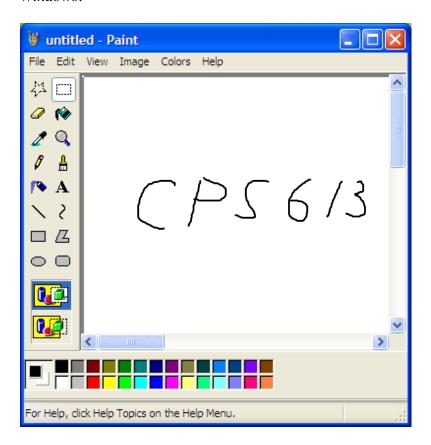# EECS 3461: Assignment 2
Due: Tuesday, October 21, 2014

Motivation

This assignment will allow you to practice using advanced Java Swing features to develop an image-editing application.

Introduction

Below is a snapshot of a *Paint* application from an earlier version of Microsoft's *Windows*.

Compared to other image editing applications, *Paint* is rather simple. However, for the purposes of this assignment, you only need to concern yourself with only a few of its features; the screenshot above is provided here merely as an illustration for a program with image editing capabilities.

Description

In this assignment you will have to implement an image editing application, with the following features and requirements:

- it should start with an clear canvas;
- it should use a file chooser to allow to open a file (of formats **jpg**, **png** and **gif**), replacing the current canvas;
- it should use a colour chooser to enable selecting a colour
- it should have a toolbox or a toolbar, which should contain the following required commands: pencil, brush, eraser, and line;
- it should have at least one element with a custom look-and-feel (mention it in a comment to your submission) and at least two elements should share the same model (e.g., a menu item and a toolbox icon).

You don't have to (but you may) implement the following:
- text insertion;
- shapes;
- saving a file (but think how to handle opening a file when the canvas is not clear);
- other features of Paint that are not required for the functions mentioned above.

If you have any questions, do not hesitate to contact the instructor (andriyp@cse.yorku.ca).

Grading
The assignment is worth 6 % of the final grade. The points will be given as follows:
- 1 point if application compiles without errors and warnings;
- 3 points: if compiles and positions the components within its window in a reasonable fashion (e.g., proper gaps, sizes, symmetry, …);
- 4 points: good widget positioning, and all basic functionality functions correctly, e.g., drawing, erasing, opening;
- 6 points: if the application uses proper mnemonics and accelerators, handles resizing well, allows for flexibility in file dimensions, is robust, prevents errors, etc.

Submission
Submit the code electronically via `submit` command (or equivalent). **Name your main class** (the one with main function) **a2**. Also submit a **readme.txt** file in which you mention for which elements you customized the look and feel. Late penalty is 20 % per day. Submission 5 days or more after deadline will be given a mark of zero (0). Contact the instructor *in advance* if you cannot meet the deadline explaining your circumstances.

Academic Honesty
Direct collaboration (e.g., sharing code samples) is not allowed (plagiarism detection software may be employed). However, you're allowed to discuss the requirements, approaches you take, etc.

State all sources you use (online sources, books, previously written code, etc.).