```
1 from PIL import Image
2 \text{ import sympy}
3 \ {\tt import} \ {\tt random}
4 im = Image.open("IMAGE HERE")
5 rgb_im = im.convert('RGB')
6 zero= "0"
7 width, height = im.size
8 x = sympy.symbols('x')
9 random_numbers=[]
10 for i in range(int(height)*int(width)):
11
       r=random.randint(-10000,10000)
       if r not in random_numbers: random_numbers.append(r)
13 z = x - x
14 \circ = z + 1
15 def linterpolation(y, xs=None):
       if xs is None:
16
17
           xs = list(range(1, len(y) + 1))
       assert len(y) == len(xs)
18
19
       result = z
20
21
       for j, (xj, yj) in enumerate(zip(xs, y)):
22
           polynomial = o
23
           for m, xm in enumerate(xs):
24
                if m != j:
25
                    polynomial *= (x - xm) / (xj - xm)
           result += yj * polynomial
26
27
       return sympy.expand(result).evalf()
28 \text{ def color(y)}:
       if len(str(y)) == 1:
29
30
           x_2 = zero + zero + str(y)
31
           return str(x_2)
32
       elif len(str(y)) == 2:
33
           x_3 = zero + str(y)
           return str(x 3)
34
35
       else:
36
           return y
```

```
37 def total(d,y,z):
38
      total_1 = str(d) + str(y) + str(z)
39
      return total_1
40 \text{ set1=[]}
41 for y in range(0, int(height)):
      for h in range (0, int(width)):
42
43
          r, g, b = rgb_im.getpixel((h, y))
44
           initial = total(str(color(r)), str(color(g)), str(color(b)))
45
           set1.append(float(initial))
46 print(random_numbers)
47 print(linterpolation(set1, random_numbers))
```