CSCx171 Laboratory Assignment #3
Importing Graphics and Simple Interactivity

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1   Objective

In this assignment, you will create an interactive Flash animation. You will create buttons that when pressed will use Actionscript to play various animations of graphics imported into Flash.

2   Resources

I provide some resources and give links to others in the next section. You are going to have to write a few lines of Actionscript in this assignment. You may want to read about (via Internet searching or in Flash's builtin help system) the following Actionscript commands:

- stop()
- gotoAndPlay()
- gotoAndStop()

Here are some additional resources:

- http://www.adobe.com/designcenter/video_workshop/html/vid0135.html
- http://www.adobe.com/designcenter/video_workshop/html/vid0133.html

3   Background Information

This section will give you some basic information about importing graphics and creating buttons that you will use in the creation of your final deliverable. Also, please search the Internet for other tutorials you find on these topics and post links to those tutorials in the class forums.

3.1   Importing Graphics

While some of you may be able to create interesting graphics using the tools in Flash, I figure most of you would benefit from being able to import graphics from various sources to improve the look of your game. First, we will look at simple methods for importing graphics in standard formats into your application and then how to manipulate those graphics in Flash.

3.2 Importing Standard Formats

There are two simple ways to import graphical images into your Flash application:

1. Click on the File Menu, choose Import, and then choose "Import to Stage". You will be presented with a dialog to select the file you want to import.

2. You can cut and paste an image on to your stage using your systems clipboard.

The bitmap you import can be in many different standard formats, such as GIFF, JPEG, and PNG, and will automatically be added to your applications "Library".

3.3 Breaking Apart Bitmaps and Fills

If you want to use a bitmap as a fill pattern, you need to do two things:

1. Break the bitmap apart
   (a) Select the bitmap
   (b) Click on the Modify menu, then choose the "Break Apart" option.
2. Use the eyedropper tool to create a new fill pattern

Note: Breaking apart a bitmap will also provide you more editing options.

3.4 Tracing Bitmaps

You may want to trace your bitmap to convert it into a collection of shapes. Flash will attempt to group areas of your bitmap based on analyzing its color. Tracing a bitmap may make it easier for you to manipulate and change it. To trace a bitmap do the following:

1. Select the bitmap

2. Click on the Modify menu, then choose "Bitmap", and then choose "Trace Bitmap".

3. A dialogue box will appear and ask you to choose color thresholds Flash will use in trying to determine what areas to group together. You should experiment with different values until you achieve the desired affect.

3.5 Buttons

Buttons are a great way to add interactivity to your Flash application. There are two ways to create buttons in flash. You can create your own buttons or use one of the built-in button components. I recommend you try both methods. The resource links I gave above provide instruction on using Flash's built-in button components. Below, I provide information on creating your own custom buttons.

Buttons are easy to create. All you need to do is select an object on your stage, right click it, choose "Convert to Symbol", name the button and select the type to be "button", and hit OK. Buttons have four states: Up, Over, Down, and Hit. These states correspond to what the button looks like in the up position, when a mouse is over it, and when the button is pressed. The Hit state allows you to control what part of a button can be clicked or to further specify actions, such as running Actionscript code, that should be taken when clicked. You can view the button states by double clicking on the button.

To learn more about buttons, do the following tutorial:

- http://livedocs.adobe.com/flash/9.0/UsingFlash/help.html?content=WSd60f23110762d6b883b18f10cb1fe1af6-7dbf.html

If you find a better, or more intuitive, tutorial, please post its link in the class forums.

4   Assignment

You are to create an interactive Flash animation that meets the following requirements:

1. Your application needs to have a minimum of 3 buttons where:

    (a) at least one button triggers a motion tween.
    (b) at least one button triggers a shape tween.

2. All buttons have a different look for the Up, Over, and Down states.

3. You import at least two graphics into your application and use them in an animation.

Below are two examples of an application that conforms to the given requirements. The first uses custom buttons and the second uses built-in buttons.

- `http://www.csc.calpoly.edu/~mhaungs/courses/CSCx171/labs/3lab/lab3a.html`

- `http://www.csc.calpoly.edu/~mhaungs/courses/CSCx171/labs/3lab/lab3a_CS3.html`

Deliverables

You will demo your interactive application in lab on October 23. In addition to the demo, you should be able to answer or demonstrate the following:

1. What resources did you use?

2. Make a small change to your application.

3. Choices you made in your implementation.

NOTE: Lab on October 23 is mandatory and you will receive a 0 if you do not demonstrate your work in lab on that day

Assessment

- Demonstration (7 pts)

- Follow-up Q&A (3 pts)