COLOR BY STUDENTNUMBER (/12)

In this exercise, you will convert you student number (7 ordered numbers) to a 14x14 matrix of numbers in which you "hide" your number, to then afterwards convert said matrix to a picture. Note: you only need to do this for your own student number! We will not give any further input. The concrete explanation can be found below.

Three examples are:

r7654321	r8041254	r9452555

This exercise is structured so that you can skip certain steps, and still obtain an outcome. Obviously, this will result in the loss of marks, but it shouldn't prevent you in finishing the exercise.

For this exercise, you will make two Python scripts: **studentnumber.py** and **color.py**. The scripts need no input, you start from your own student number.

1. **STUDENTNUMBER.PY (/5)**
   Convert the **7 digits of your student number** to a 14x14 matrix by following the following rules (**/4**):
   a. Each **digit** of your student numbers corresponds to **1 column** in the resulting matrix.
   b. Between two consecutive digits, there is **1 column** each time.
   c. If the **middle digit** is even, you'll start in the **first column**, otherwise you'll start in the **second column**.
   d. Each digit determines how ofter it appears consecutively in the column
      → 0 appears 0 times, 1 appears 1 time, 2 appears 2 times, …
   e. Where you start in the column is up to you.
   f. The rest of your matrix is filled up with random numbers from **0 till 195.**
   g. ->

   You write out your matrix to a **textfile** called studentnumber_<number>.txt **(/1)**

2. COLOR.PY (/7)

Read in the textfile you made in the previouos subquestion (studentnumber_<number>.txt) **(/1)**

Go looking for a **Python** library with which you can make your own images, and install it. You will make an image based upon the following rules **(/5)**:

a. The **picture** measures **140 px x 140 px**.
b. The **last digit** of your student number **determines the color** according to the table below.
c. The **numbers in your matrix determine the intensity.** In other words: the picture will always get a gradient effect wherein the digits of your student number will be striking.

Save your **image** as **<number>.jpg. (/1)**

LAST DIGIT	COLOR		R	G	B
0		YELLOW	255	255	0
1		ORANGE	255	128	0
2		RED	255	0	0
3		PURPLE	255	0	255
4		BLUE	0	0	255
5		TURQUOISE	0	255	255
6		GREEN	0	255	0
7		DARK GREEN	0	128	0
8		BROWN	128	0	0
9		GREY	0	0	0