

## CS 1316 – Homework 4 – Simple Animation

**Due: Monday Feb 15th, 2009 before 6pm.**

**THIS IS AN INDIVIDUAL ASSIGNMENT!**

You should work individually on this assignment. You may collaborate with other students in this class. Collaboration means talking through problems, assisting with debugging, explaining a concept, etc. You should not exchange code or write code for others. For individual assignments, each student must turn in a unique program. Your submission must not be substantially similar to another student's submission. Collaboration at a reasonable level will not result in substantially similar code.

### Simple Animation

After several failed attempts at photo manipulation whilst working for Adobe, you've been transferred to the art department to produce animations. They have asked you to create a stand-alone object called SimpleAnimation. Your object should have a main method that demonstrates how it is used and will create and play an animation when it is run.

- Your SimpleAnimation object must have a constructor that can be called with no parameters, and when called it should create and play your generic animation.
  - Your main method should simply create a SimpleAnimation object using the default constructor that takes no parameters.
- Animation Specifications
  - The FrameSequencer must contain at least 120 frames and run at 24 frames/second (for a total of at least 5 seconds).
  - The overall animation should have a minimum size of 500x500 and a maximum size of 1024x768.
  - There must be at least three moving elements in the animation, although you are encouraged to add more.
  - Images other than the background should be composed using chromakey, so that they do not have a square border.
- Your SimpleAnimation object should also support at least one other constructor that accepts parameters of your choosing. These parameters are used to modify the animation

that is created. For example, you may include a parameter that specifies how many sprites will be animated on the background, or the speed of your animation, or the color of specific elements.

- Suggested features your parameters may change/modify:
  - Speed, location or color of sprites.
  - Speeding up, slowing down elements in the animation.
  - Add ways to apply various effects to the animation
    - Grayscale
    - Color wash
    - Anything else you can think of...
- You should provide comments on how to use your different constructors so that the TA's understand what each parameter does.
- Chromakey should be well-tuned such that the sprites do not have excessive border pixels or “green fuzz” around them.

### Turn-In:

Turn in your SimpleAnimation.java file and any original artwork files it needs to run.

If you use files from the provided media-sources file that comes with the textbook, you may assume the TA's already have access to those files and do not need to provide them. You may assume that the TA's have already set the “media path” in the file chooser appropriately.

- I.e. if their media-source directory is located at D:/cs1316, assume they have already run `FileChooser.setMediaPath("D:/cs1316/media-sources/")` so that a call to `FileChooser.getMediaPath("jungle.jpg")` will return the full path of “D:/cs1316/media-sources/jungle.jpg”.

## Grading Criteria:

- Main method produces a working animation 10pts
- Animation
  - Contains min 3 moving elements 20pts
  - Chromakey used correctly 10pts
    - Does not produce excessive “fuzz” 5pts
  - Background picture meets specifications 10pts
  - Correct length 15pts
- Additional Functionality
  - Alternative constructors function as intended 20pts
  - Commented thoroughly 10pts

Especially cool, entertaining, or technically challenging animations may earn extra credit points, so show us your best stuff!