

# COMP201: INTRODUCTION TO COMPUTING

## PROGRAMMING ASSIGNMENT #2

**Announcement: OCT 16, 2017**

**Submission deadline: OCT 30, 2017**

### Description

In this assignment you will perform operations on images and sound in order to better understand multimedia processing and advanced skills in computer programming.

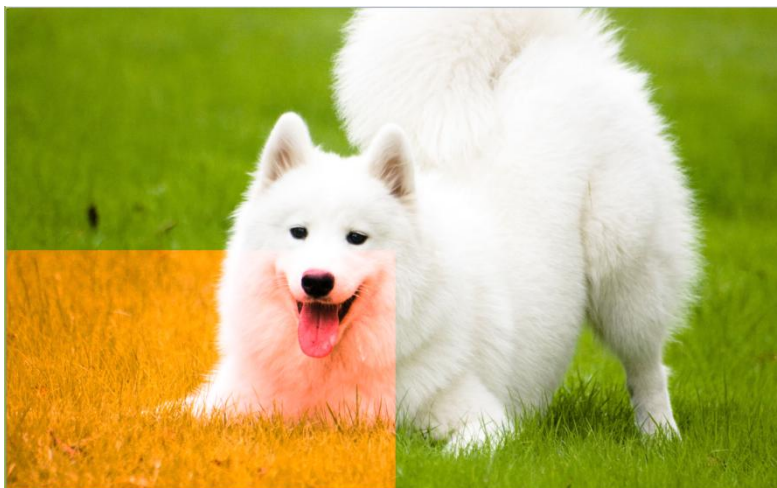
#### Part I – Image Processing

1. [Taken from wikipedia: [https://en.wikipedia.org/wiki/Chroma\\_key](https://en.wikipedia.org/wiki/Chroma_key)] Chroma key compositing, or chroma keying, is a visual effects / post-production technique for compositing (layering) two images or video streams together based on color hues. The technique has been used heavily in many fields to remove a background from the subject of a photo or video – particularly the newscasting, motion picture and videogame industries.

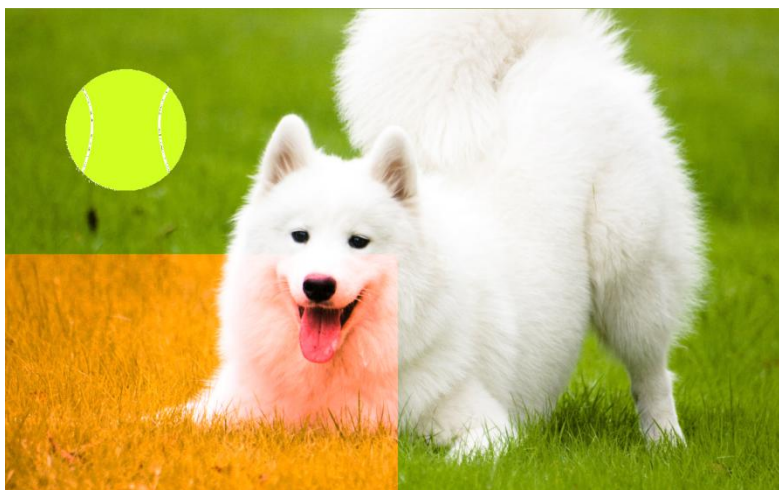
**Download any images you find interesting and create your own chroma keying. For example assume that we want to put the character in “HarryPotter.jpg” (below left) in the scene in “scene.jpg”.**



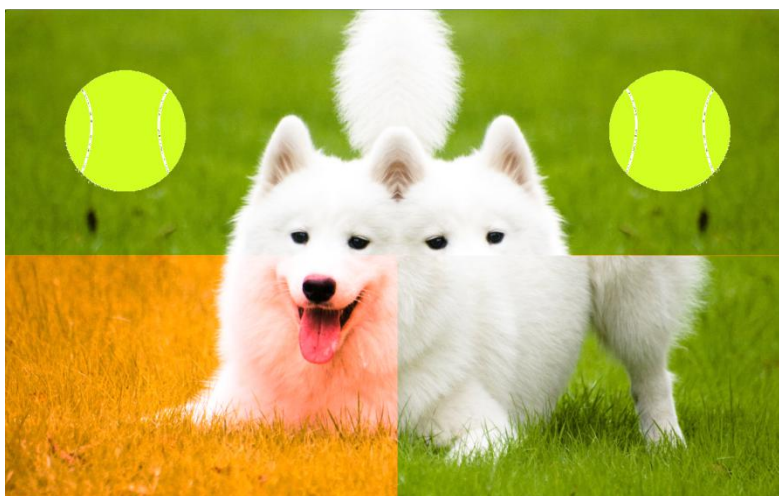
2. a) Load an image, and make red enhanced for the left bottom of the image, for example, “Samoyed.jpg”:



b) Add another image to the original image, for example, add “ball.jpg” to “Samoyed.jpg”:



c) Mirror the left upper quarter to the right side, as:



**Submission (electronic submission through Moodle only)**

Please create a zip file containing your Python code, a readme text file (.txt). In the readme file document the features and functionality of the application, and anything else you want the grader to know.

**Evaluation Procedure**

You **MUST** demonstrate your solution program to the lab instructor during lab hours. You must run your submitted code, demonstrate its full functionality and answer questions about the Python programming aspects of your solution. Major marking is done on the spot during demonstration. Your code will be further checked for structure, non-plagiarism, etc. However, **ONLY** demonstrated submissions will receive marks. Other submissions will not be marked.