

# CST 205 Homework 3

Due March 9, 2018 at 11:55pm

## Task

Using PyQt5, create a GUI for an *enhanced* image search engine. The user should be able to enter a search term into a QLineEdit widget. A QComboBox will allow the user to select one of the following image manipulations: sepia, negative, grayscale, thumbnail, or none. For the thumbnail, it is acceptable to reduce the image size by one half.

Once the user presses the “Search” button (a QPushButton widget), your GUI should either display the image result in the same window *or* in a new window.

Use the images provided [here](#) and the image information provided [here](#).

## Search Rules

Your search should work as follows: Given a search term, search through the image title and image tags looking for matches. Your program should maintain a record of matches for each image. The image with the highest number of matches should be returned. If multiple images satisfy this condition, the image with the title that comes first alphabetically should be returned.

For example, if the search term is “cactus near a beach”, your program would find 2 word matches for the image “Quiet at dawn, Cabo San Lucas” and 1 word match for the image “View from our rental”. As another example, if the search term is “building in Italy”, the image with the title “Lombardia, september 2017” should be returned (and not “Palazzo Madama”). (Both images have 2 word matches.)

The search should not be case sensitive.

## Deliverable

Submit all source code files and a screenshot of your GUI. Each source code file should have a header comment including your name, the date, the course name, and a brief description of what the code does.

**Note:** All images used have an [Attribution-NonCommercial License](#).