

CISC 110 Assignment 1

In this assignment, you will create an animation of a tree that starts out as a winter tree with no leaves. There are two buttons. One, called `HelloButton`, causes the tree to grow leaves. The other, called `GoodbyeButton`, causes the tree to lose its leaves and fall over. The buttons also control the text that is displayed in a text box.

`HelloButton` displays the message "Hello Tree". `GoodbyeButton` displays the message "Goodbye Tree".

As you do this assignment, remember to save your work after each step, and also to save your work periodically in separate files, multiple versions in multiple files, so you can easily return to any stage if you run into problems.

Here are the steps:

1. In the lab, create the dynamic text field that displays messages and another static text field that is only a title. Also create the two buttons, but only make them display the messages. For details, see the Lab 1 instructions.
2. In your `assign1.fl` file, create a new `MovieClip` symbol for the winter tree. Draw a winter tree with a trunk and bare branches. Create a new layer on your timeline called `Tree` and add an instance of your tree to the left side of the stage.
3. Create a new `MovieClip` symbol for a leaf.
4. Add a new layer on your timeline for your leaves, called `Leaves`. Create an animation of leaves growing (appearing) on the tree using frame by frame animation. On each keyframe, add a leaf instance, varying each in different ways, for instance position, size, and rotation. Make the leaves appear gradually by adding blank frames between the keyframes. You could also slow down the animation by reducing the frame rate.
5. Create an animation of the leaves falling to the ground either using frame by frame animation or a tween that makes them fall all at once, your choice. It's ok if the leaves drop below the stage and disappear.
6. Create an animation of the tree falling over using a motion tween. Rotate the tree to have it laying on the ground in the end frame.
7. Play your movie. You should see a bare winter tree that grows leaves, then drops its leaves and falls over. The next step is to make the buttons control the animation. `HelloButton` will start the animation playing at the first frame. `GoodbyeButton` will start the animation playing at the frame where the leaves start to drop. Stop actions will be added to the timeline to prevent the entire animation repeatedly playing when a button is pressed. The stop actions will be added to the timeline in `assign1.fl`. All other ActionScript will be added in your ActionScript file, `assign1.as`.
8. Add a layer on your timeline called `Actions`. Open the Actions window. Select the last frame of your animation that adds leaves, but select it on the `Actions` layer. Add a stop action there by typing `stop();` in the Actions window while that frame

is selected in the Actions layer. Also add a `stop` action on the last frame of your animation that makes the tree fall over.

9. Open your `assign1.as` file. Add a `gotoAndPlay` action inside the `hello` function to make your animation go to frame 1 when `HelloButton` is pressed:
`gotoAndPlay(1);` To be inside the `hello` function, you must place the `gotoAndPlay` action after the open curly brace at the end of the first line of the `hello` function and before the close curly brace that follows the line `Output.text = "Hello tree!"`; Create a new line between those braces for the action.
10. Add a `gotoAndPlay` action inside the `goodbye` function to make your animation go to the first frame where leaves start to drop when the `GoodbyeButton` is pressed. For instance, if the leaves start to drop at frame 16, the command to add is:
`gotoAndPlay(16);`
11. One use of `trace` statements is to give you information about which part of your script is being executed when. Add a `trace` statement inside your `hello` function to show that when `HelloButton` is pressed, the `hello` function is executed:
`trace("Hello Button pressed");`
12. Once your movie is working the way you'd like, publish it and upload it to the CISC 110 web space.

Assignment 1 Marking Scheme (2% of final mark)

Marked out of 10:

2 marks: Frame by frame animation of leaves growing on the tree

2 marks: Animation of the leaves dropping and the tree falling (rotating to the ground via a tween).

2 marks: `HelloButton` causes the tree to grow leaves. Animation stops with the fully leafed-in tree on stage.

2 marks: `GoodbyeButton` causes the tree to drop leaves and fall over. Animation starts with fully leafed-in tree on stage and ends with the barren tree laying on the ground.

1 mark: Trace statement displays a message in the Output Window whenever `HelloButton` is pressed and therefore whenever the `hello` function is executed.

1 mark: Assignment 1 is published and uploaded on the CISC 110 website.