```
 1 import math as m
 2
 3 i = 1
 4
 5 Seq = []
 6 Even = []
 7
 8 Phi = (1 + m.sqrt(5))/2
 9 phi = (1 - m.sqrt(5))/2
10
11 #Generates a Fibonacci Sequence
12 def GenerateSequence(n):
13
14     a = (Phi ** n - (phi)**n) / m.sqrt(5)
15     return round(a)
16
17 #Finds all values of the fibonacci sequence that are less
   than 4000000
18 while GenerateSequence(i) < 4000000:
19
20     Seq.append(GenerateSequence(i))
21     i = i + 1
22
23 x = 0
24
25 #Finds all fibonacci values that are < 4000000 and even.
26 while x < Seq.__len__():
27
28     if Seq[x] % 2 == 0:
29
30         Even.append(Seq[x])
31
32     x = x + 1
33
34 print(Even)
35 t = sum(Even)
36 print(t)
37
38
39
40
41
42
43
```