Write a Python script that calculates approximations of an image using Singular Value Decomposition. The input image is available at

https://drive.google.com/file/d/1lMLd2ZLkC-CAL7\_pzZjXa-dEbwLTQzcU/view?usp=sharing

You may use library functions to read images from the file and calculate Singular Value Decomposition.

1. The image should be read in greyscale (see e.g. <https://matplotlib.org/3.3.1/api/_as_gen/matplotlib.pyplot.imread.html>)
2. For singular value decomposition, see https://numpy.org/doc/stable/reference/generated/numpy.linalg.svd.html

Submit the following files:

1. Source code written in **Python**
2. Doc or pdf file with image approximations constructed using k = 1,5,10,50,100 singular values

iCollege does not allow to upload a source code. Therefore, please archive these files, and then add an extension *.txt* to your archive.

For example, you have archived your files of the source code into *SuperStudent.zip*

Then, you have to rename it as ***SuperStudent.zip.txt*** and upload on iCollege.