## Obrazek:



SHA-256:

stare: 69b842703e54a7c5264a41d899e7bd08b9f5de5921a7faf0de372bb2edf47d96 nowe: 5431f893244e27f1790329d756add6a9ef37f89a6bc4f5e<u>d73b4031834824d41</u>

MD5:

stare: 748ee6869e62fc89fabe9c9a6d1a4710 nowe: 5230b4217da2f3baf66f70240e605275

```
import hashlib
2
3 m1 = hashlib.sha256()
4 m2 = hashlib.sha256()
 5
6 with open("stickbug.bmp", "rb") as f:
        img1 = f.read()
8
9 img2 = bytearray(img1)
10 img2[0] = img2[0] ^ 1
11
12 m1.update(img1)
13 m2.update(img2)
14
15 md51 = hashlib.md5(img1)
16 md52 = hashlib.md5(img2)
17
18 print("SHA-256:")
19 print("stare: ", m1.hexdigest())
   print("nowe: ", m2.hexdigest())
20
21
22 print(len(img1))
23 print(len(img2))
24
25 for i in range(0, len(img1)):
26 -
       if img1[i] != img2[i]:
27
           print(img1[i],img2[i])
28
29 print("MD5:")
  print("stare: ", md51.hexdigest())
30
31 print("nowe: ", md52.hexdigest())
```