

```

1 import cv2
2 import numpy as np
3 from matplotlib import pyplot as plt
4 from PIL import Image
5 import os
6 import argparse
7
8
9 def ParseArguments():
10     parser = argparse.ArgumentParser(description="Sample usage of argparse (read image, display
11     color and bw, save bw) ")
12     parser.add_argument('--input', required=True, help='Input image (default: %(default)s)')
13     parser.add_argument('--output', default=None, required=False, help='Output image (default:
14     %(default)s)')
15     parser.add_argument('--text', default="Sample text", required=False, help='Sample text (default:
16     %(default)s)')
17     args = parser.parse_args()
18
19     return args.input, args.output, args.text
20
21 input_file, output_file, sample_text= ParseArguments()
22
23 print("Text: ", sample_text)
24
25 print("Input file =", input_file)
26
27 #Wczytanie i wyswietlenie obrazka
28
29 img = cv2.imread(input_file)
30
31 #Na figure 1 wyswietlim
32 plt.figure(1)
33 plt.imshow(cv2.cvtColor(img, cv2.COLOR_BGR2RGB))
34
35 #Robimy obrazek czarno-bialy - po prostu odczytujemy jeden kanal, wysw. go na figure 2
36
37
38 img_gray=img[:, :,0]
39 plt.figure(2)
40 plt.imshow(img_gray, cmap=plt.get_cmap('gray'))
41
42
43 #Pokazujemy wszystko:
44
45 plt.show()
46
47
48 #Jesli output_file podany - zapisujemy czarnobialy obrazek
49 if(output_file!=None):
50     print("out =", output_file)
51     cv2.imwrite(output_file,img_gray)
52
53

```