XOR.go:162: >>> Output activations: [3.470994e-21 1.000000e+00 9.970916e-01 1.265516e-09]
INFO: 17:44:51 XOR.go:90: Generation #37 winner dumped to: ./out/xor/73/xor winner 7-15
```

```
INFO: 17:44:51 common.go:124: >>>> The winner organism found in [37] generation, fitness: 15.976742
<<<<
INFO: 17:44:51 common.go:60:
>>>> Spawning new population
INFO: 17:44:51 common.go:66: 0K <<<<<</pre>
INFO: 17:44:51 common.go:68: >>>> Verifying spawned population
INFO: 17:44:51 common.go:74: OK <<<<
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                              1 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation:
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 8
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 9
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 10
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 11
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 12 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 13 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 14
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 15
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 16
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 17
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 18
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 19
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 20
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 21 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 22
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 23 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 24 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 25 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 26 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 27 Run: 74
```

```
INFO: 17:44:51 common.go:95: >>>> Generation: 28 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 29
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 30
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 31
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 32
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 33
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 34
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 35
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 36
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 37
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 38
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 39
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 40
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 41
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 42
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 43
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 44
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 45
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 46
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 47
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 48
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 49
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 50
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 51
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 52
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 53
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 54
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 55
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 56
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 57
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 58
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 59
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 60
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 61 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 62 Run: 74
```

```
INFO: 17:44:51 common.go:95: >>>> Generation: 63 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 64
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 65
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 66
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 67
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 68
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 69
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 70 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 71
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 72
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 73
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 74
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 75
                                                 Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 76
                                                  Run: 74
INFO: 17:44:51 common.go:95: >>>> Generation: 77
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 78
                                                 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 79
                                                 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 80
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 81
                                                 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 82 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 83
                                                 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 84
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 85
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 86
                                                 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 87
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 88
                                                 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 89
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 90
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 91 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 92
                                                  Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 93 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 94 Run: 74
INFO: 17:44:52 common.go:95: >>>> Generation: 95 Run: 74
INFO: 17:44:52 XOR.go:162: >>> Output activations: [1.679358e-10 9.999998e-01 9.999905e-01 1.297935e-02]
INFO: 17:44:52 XOR.go:90: Generation #95 winner dumped to: ./out/xor/74/xor winner 6-9
```

```
INFO: 17:44:52 common.go:124: >>>> The winner organism found in [95] generation, fitness: 15.896256
<<<<
INFO: 17:44:52 common.go:60:
>>>> Spawning new population
INFO: 17:44:52 common.go:66: OK <<<<
INFO: 17:44:52 common.go:68: >>>> Verifying spawned population
INFO: 17:44:52 common.go:74: OK <<<<
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 8
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 9
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 10
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 11
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 12 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 13 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 14
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 15
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 16
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 17
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 18
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 19
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 20
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 21 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 22
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 23 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 24
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 25
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 26
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 27 Run: 75
```

```
INFO: 17:44:52 common.go:95: >>>> Generation: 28 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 29
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 30 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 31 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 32 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 33 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 34 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 35 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 36 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 37
                                                 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 38 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 39 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 40 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 41 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 42 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 43 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 44 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 45 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 46 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 47 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 48 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 49 Run: 75
INFO: 17:44:52 common.go:95: >>>> Generation: 50 Run: 75
INFO: 17:44:52 XOR.go:162: >>>> Output activations: [5.871638e-09 1.000000e+00 9.998970e-01 2.574379e-07]
INFO: 17:44:52 XOR.go:58: Dumped optimal genome to: ./out/xor/75/xor optimal 5-7
INFO: 17:44:52 XOR.go:90: Generation #50 winner dumped to: ./out/xor/75/xor winner 5-7
INFO: 17:44:52 common.go:124: >>>> The winner organism found in [50] generation, fitness: 15.999174
<<<<
INFO: 17:44:52 common.go:60:
>>>> Spawning new population
INFO: 17:44:52 common.go:66: OK <<<<
INFO: 17:44:52 common.go:68: >>>> Verifying spawned population
INFO: 17:44:52 common.go:74: 0K <<<<
INFO: 17:44:52 common.go:95: >>>> Generation: 0 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 1 Run: 76
```

```
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 9
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 10
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 11
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 12
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 13
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 14
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 15
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 16
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 17
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 18
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 19
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 20
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 21
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 22
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 23
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 24
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 25
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 26
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 27
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 28
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 29
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 30
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 31
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 32
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 33
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 34
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 35
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 36 Run: 76
```

```
INFO: 17:44:52 common.go:95: >>>> Generation: 37
INFO: 17:44:52 common.go:95: >>>> Generation: 38
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 39
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 40
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 41
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 42
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 43
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 44
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 45
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 46
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 47
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 48
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 49
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 50
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 51 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 52
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 53
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 54
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 55
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 56
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 57
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 58
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 59
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 60
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 61
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 62
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 63
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 64
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 65
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 66
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 67
                                                  Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 68
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 69
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 70
                                                 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 71 Run: 76
```

```
INFO: 17:44:52 common.go:95: >>>> Generation: 72 Run: 76
INFO: 17:44:52 common.go:95: >>>> Generation: 73 Run: 76
INFO: 17:44:52 XOR.go:162: >>> Output activations: [1.621250e-15 9.890401e-01 9.995882e-01 1.213054e-04]
INFO: 17:44:52 XOR.go:90: Generation #73 winner dumped to: ./out/xor/76/xor winner 6-12
INFO: 17:44:52 common.go:124: >>>> The winner organism found in [73] generation, fitness: 15.908188
<<<<
INFO: 17:44:52 common.go:60:
>>>> Spawning new population
INFO: 17:44:52 common.go:66: OK <<<<
INFO: 17:44:52 common.go:68: >>>> Verifying spawned population
INFO: 17:44:52 common.go:74: 0K <<<<</pre>
INFO: 17:44:52 common.go:95: >>>> Generation: 0 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 4
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation:
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 8
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 9
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 10
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 11
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 12 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 13
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 14 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 15
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 16
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 17
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 18
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 19
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 20
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 21 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 22 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 23 Run: 77
```

```
INFO: 17:44:52 common.go:95: >>>> Generation: 24
INFO: 17:44:52 common.go:95: >>>> Generation: 25
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 26
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 27
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 28
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 29
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 30
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 31 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 32
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 33
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 34
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 35
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 36
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 37
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 38
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 39
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 40
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 41
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 42
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 43
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 44
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 45
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 46
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 47
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 48
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 49
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 50
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 51
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 52
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 53
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 54
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 55
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 56
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 57
                                                  Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 58 Run: 77
```

```
INFO: 17:44:52 common.go:95: >>>> Generation: 59 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 60
                                                 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 61 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 62 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 63 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 64
                                                 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 65 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 66
                                                Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 67
                                                 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 68
                                                 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 69
                                                 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 70 Run: 77
INFO: 17:44:52 common.go:95: >>>> Generation: 71 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 72
                                                 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 73
                                                 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 74 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 75
                                                 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 76
                                                 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 77
                                                 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 78
                                                Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 79 Run: 77
INFO: 17:44:53 common.go:95: >>>> Generation: 80 Run: 77
INFO: 17:44:53 XOR.go:162: >>> Output activations: [7.279612e-03 9.999994e-01 1.000000e+00 1.655329e-18]
INFO: 17:44:53 XOR.go:90: Generation #80 winner dumped to: ./out/xor/77/xor winner 9-24
INFO: 17:44:53 common.go:124: >>>> The winner organism found in [80] generation, fitness: 15.941811
<<<<
INFO: 17:44:53 common.go:60:
>>>> Spawning new population
INFO: 17:44:53 common.go:66: OK <<<<
INFO: 17:44:53 common.go:68: >>>> Verifying spawned population
INFO: 17:44:53 common.go:74: OK <<<<
INFO: 17:44:53 common.go:95: >>>> Generation: 0 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation:
                                             1 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 2 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 3 Run: 78
```

```
INFO: 17:44:53 common.go:95: >>>> Generation:
                                              4 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 10
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 11
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 12
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 13
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 14
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 15
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 16
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 17
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 18
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 19
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 20
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 21
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 22
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 23
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 24
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 25
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 26
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 27
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 28
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 29
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 30
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 31
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 32
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 33
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 34
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 35
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 36
                                                  Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 37
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 38 Run: 78
```

```
INFO: 17:44:53 common.go:95: >>>> Generation: 39
INFO: 17:44:53 common.go:95: >>>> Generation: 40
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 41 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 42 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 43 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 44
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 45 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 46 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 47
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 48
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 49
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 50 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 51 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 52
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 53
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 54 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 55 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 56
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 57
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 58
                                                 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 59 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 60 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 61 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 62 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 63 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 64 Run: 78
INFO: 17:44:53 common.go:95: >>>> Generation: 65 Run: 78
INFO: 17:44:53 XOR.go:162: >>>> Output activations: [6.958932e-16 1.000000e+00 9.999124e-01 2.221206e-07]
INFO: 17:44:53 XOR.go:90: Generation #65 winner dumped to: ./out/xor/78/xor winner 10-23
INFO: 17:44:53 common.go:124: >>>> The winner organism found in [65] generation, fitness: 15.999297
<<<<
INFO: 17:44:53 common.go:60:
>>>> Spawning new population
INFO: 17:44:53 common.go:66: OK <<<<
INFO: 17:44:53 common.go:68: >>>> Verifying spawned population
```

```
INFO: 17:44:53 common.go:74: OK <<<<
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 9
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 10
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 11
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 12
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 13
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 14
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 15
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 16
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 17
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 18
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 19
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 20
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 21
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 22
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 23
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 24
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 25
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 26
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 27
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 28
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 29
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 30
                                                  Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 31 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 32
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 33 Run: 79
```

```
INFO: 17:44:53 common.go:95: >>>> Generation: 34 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 35 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 36 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 37 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 38
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 39
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 40 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 41 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 42
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 43
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 44 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 45 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 46 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 47
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 48
                                                 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 49 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 50 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 51 Run: 79
INFO: 17:44:53 common.go:95: >>>> Generation: 52 Run: 79
INFO: 17:44:53 XOR.go:162: >>> Output activations: [1.246579e-08 9.998904e-01 9.599358e-01 1.676540e-06]
INFO: 17:44:53 XOR.go:90: Generation #52 winner dumped to: ./out/xor/79/xor winner 8-16
INFO: 17:44:53 common.go:124: >>>> The winner organism found in [52] generation, fitness: 15.680210
<<<<
INFO: 17:44:53 common.go:60:
>>>> Spawning new population
INFO: 17:44:53 common.go:66: 0K <<<<<</pre>
INFO: 17:44:53 common.go:68: >>>> Verifying spawned population
INFO: 17:44:53 common.go:74: OK <<<<
INFO: 17:44:53 common.go:95: >>>> Generation: 0
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation:
                                              1 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 4 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 6 Run: 80
```

```
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 8
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 9
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 10
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 11 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 12
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 13
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 14
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 15
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 16
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 17
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 18
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 19
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 20
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 21 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 22 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 23
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 24 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 25
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 26
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 27 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 28
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 29
                                                 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 30 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 31 Run: 80
INFO: 17:44:53 common.go:95: >>>> Generation: 32 Run: 80
INFO: 17:44:53 XOR.go:162: >>> Output activations: [6.771377e-08 1.000000e+00 9.993174e-01 4.305476e-04]
INFO: 17:44:53 XOR.go:162: >>>> Output activations: [6.771377e-08 1.000000e+00 9.993174e-01 5.462449e-02]
INFO: 17:44:53 XOR.go:90: Generation #32 winner dumped to: ./out/xor/80/xor winner 7-16
INFO: 17:44:53 common.go:124: >>>> The winner organism found in [32] generation, fitness: 15.991096
<<<<
INFO: 17:44:53 common.go:60:
>>>> Spawning new population
INFO: 17:44:53 common.go:66: OK <<<<
INFO: 17:44:53 common.go:68: >>>> Verifying spawned population
```

```
INFO: 17:44:53 common.go:74: OK <<<<
INFO: 17:44:53 common.go:95: >>>> Generation:
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 9
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 10
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 11
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 12
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 13
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 14
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 15
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 16
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 17
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 18
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 19
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 20
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 21
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 22
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 23
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 24
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 25
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 26
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 27
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 28
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 29
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 30
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 31 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 32 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 33 Run: 81
```

```
INFO: 17:44:53 common.go:95: >>>> Generation: 34 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 35
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 36
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 37
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 38
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 39
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 40
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 41 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 42
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 43
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 44
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 45
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 46
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 47
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 48
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 49
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 50
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 51 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 52
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 53
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 54
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 55
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 56
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 57
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 58
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 59
                                                 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 60
                                                  Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 61 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 62 Run: 81
INFO: 17:44:53 common.go:95: >>>> Generation: 63
                                                  Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 64
                                                 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 65
                                                 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 66
                                                 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 67
                                                 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 68 Run: 81
```

```
INFO: 17:44:54 common.go:95: >>>> Generation: 69 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 70 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 71 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 72 Run: 81
INFO: 17:44:54 common.go:95: >>>> Generation: 73 Run: 81
INFO: 17:44:54 XOR.go:162: >>> Output activations: [3.018218e-06 9.999192e-01 1.000000e+00 1.419055e-03]
INFO: 17:44:54 XOR.go:90: Generation #73 winner dumped to: ./out/xor/81/xor winner 8-18
INFO: 17:44:54 common.go:124: >>>> The winner organism found in [73] generation, fitness: 15.987980
<<<<<
INFO: 17:44:54 common.go:60:
>>>> Spawning new population
INFO: 17:44:54 common.go:66: OK <<<<
INFO: 17:44:54 common.go:68: >>>> Verifying spawned population
INFO: 17:44:54 common.go:74: 0K <<<<<</pre>
INFO: 17:44:54 common.go:95: >>>> Generation: 0 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation:
                                              1 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 2 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 4
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation:
                                              5 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 6
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 8
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 9
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 10
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 11 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 12 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 13
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 14 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 15 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 16 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 17
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 18
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 19
                                                 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 20 Run: 82
```

```
INFO: 17:44:54 common.go:95: >>>> Generation: 21 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 22 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 23 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 24 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 25 Run: 82
INFO: 17:44:54 common.go:95: >>>> Generation: 26 Run: 82
INFO: 17:44:54 XOR.go:162: >>>> Output activations: [6.200728e-09 9.998144e-01 9.933047e-01 1.571653e-05]
INFO: 17:44:54 XOR.go:90: Generation #26 winner dumped to: ./out/xor/82/xor_winner_9-17
INFO: 17:44:54 common.go:124: >>>> The winner organism found in [26] generation, fitness: 15.944874
<<<<
INFO: 17:44:54 common.go:60:
>>>> Spawning new population
INFO: 17:44:54 common.go:66: 0K <<<<<</pre>
INFO: 17:44:54 common.go:68: >>>> Verifying spawned population
INFO: 17:44:54 common.go:74: OK <<<<
INFO: 17:44:54 common.go:95: >>>> Generation: 0
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation:
                                              1 Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 9
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 10
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 11
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 12
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 13
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 14
                                                  Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 15
                                                 Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 16 Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 17
                                                 Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 18
                                                 Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 19 Run: 83
```

```
INFO: 17:44:54 common.go:95: >>>> Generation: 20 Run: 83
INFO: 17:44:54 common.go:95: >>>> Generation: 21 Run: 83
INFO: 17:44:54 XOR.go:162: >>> Output activations: [4.074893e-04 1.000000e+00 9.838318e-01 5.448171e-04]
INFO: 17:44:54 XOR.go:90: Generation #21 winner dumped to: ./out/xor/83/xor winner 6-10
INFO: 17:44:54 common.go:124: >>>> The winner organism found in [21] generation, fitness: 15.863329
<<<<
INFO: 17:44:54 common.go:60:
>>>> Spawning new population
INFO: 17:44:54 common.go:66: OK <<<<
INFO: 17:44:54 common.go:68: >>>> Verifying spawned population
INFO: 17:44:54 common.go:74: 0K <<<<</pre>
INFO: 17:44:54 common.go:95: >>>> Generation: 0
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 4
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 6
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 8
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 9
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 10
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 11
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 12 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 13
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 14 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 15 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 16 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 17 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 18
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 19
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 20 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 21 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 22 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 23 Run: 84
```

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INFO: 17:44:54 common.go:95: >>>> Generation: 24 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 25 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 26 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 27 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 28 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 29
                                                 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 30 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 31 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 32 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 33 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 34 Run: 84
INFO: 17:44:54 common.go:95: >>>> Generation: 35 Run: 84
INFO: 17:44:54 XOR.go:162: >>>> Output activations: [3.797466e-04 9.814707e-01 9.643587e-01 3.457638e-03]
INFO: 17:44:54 XOR.go:58: Dumped optimal genome to: ./out/xor/84/xor optimal 5-6
INFO: 17:44:54 XOR.go:90: Generation #35 winner dumped to: ./out/xor/84/xor winner 5-6
INFO: 17:44:54 common.go:124: >>>> The winner organism found in [35] generation, fitness: 15.539301
<<<<
INFO: 17:44:54 common.go:60:
>>>> Spawning new population
INFO: 17:44:54 common.go:66: OK <<<<
INFO: 17:44:54 common.go:68: >>>> Verifying spawned population
INFO: 17:44:54 common.go:74: 0K <<<<</pre>
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation:
                                              1 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation:
                                              2 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 4
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 6
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 8
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 9
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 10
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 11 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 12 Run: 85
```

```
INFO: 17:44:54 common.go:95: >>>> Generation: 13 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 14
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 15
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 16
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 17
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 18
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 19
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 20
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 21
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 22
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 23
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 24
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 25
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 26
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 27
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 28
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 29
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 30
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 31
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 32
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 33
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 34
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 35
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 36
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 37
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 38
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 39
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 40
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 41
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 42
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 43
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 44
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 45
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 46
                                                  Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 47 Run: 85
```

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INFO: 17:44:54 common.go:95: >>>> Generation: 48 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 49
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 50 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 51 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 52 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 53
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 54 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 55
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 56
                                                Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 57
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 58 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 59 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 60 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 61 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 62 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 63 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 64 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 65 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 66 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 67 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 68 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 69 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 70
                                                 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 71 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 72 Run: 85
INFO: 17:44:54 common.go:95: >>>> Generation: 73 Run: 85
INFO: 17:44:54 XOR.go:162: >>> Output activations: [2.457742e-44 9.985743e-01 9.920779e-01 1.748778e-05]
INFO: 17:44:54 XOR.go:90: Generation #73 winner dumped to: ./out/xor/85/xor winner 11-25
INFO: 17:44:54 common.go:124: >>>> The winner organism found in [73] generation, fitness: 15.925166
<<<<
INFO: 17:44:54 common.go:60:
>>>> Spawning new population
INFO: 17:44:54 common.go:66: OK <<<<
INFO: 17:44:54 common.go:68: >>>> Verifying spawned population
INFO: 17:44:54 common.go:74: OK <<<<
```

```
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 9
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 10
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 11
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 12
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 13
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 14
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 15
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 16
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 17
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 18
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 19
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 20
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 21
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 22
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 23
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 24
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 25
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 26
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 27
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 28
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 29
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 30
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 31
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 32 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 33
                                                  Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 34 Run: 86
```

```
INFO: 17:44:54 common.go:95: >>>> Generation: 35 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 36
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 37
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 38
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 39
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 40
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 41 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 42 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 43
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 44
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 45
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 46
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 47
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 48
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 49
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 50 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 51 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 52
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 53
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 54
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 55
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 56
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 57
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 58
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 59
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 60
                                                 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 61 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 62 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 63 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 64 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 65 Run: 86
INFO: 17:44:54 common.go:95: >>>> Generation: 66 Run: 86
INFO: 17:44:54 XOR.go:162: >>> Output activations: [9.967704e-05 9.987681e-01 1.000000e+00 1.110301e-08]
INFO: 17:44:54 XOR.go:90: Generation #66 winner dumped to: ./out/xor/86/xor winner 8-19
INFO: 17:44:54 common.go:124: >>>> The winner organism found in [66] generation, fitness: 15.989349
```

```
<<<<<
INFO: 17:44:54 common.go:60:
>>>> Spawning new population
INFO: 17:44:54 common.go:66: OK <<<<
INFO: 17:44:54 common.go:68: >>>> Verifying spawned population
INFO: 17:44:54 common.go:74: 0K <<<<
INFO: 17:44:54 common.go:95: >>>> Generation: 0
                                                 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation:
                                             1 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 4 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 5 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 6
                                                 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation:
                                                 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 8 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 9 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 10 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 11 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 12 Run: 87
INFO: 17:44:54 common.go:95: >>>> Generation: 13 Run: 87
INFO: 17:44:55 common.go:95: >>>> Generation: 14 Run: 87
INFO: 17:44:55 common.go:95: >>>> Generation: 15 Run: 87
INFO: 17:44:55 XOR.go:162: >>> Output activations: [4.368980e-04 9.543030e-01 9.999993e-01 1.428820e-03]
INFO: 17:44:55 XOR.go:90: Generation #15 winner dumped to: ./out/xor/87/xor winner 6-9
INFO: 17:44:55 common.go:124: >>>> The winner organism found in [15] generation, fitness: 15.621756
<<<<
INFO: 17:44:55 common.go:60:
>>>> Spawning new population
INFO: 17:44:55 common.go:66: OK <<<<
INFO: 17:44:55 common.go:68: >>>> Verifying spawned population
INFO: 17:44:55 common.go:74: OK <<<<
INFO: 17:44:55 common.go:95: >>>> Generation: 0 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 1 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 2 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 3 Run: 88
```

```
INFO: 17:44:55 common.go:95: >>>> Generation:
                                               4 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 10
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 11
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 12
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 13
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 14
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 15
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 16
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 17
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 18
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 19
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 20
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 21
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 22
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 23
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 24
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 25
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 26
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 27
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 28
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 29
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 30
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 31
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 32
                                                 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 33
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 34
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 35
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 36
                                                  Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 37
                                                 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 38 Run: 88
```

```
INFO: 17:44:55 common.go:95: >>>> Generation: 39 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 40 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 41 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 42 Run: 88
INFO: 17:44:55 common.go:95: >>>> Generation: 43 Run: 88
INFO: 17:44:55 XOR.go:162: >>> Output activations: [3.861503e-10 9.958286e-01 1.000000e+00 9.769019e-03]
INFO: 17:44:55 XOR.go:90: Generation #43 winner dumped to: ./out/xor/88/xor winner 8-16
INFO: 17:44:55 common.go:124: >>>> The winner organism found in [43] generation, fitness: 15.888670
<<<<<
INFO: 17:44:55 common.go:60:
>>>> Spawning new population
INFO: 17:44:55 common.go:66: OK <<<<
INFO: 17:44:55 common.go:68: >>>> Verifying spawned population
INFO: 17:44:55 common.go:74: 0K <<<<<</pre>
INFO: 17:44:55 common.go:95: >>>> Generation: 0
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation:
                                              1 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 2 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 4
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation:
                                              5 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 8
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 9
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 10
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 11 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 12
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 13
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 14 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 15
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 16 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 17
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 18
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 19
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 20 Run: 89
```

```
INFO: 17:44:55 common.go:95: >>>> Generation: 21 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 22
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 23
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 24
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 25
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 26
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 27
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 28
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 29
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 30
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 31
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 32
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 33
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 34
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 35
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 36
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 37
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 38
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 39
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 40
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 41
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 42
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 43
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 44
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 45
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 46
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 47
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 48
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 49
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 50
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 51
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 52
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 53
                                                  Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 54
                                                 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 55 Run: 89
```

```
INFO: 17:44:55 common.go:95: >>>> Generation: 56 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 57 Run: 89
INFO: 17:44:55 common.go:95: >>>> Generation: 58 Run: 89
INFO: 17:44:55 XOR.go:162: >>>> Output activations: [3.570929e-04 9.999941e-01 9.648058e-01 1.272763e-04]
INFO: 17:44:55 XOR.go:90: Generation #58 winner dumped to: ./out/xor/89/xor winner 8-19
INFO: 17:44:55 common.go:124: >>>> The winner organism found in [58] generation, fitness: 15.715798
<<<<
INFO: 17:44:55 common.go:60:
>>>> Spawning new population
INFO: 17:44:55 common.go:66: OK <<<<
INFO: 17:44:55 common.go:68: >>>> Verifying spawned population
INFO: 17:44:55 common.go:74: OK <<<<
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 4
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 8
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 9
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 10
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 11 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 12 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 13
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 14
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 15
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 16 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 17
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 18
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 19
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 20 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 21 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 22 Run: 90
```

```
INFO: 17:44:55 common.go:95: >>>> Generation: 23 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 24
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 25
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 26
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 27
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 28
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 29
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 30
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 31
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 32
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 33
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 34
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 35
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 36
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 37
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 38
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 39
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 40
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 41
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 42
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 43
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 44
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 45
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 46
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 47
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 48
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 49
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 50
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 51
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 52
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 53
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 54
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 55
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 56
                                                  Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 57 Run: 90
```

```
INFO: 17:44:55 common.go:95: >>>> Generation: 58 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 59
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 60
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 61 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 62
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 63
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 64
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 65
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 66
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 67
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 68
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 69
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 70
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 71
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 72
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 73
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 74
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 75
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 76
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 77
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 78
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 79
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 80
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 81 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 82 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 83
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 84
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 85
                                                 Run: 90
INFO: 17:44:55 common.go:95: >>>> Generation: 86 Run: 90
INFO: 17:44:55 XOR.go:162: >>> Output activations: [1.088391e-10 1.000000e+00 9.992122e-01 9.752749e-03]
INFO: 17:44:55 XOR.go:90: Generation #86 winner dumped to: ./out/xor/90/xor winner 8-18
INFO: 17:44:55 common.go:124: >>>> The winner organism found in [86] generation, fitness: 15.915786
<<<<
INFO: 17:44:55 common.go:60:
>>>> Spawning new population
```

```
INFO: 17:44:55 common.go:66: OK <<<<
INFO: 17:44:55 common.go:68: >>>> Verifying spawned population
INFO: 17:44:55 common.go:74: 0K <<<<<</pre>
INFO: 17:44:55 common.go:95: >>>> Generation:
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 9
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 10
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 11
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 12 Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 13
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 14
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 15
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 16
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 17
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 18
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 19
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 20
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 21
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 22
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 23
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 24
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 25
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 26
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 27
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 28
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 29
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 30
                                                  Run: 91
INFO: 17:44:55 common.go:95: >>>> Generation: 31 Run: 91
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 32 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 33
                                                 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 34 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 35 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 36 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 37 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 38
                                                Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 39 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 40 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 41 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 42 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 43 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 44 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 45 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 46 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 47 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 48 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 49
                                                 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 50 Run: 91
INFO: 17:44:56 common.go:95: >>>> Generation: 51 Run: 91
INFO: 17:44:56 XOR.go:162: >>> Output activations: [1.908034e-03 1.000000e+00 1.000000e+00 1.978900e-05]
INFO: 17:44:56 XOR.go:90: Generation #51 winner dumped to: ./out/xor/91/xor winner 8-18
INFO: 17:44:56 common.go:124: >>>> The winner organism found in [51] generation, fitness: 15.984581
<<<<
INFO: 17:44:56 common.go:60:
>>>> Spawning new population
INFO: 17:44:56 common.go:66: OK <<<<
INFO: 17:44:56 common.go:68: >>>> Verifying spawned population
INFO: 17:44:56 common.go:74: OK <<<<
INFO: 17:44:56 common.go:95: >>>> Generation: 0
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation:
                                             1 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation:
                                             2 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation:
                                             3 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 4
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 5 Run: 92
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 6 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 10
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 11
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 12
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 13
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 14
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 15
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 16
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 17
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 18
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 19
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 20
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 21 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 22
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 23
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 24
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 25
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 26
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 27
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 28
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 29
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 30
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 31 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 32
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 33
                                                  Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 34 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 35
                                                 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 36 Run: 92
INFO: 17:44:56 common.go:95: >>>> Generation: 37 Run: 92
INFO: 17:44:56 XOR.go:162: >>>> Output activations: [3.682145e-05 9.999573e-01 1.000000e+00 5.526222e-02]
INFO: 17:44:56 XOR.go:90: Generation #37 winner dumped to: ./out/xor/92/xor winner 6-10
INFO: 17:44:56 common.go:124: >>>> The winner organism found in [37] generation, fitness: 15.560329
```

```
<<<<<
INFO: 17:44:56 common.go:60:
>>>> Spawning new population
INFO: 17:44:56 common.go:66: OK <<<<
INFO: 17:44:56 common.go:68: >>>> Verifying spawned population
INFO: 17:44:56 common.go:74: 0K <<<<
INFO: 17:44:56 common.go:95: >>>> Generation: 0
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 9
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 10
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 11
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 12
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 13
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 14
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 15
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 16
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 17
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 18
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 19
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 20
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 21
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 22
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 23
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 24
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 25
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 26
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 27
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 28
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 29
INFO: 17:44:56 common.go:95: >>>> Generation: 30
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 31 Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 32
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 33
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 34
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 35
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 36
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 37
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 38
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 39
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 40
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 41
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 42
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 43
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 44
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 45
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 46
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 47
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 48
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 49
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 50
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 51
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 52
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 53
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 54
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 55
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 56
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 57
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 58
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 59
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 60
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 61 Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 62
                                                 Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 63 Run: 93
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 64 Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 65
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 66
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 67
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 68
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 69
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 70
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 71
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 72
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 73
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 74
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 75
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 76
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 77
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 78
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 79
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 80
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 81
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 82
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 83
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 84
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 85
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 86
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 87
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 88
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 89
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 90
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 91
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 92
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 93
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 94
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 95
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 96
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 97
                                                  Run: 93
INFO: 17:44:56 common.go:95: >>>> Generation: 98
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 99 Run: 93
INFO: 17:44:56 common.go:60:
>>>> Spawning new population
INFO: 17:44:56 common.go:66: OK <<<<
INFO: 17:44:56 common.go:68: >>>> Verifying spawned population
INFO: 17:44:56 common.go:74: 0K <<<<
INFO: 17:44:56 common.go:95: >>>> Generation: 0 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 1 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 2 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation:
                                             3 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 4 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 5 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 6 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 7 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 8 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 9 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 10 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 11 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 12 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 13 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 14 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 15 Run: 94
INFO: 17:44:56 common.go:95: >>>> Generation: 16 Run: 94
INFO: 17:44:56 XOR.go:162: >>>> Output activations: [1.024498e-09 9.938519e-01 1.000000e+00 1.360275e-03]
INFO: 17:44:56 XOR.go:90: Generation #16 winner dumped to: ./out/xor/94/xor winner 6-9
INFO: 17:44:56 common.go:124: >>>> The winner organism found in [16] generation, fitness: 15.939989
<<<<
INFO: 17:44:56 common.go:60:
>>>> Spawning new population
INFO: 17:44:56 common.go:66: OK <<<<
INFO: 17:44:56 common.go:68: >>>> Verifying spawned population
INFO: 17:44:56 common.go:74: OK <<<<
INFO: 17:44:56 common.go:95: >>>> Generation: 0 Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 1 Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 2 Run: 95
```

```
INFO: 17:44:56 common.go:95: >>>> Generation:
                                              3 Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 9
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 10
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 11
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 12
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 13
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 14
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 15
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 16
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 17
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 18
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 19
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 20
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 21
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 22 Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 23
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 24
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 25
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 26
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 27
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 28
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 29
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 30
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 31 Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 32
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 33
                                                  Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 34 Run: 95
INFO: 17:44:56 common.go:95: >>>> Generation: 35 Run: 95
INFO: 17:44:56 XOR.go:162: >>> Output activations: [2.344321e-22 1.000000e+00 9.922516e-01 2.934689e-05]
INFO: 17:44:56 XOR.go:90: Generation #35 winner dumped to: ./out/xor/95/xor winner 7-13
```

```
INFO: 17:44:56 common.go:124: >>>> The winner organism found in [35] generation, fitness: 15.937839
<<<<
INFO: 17:44:56 common.go:60:
>>>> Spawning new population
INFO: 17:44:56 common.go:66: OK <<<<<</pre>
INFO: 17:44:56 common.go:68: >>>> Verifying spawned population
INFO: 17:44:56 common.go:74: OK <<<<
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation:
                                              1 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 4 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 8
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 9
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 10
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 11 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 12 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 13 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 14
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 15
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 16
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 17
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 18
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 19
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 20
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 21 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 22
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 23 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 24 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 25 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 26
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 27 Run: 96
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 28 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 29
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 30 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 31 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 32 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 33 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 34 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 35
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 36 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 37
                                                 Run: 96
INFO: 17:44:56 common.go:95: >>>> Generation: 38 Run: 96
INFO: 17:44:56 XOR.go:162: >>>> Output activations: [6.255370e-06 9.966693e-01 9.999994e-01 9.357611e-08]
INFO: 17:44:56 XOR.go:162: >>> Output activations: [1.166555e-02 9.999006e-01 9.964626e-01 1.747714e-03]
INFO: 17:44:56 XOR.go:90: Generation #38 winner dumped to: ./out/xor/96/xor winner 7-14
INFO: 17:44:56 common.go:124: >>>> The winner organism found in [38] generation, fitness: 15.973310
<<<<
INFO: 17:44:56 common.go:60:
>>>> Spawning new population
INFO: 17:44:56 common.go:66: OK <<<<
INFO: 17:44:56 common.go:68: >>>> Verifying spawned population
INFO: 17:44:56 common.go:74: OK <<<<
INFO: 17:44:56 common.go:95: >>>> Generation: 0 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 4
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation:
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 9
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 10
                                                 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 11 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 12 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 13 Run: 97
```

```
INFO: 17:44:56 common.go:95: >>>> Generation: 14 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 15
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 16
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 17
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 18
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 19
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 20
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 21 Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 22
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 23
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 24
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 25
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 26
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 27
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 28
                                                  Run: 97
INFO: 17:44:56 common.go:95: >>>> Generation: 29
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 30
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 31
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 32
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 33
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 34
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 35
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 36
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 37
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 38
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 39
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 40
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 41
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 42
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 43
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 44
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 45
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 46
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 47
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 48 Run: 97
```

```
INFO: 17:44:57 common.go:95: >>>> Generation: 49
INFO: 17:44:57 common.go:95: >>>> Generation: 50
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 51
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 52
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 53
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 54
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 55
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 56
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 57
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 58
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 59
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 60
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 61 Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 62
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 63
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 64
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 65
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 66
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 67
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 68
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 69
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 70
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 71
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 72
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 73
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 74
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 75
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 76
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 77
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 78
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 79
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 80
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 81 Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 82
                                                  Run: 97
INFO: 17:44:57 common.go:95: >>>> Generation: 83 Run: 97
```

```
INFO: 17:44:57 XOR.go:162: >>> Output activations: [1.259258e-11 1.000000e+00 9.997496e-01 2.020933e-13]
INFO: 17:44:57 XOR.go:90: Generation #83 winner dumped to: ./out/xor/97/xor_winner_7-17
INFO: 17:44:57 common.go:124: >>>> The winner organism found in [83] generation. fitness: 15.997997
<<<<
INFO: 17:44:57 common.go:60:
>>>> Spawning new population
INFO: 17:44:57 common.go:66: OK <<<<
INFO: 17:44:57 common.go:68: >>>> Verifying spawned population
INFO: 17:44:57 common.go:74: 0K <<<<<</pre>
INFO: 17:44:57 common.go:95: >>>> Generation:
                                               0 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation:
                                              1 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation:
                                              2 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 6
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 8
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 9
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 10
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 11 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 12
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 13
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 14 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 15
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 16
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 17
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 18
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 19
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 20
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 21 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 22 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 23 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 24 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 25 Run: 98
```

```
INFO: 17:44:57 common.go:95: >>>> Generation: 26 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 27
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 28
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 29
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 30 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 31 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 32 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 33 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 34 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 35
                                                 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 36 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 37 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 38 Run: 98
INFO: 17:44:57 common.go:95: >>>> Generation: 39 Run: 98
INFO: 17:44:57 XOR.go:162: >>>> Output activations: [4.712083e-05 9.999804e-01 9.920314e-01 3.499050e-06]
INFO: 17:44:57 XOR.go:90: Generation #39 winner dumped to: ./out/xor/98/xor winner 6-12
INFO: 17:44:57 common.go:124: >>>> The winner organism found in [39] generation, fitness: 15.935754
<<<<
INFO: 17:44:57 common.go:60:
>>>> Spawning new population
INFO: 17:44:57 common.go:66: OK <<<<
INFO: 17:44:57 common.go:68: >>>> Verifying spawned population
INFO: 17:44:57 common.go:74: 0K <<<<<</pre>
INFO: 17:44:57 common.go:95: >>>> Generation: 0
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                              1 Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 4
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                 Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation:
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 9
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 10
                                                 Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 11 Run: 99
```

```
INFO: 17:44:57 common.go:95: >>>> Generation: 12 Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 13
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 14
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 15
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 16
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 17
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 18
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 19
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 20
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 21
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 22
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 23
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 24
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 25
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 26
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 27
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 28
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 29
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 30
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 31
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 32
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 33
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 34
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 35
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 36
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 37
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 38
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 39
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 40
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 41
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 42
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 43
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 44
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 45
                                                  Run: 99
INFO: 17:44:57 common.go:95: >>>> Generation: 46 Run: 99
```

INFO: 17:44:57 XOR.go:162: >>>> Output activations: [2.018353e-20 1.000000e+00 1.000000e+00 1.211289e-15]

INFO: 17:44:57 XOR.go:90: Generation #46 winner dumped to: ./out/xor/99/xor_winner_7-15

INFO: 17:44:57 common.go:124: >>>> The winner organism found in [46] generation, fitness: 16.000000

<<<<

Solved 91 trials from 100, success rate: 0.910000

Average

Trial duration: 233.568394ms Epoch duration: 1.738699ms

Generations/trial: 53.3

Champion found in 99 trial run

Winner Nodes: 7
Winner Genes: 15
Winner Evals: 9261

Diversity: 41
Complexity: 22
Age: 35
Fitness: 16.000000

Average among winners

Winner Nodes: 7.0
Winner Genes: 13.9
Winner Evals: 9633.3
Generations/trial: 48.7

Diversity: 38.076923 Complexity: 20.846154 Age: 25.439560

Fitness: 15.832682

Averages for all organisms evaluated during experiment

Diversity: 22.478840 Complexity: 14.251525

Age: 13.704519

Fitness: 7.975999

Efficiency score: 11.901923

>>> Start genome file: ./data/xorstartgenes
>>> Configuration file: ./data/xor.neat