CISC 110 Lab 3

General Instructions for All Labs/Assignments: Same instructions as Lab 2!

Specific Instructions for Lab 3

In this lab, you will complete the first portion of Assignment 3. In your assignment, you will create an interactive birthday card for a friend or relative.

In the lab portion, you will create a simplified version. It will have a birthday message of your choice that gradually fades in from completely transparent to fully opaque. It will also have a mini movie of something that has one or more wheels (a vehicle?) that you will program to move across the screen with its wheels turning.

You will use a frame loop, not tweens, to make the message fade in via the alpha property, the vehicle move across the screen via its x property, and the wheels turn via their rotation property. You will have two MovieClips, one for the message and one for the vehicle. Each of these will have the standard MovieClip properties, for example the x and y position and the alpha value. The vehicle will also have a custom property for its velocity and the message will have a custom property for its fade in amount.

Look at *4.4 Case Study 1: Animated City Scene* on page 180 of your text for an example that is similar - both the design and the coding.

Here are the required functions:

Function Name	Description
`Assign3`	The main function as well as the class constructor. This function is responsible for triggering the initial ENTER_FRAME event
`OnFrameEvent`	The event handler for an ENTER_FRAME event. This function is responsible for all of the animations in this application.

Here are the required display objects:

Object Identifier	Description	Type of Object
`Message`	MovieClip instance: Used to display the birthday message. This must be a MovieClip so its `alpha` property can be modified with program code to fade in.	MovieClip
`Vehicle`	MovieClip instance: This symbol is composed of multiple MovieClips: one for the body and one for each wheel. Each wheel has an instance name, for example `wheel1` and `wheel2` if it has two wheels.	MovieClip

Here are the required properties for the MovieClip instances:

MovieClip Instance	Description
`Message`	`alpha`: current visibility of `Message` as it gradually fades into view
	`fadeInAmt`: the fixed value for the amount the message will fade in at each frame
`Vehicle`	`x`: the current location of `Vehicle` on the x-axis
	`velocity`: the fixed velocity of the vehicle on the x axis (the amount the vehicle will move at each frame)

Here are the steps for you to complete:

1. Create a new folder called `Assign3` in your CISC 110 folder. Then create a new ActionScript 3.0 file called `Assign3.fla` and save it in your `Assign3` folder (`Create New | ActionScript 3.0`).
2. Insert a new MovieClip symbol and create a birthday message. Drag an instance of it onto the stage and give it the instance name `Message`.
3. Insert a new MovieClip symbol and create a wheel.
4. Insert a new MovieClip symbol and create something that has one or more wheels, using the wheel symbol you just created for each wheel. While you are still in the editing window for the new symbol, select each wheel and give it an instance name: `wheel1`, `wheel2`, `wheel3`, ... Drag an instance of the new symbol onto the stage and give it the instance name `Vehicle`.

5. Specify your document class to be `Assign3`. This tells your Flash file (`.fla`) to link to your ActionScript file (`.as`).
6. Download the file `Assign3.as` from the CISC 110 website under Lab 3. This contains a starting template for your program script.
7. Make the changes below to your `Assign3.as` file. After each change, save your .as file and run your movie. If you don't save it first, you will be running the old version. Use `trace` statements wherever useful to check the values of variables.
8. Within your constructor function, `Assign3`, under the comment, `// TASK 1: INITIALIZE THE MOVIECLIP INSTANCES ON STAGE`, set the velocity of Vehicle to 10 (10 pixels), the alpha of Message to 0 (0 %) and the fadeInAmt to .01 (1%).
9. Under the comment, `// TASK 2: ADD A LISTENER TO LOOP WITHIN THE FRAME`, add a Event.ENTER_FRAME listener to the `stage` and specify that the `onFrameEvent` function be called each time the event occurs. (Don't follow the text example exactly for this. Use "`stage.addEventListener` ..." , not "`addEventListener` ...")
10. Within your `onFrameEvent` function, under the comment, `// TASK 1: DRIVE THE VEHICLE ACROSS THE STAGE`, add the velocity to the x value of your vehicle and to the rotation value of each wheel.
11. Under the comment, `// TASK 2: MESSAGE GRADUALLY APPEARS`, add the fade in amount to the alpha value of your message.
12. Run your movie.

Lab 3 Marking Scheme (1% of final mark)

Marked out of 5:

1 mark - One MovieClip, named `Message`, with the birthday text, and a custom property, `fadeInAmt`

1 mark - One composite MovieClip, named `Vehicle`, that has a body and one or more wheel MovieClips, and a custom property, `velocity`.

1 mark - Frame loop causes `Message` to gradually fade in via adding `fadeInAmt` to its alpha property

1 mark - Frame loop causes `Vehicle` to move across stage via adding `velocity` to its `x` property

1 mark - Frame loop causes each wheel of `Vehicle` to rotate via adding `velocity` to its `rotation` property