Laboratory work 6

Assignment:

1. Calculate the variant number using the formula:

`N = ord(X) % 5 + 1,`

where X is the first capital letter of your name in Latin transcription. For example, for James Bond, the variant number will be N = 5

```
In [86]: N = ord("J") % 5 + 1
         N

Out[86]: 5
```

2. Download data from a file `lab6.xlsx` to the dataframe

3. Get your variant data from the dataframe using indexing tools.

4. Create a function that takes data from the dataframe as arguments and returns a reduced image with added "round glasses" and saves the resulting image to a file.
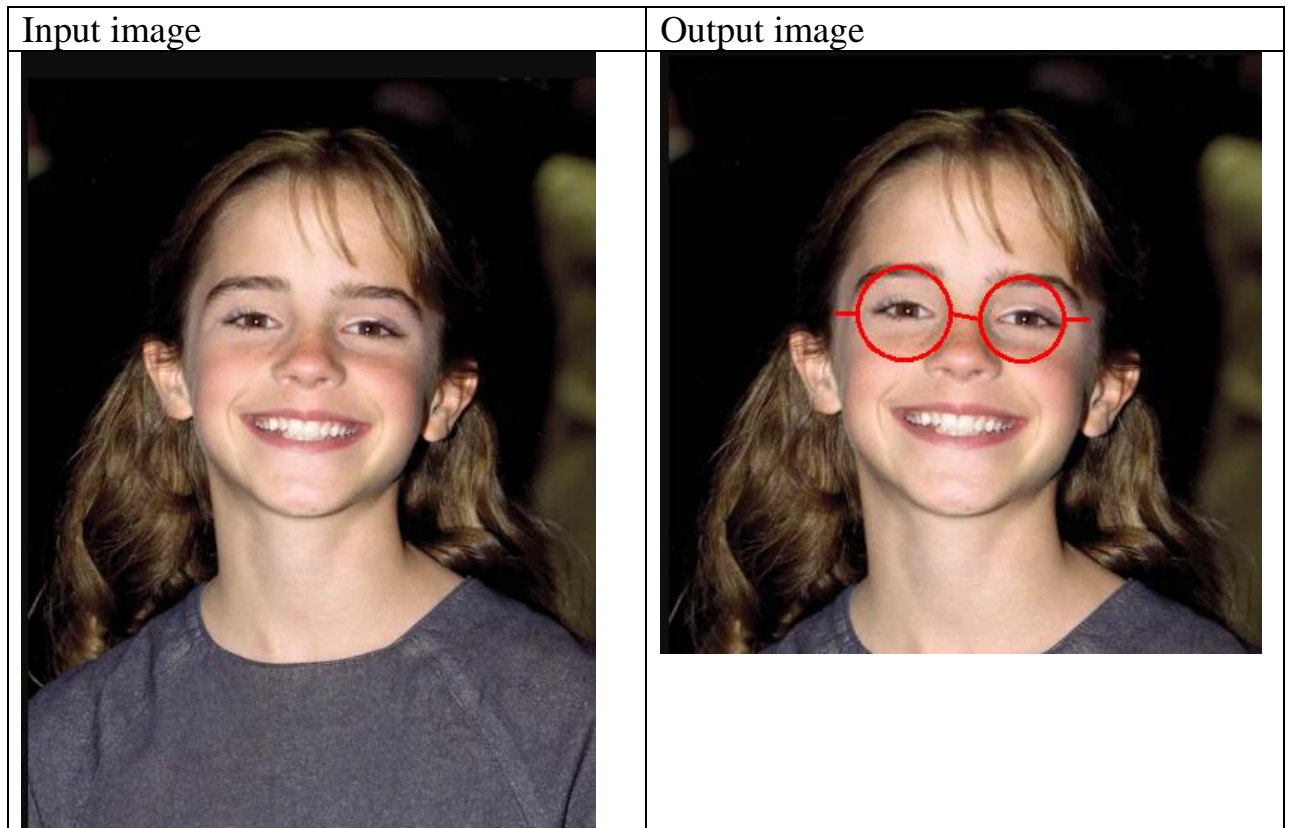
Notes

1. When reducing the image, place the face in the center of the image

2. To detect the face and eyes, use Haar Cascade from the OpenCV library.

3. Use PIL and/or OpenCV libraries for drawing (according to your choice)

4. As a result, upload a Jupyter notebook with task, code and output images to the Google Classroom.

Example

Input image	Output image

Calculation of points to evaluate the work

N	Done	Points
1	Loading the contents of an .xlsx file into a dataframe	5
2	Programm access to a dataframe to receive data for a personal task	10
3	Finding a face in the image	10
4	Finding eyes in the image	10
5	Setting the parameters for correct eye finding	5
6	Adding a "rim" to "glasses"	5
7	Adding a "bridge" to "glasses"	10
8	Adding "temples" to "glasses"	10
9	Placing the face in the center of the reduced image	5
10	Reducing the image	5
11	Setting the correct color of "glasses"	5
12	Setting the correct line thickness	5
13	Adding the ability to change the parameters of the "glasses" (color, thickness) when changing the values in the dataframe	10
14	Availability of feature tests on other images (of your choice)	5