Initialize score\_list and word\_list

Set test\_string to Hello World

Start a for loop for count to 500

random\_word is “”

random\_score is 0

for char in the length of test\_string

make letter a random character

add letter to the end of random\_word

add random\_word to word\_list

for char in length of test\_string

add the absolute value of the difference between test\_string and random\_word at\ char to score

add score to the end of score\_list

initialize parent1 and parent2 and best\_word to “”

set MIN to sys.maxsize

set MIN2 to 0

while test\_string != best\_word:

for cnt in range to 500:

if score\_list at cnt is less than MIN:

parent1 is word\_list at cnt

MIN is score\_list at cnt

else if cnt == 0

parent2 is word\_list at cnt

MIN2 is score\_list at cnt

else if score\_list at cnt is less than MIN2

parent2 is word\_list at cnt

MIN2 is score\_list at cnt

For cnt in range to 500

New\_word = “”

For char in range to the length of parent1

Random\_letter is random.random()

Random\_parent is random.random()

Mutation is random.random

If mutation is less than .1

Add a random character to new\_word

If random\_parent is less than .5

If random\_letter is less than .5

Add a letter that is one character higher than parent1 at char\ to new\_word

Else

Add a letter that is one character lower than parent1 at char\ to new\_word

Else

If random\_letter is less than .5

Add a letter that is one character higher than parent2 at char\ to new\_word

Else

Add a letter that is one character lower than parent2 at char\ to new\_word