Introduction.

1. Network credentials: `Laboratorium-IoT /`
2. Github repository - github.com/tocet/prog_devices
3. Raspberry Pi pinout - pinout.xyz/pinout/pin16_gpio23/

Task 1. Display an image.

Download a JPEG image. Save the image in the project folder. In necessary change either the name of the download file or the filename in the following code. Run the code.

```
from tkinter import *
from PIL import Image, ImageTk

wnd = Tk()
wnd.title('Images')

t_img = ImageTk.PhotoImage(Image.open("wsg_logo.jpg"))
label_img = Label(image=t_img)
label_img.pack()

button_exit = Button(wnd,text="Quit",command=wnd.quit)
button_exit.pack()

wnd.mainloop()
```

Task 2. Test the following code.

```
import os

for images in os.listdir():
    if (images.endswith(".png")
            or images.endswith(".jpg")
            or images.endswith(".jpeg")):
        # display
        print(images)
        print(type(images))
```

Task 3. Create an image viewer.

- an image should be visible in the main window;
- add at least 2 touch buttons to change the currently displayed image;
- the intefcace should have at least 3 buttons - Next, Previous, Load Image;
- number of available images should be presented on the interface;
- number of the displayed image should be visible - eg. 4/20

Attention: Presenting this solution is worth +1 (0.2 per implemented functionality) to the final course score.

Extra task (+1 point to final score): Connect SSD1306 OLED display to the RPi 4. Present number of images in the folder, current file name and number on the display.

For those interested:

1. Pillow documentation:

   pillow.readthedocs.io/en/stable/

2. GPIO Zero documentation:

   gpiozero.readthedocs.io/en/stable/installing.html