

**Carleton University**  
**Department of Systems and Computer Engineering**  
**SYSC 1005 - Introduction to Software Development - Fall 2017**

**Term Project - Photo Editor**

**Requirements**

1. Review your solution to the exercises in Labs 5, 6 and 7. Finish any exercises you didn't complete.
2. Make sure that each function has a docstring containing:
  - a type contract
  - a brief description of what the function does. (Remember, this description does not explain the function's implementation details/algorithm.)
  - at least one example of how to call the function from the Python shell
3. Make sure that each function follows the widely-accepted conventions for good Python programming style. For example:
  - function names and variable names should be descriptive (your functions shouldn't contain a sequence of variables named `a1`, `a2`, `a3`, `a4`, etc.!)
  - use one space to separate operands and operators, use once space to separate each argument in an argument list; e.g., write  

```
new_colour = create_color(r // 2, g // 4, b)
```

instead of  

```
new_colour=create_color(r//2,g//4,b)
```

For examples of good programming style, review the examples in *Practical Programming* and the Python code posted on cuLearn.

## Submitting Your Project

Log in to cuLearn and submit `filters.py` and `photo_editor.py`. To do this:

1. Click the **Submit Project** link. A page containing instructions and your submission status will be displayed. After you've read the instructions, click the **Add submission** button. A page containing a **File submissions** box will appear. Drag `filters.py` and `photo_editor.py` to the **File submissions** box. **Do not submit files with different names. Do not submit another type of file (e.g., a ZIP file, a RAR file, a .txt file, etc.)**
2. After the icons for the files appear in the box, click the **Save changes** button. At this point, the submission status of your file is **"Draft (not submitted)"**. If you're ready to finish submitting the file, jump to Step 2.2. If you aren't ready to do this; for example, you want to do some more work on the project and resubmit it later, you can leave the file with "draft" submission status. When you're ready to submit the final version, you can update your "draft" file submission by following the instructions in Step 2.1, then finish the submission process by following the instructions in Step 2.2.
  - 2.1. You can replace or delete a previously submitted file by clicking the **Edit my submission** button. The page containing the **File submissions** box will appear.
    - 2.1.1. To overwrite a file you previously submitted with a file having the same name, drag another copy of the file to the **File submissions** box, then click the **Overwrite** button when you are told the file exists (**"There is already a file called..."**). After the icon for the file reappears in the box, click the **Save changes** button.
    - 2.1.2. To delete a file you previously submitted, click its icon. A dialogue box will appear. Click the **Delete** button., then click the **OK** button when you are asked, **"Are you sure you want to delete this file?"** After the icon for the file disappears, you can drag another file to the **File submissions** box. When you're done, click the **Save changes** button.
  - 2.2. Once you're sure that you don't want to make any changes, click the **Submit assignment** button. A **Submit assignment** page will be displayed containing the message, **"Are you sure you want to submit your work for grading? You will not be able to make any more changes."** Click the **Continue** button to confirm that you are ready to submit your lab work. This will change the submission status to **"Submitted for grading"**.

**Deadline:** 11:55 p.m. on the last day of classes (Dec. 8, 2017). Late submissions will not be accepted.