GA PROGRAM OUTPUT (Sample Run):

```
[Running] python -u "/Users/benjaminberube/Desktop/ELEC 494/GA.py"
GENETIC ALGORITHM
('Population size: ', 100)
('Genome length: ', 20)
('Generation  ', 0, ': average fittness =', 10.08, ', best fittness = ', 18)
('Generation  ', 1, ': average fittness =', 10.13, ', best fittness = ', 18)
('Generation  ', 2, ': average fittness =', 10.26, ', best fittness = ', 18)
('Generation  ', 3, ': average fittness =', 10.32, ', best fittness = ', 18)
('Generation  ', 4, ': average fittness =', 10.37, ', best fittness = ', 18)
('Generation  ', 5, ': average fittness =', 10.39, ', best fittness = ', 18)
('Generation  ', 6, ': average fittness =', 10.5, ', best fittness = ', 18)
('Generation  ', 7, ': average fittness =', 10.58, ', best fittness = ', 18)
('Generation  ', 8, ': average fittness =', 10.68, ', best fittness = ', 18)
('Generation  ', 9, ': average fittness =', 10.68, ', best fittness = ', 18)
('Generation  ', 10, ': average fittness =', 10.69, ', best fittness = ', 18)
('Generation  ', 11, ': average fittness =', 10.79, ', best fittness = ', 18)
('Generation  ', 12, ': average fittness =', 10.81, ', best fittness = ', 18)
('Generation  ', 13, ': average fittness =', 10.9, ', best fittness = ', 18)
('Generation  ', 14, ': average fittness =', 10.97, ', best fittness = ', 18)
('Generation  ', 15, ': average fittness =', 11.06, ', best fittness = ', 18)
('Generation  ', 16, ': average fittness =', 11.13, ', best fittness = ', 18)
('Generation  ', 17, ': average fittness =', 11.23, ', best fittness = ', 18)
('Generation  ', 18, ': average fittness =', 11.28, ', best fittness = ', 18)
('Generation  ', 19, ': average fittness =', 11.32, ', best fittness = ', 18)
('Generation  ', 20, ': average fittness =', 11.38, ', best fittness = ', 18)
('Generation  ', 21, ': average fittness =', 11.42, ', best fittness = ', 18)
('Generation  ', 22, ': average fittness =', 11.47, ', best fittness = ', 18)
('Generation  ', 23, ': average fittness =', 11.49, ', best fittness = ', 18)
('Generation  ', 24, ': average fittness =', 11.54, ', best fittness = ', 18)
('Generation  ', 25, ': average fittness =', 11.58, ', best fittness = ', 18)
('Generation  ', 26, ': average fittness =', 11.61, ', best fittness = ', 18)
('Generation  ', 27, ': average fittness =', 11.64, ', best fittness = ', 18)
('Generation  ', 28, ': average fittness =', 11.73, ', best fittness = ', 18)
('Generation  ', 29, ': average fittness =', 11.82, ', best fittness = ', 18)
('Generation  ', 30, ': average fittness =', 11.89, ', best fittness = ', 18)
('Generation  ', 31, ': average fittness =', 11.92, ', best fittness = ', 18)
('Generation  ', 32, ': average fittness =', 12.0, ', best fittness = ', 18)
('Generation  ', 33, ': average fittness =', 12.03, ', best fittness = ', 18)
('Generation  ', 34, ': average fittness =', 12.06, ', best fittness = ', 18)
('Generation  ', 35, ': average fittness =', 12.09, ', best fittness = ', 18)
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('Generation  ', 47, ': average fittness =', 12.71, ', best fittness = ', 19)
('Generation  ', 48, ': average fittness =', 12.85, ', best fittness = ', 19)
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GA Successfully executed

[Done] exited with code=0 in 0.155 seconds
```