CS 101

Program #3

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**Algorithm**

* random----------------- import random
* Set the goal string (10-15 characters): ‘Kangaroos!’
* All strings have to be randomly generated
* Population need to be set at 500------------------- population [500]
* Each string in the population needs to be the same length as the goal string
* Create formula to find the fitness score of each string based on accuracy
* Assign the formula to a variable
* Put in a while loop and wait till it finds the exact goal string
* Ord(value) – ord(value) of goal strings, iterate for each character with absolute value
* Print each string in the population with its fitness score, strings with the lowest fitness score are better-----------

insert chr(random.randint(32,126))

* Average all 500 scores and find the potential parent strings (parent strings are higher than 300)
* The new offspring strings have a 1% chance of being mutated------------

if random.random() < 0.01:

# do the 1% thing

else:

# do the 99% thing

* Take the two lowest and make them the parents, 50 50 chance to iterate
* Iterate/start new population with previous strings to make a new population of 500 kids
* Breed those of the new population and reiterate till goal string found using------- population.append(item)
* Create string and print out how many lines, cycles it took to find goal string and print fitness score of 0
* Do you want to restart the program or not? Yes or no loop