

Nr albumu: 167363, 173700, 164462, 164412

1. Hashe

1.1. Dane obrazki



Rysunek 1 kot.bmp



Rysunek 2 kotbit.bmp

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1.2. Kod liczący SHA-256

```
import hashlib

m1 = hashlib.sha256()
m2 = hashlib.sha256()

with open("kot.bmp", "rb") as f:
    img1 = f.read()

with open("kotbit.bmp", "rb") as f:
    img2 = f.read()

m1.update(img1)
m2.update(img2)

md51 = hashlib.md5(img1)
md52 = hashlib.md5(img2)

print("SHA-256:")
print(m1.hexdigest())
print(m2.hexdigest())

print(len(img1))
print(len(img2))

for i in range(0, len(img1)):
    if img1[i] != img2[i]:
        print(img1[i], img2[i])

print("MD5:")
print(md51.hexdigest())
print(md52.hexdigest())
```

1.3. Wynik

SHA-256:
d967ddcc99342d9b5e065a1497ca4fc3eb7304651da465d9801965843ecb3fef
4e35b432bb61ccfc9e9222b19e3a3d1706c8054c013e967e8f584a461c63093b
1814454
1814454
134 255
MD5:
706c1de8ca2c21e5bca6c587f0498c55
221968c2029e5cfb14587b99725d1f99