

Lab 16 – XNA Audio Without XACT

Instructions: Complete each problem. If you're struggling with a problem, feel free to ask questions on the class forum.

This lab is optional, but it gives you valuable programming experience. You should definitely complete the lab if you can.

Problem 1 – Create a MonoGame project

Start up the IDE and create a new MonoGame project named Lab16. Save the project in a reasonable location on the computer.

Download or create 4 different wav files and save them in the Content folder.

Rename the wav files to upperLeft, upperRight, lowerLeft, and lowerRight.

Save the project.

Problem 2 – Add audio content and load audio content

Start up the IDE.

Add the wav files as content to your project. Use the instructions from the Adding Content to a MonoGame Project link on the MonoDevelop Resources course page as necessary (the instructions talk about xnb files, but the steps work for wav files as well).

Add four `SoundEffect` fields at the top of the `Game1` class.

In the `Game1 LoadContent` method, add code to load the four sound effects into your four fields.

Problem 3 – Play sound effects for left clicks on screen

Make the mouse visible in the `Game1` constructor.

In the `Game1 Update` method, add code to get the current mouse state.

In the `Game1 Update` method, add an if statement to check whether the left mouse button is pressed. If it is, play the appropriate sound effect based on which quadrant (upper left, upper right, lower left, or lower right) the mouse is in.

This may seem to work if you click the mouse normally. Now just hold the left mouse button down – the game starts playing the sound effect on every update, leading to lots of nasty overlap. Let's fix this to actually use mouse clicks, not mouse button presses.

Add a field to the `Game1` class to tell whether a mouse click was started and initialize the field to `false`.

In the `Game1 Update` method, add an if statement right after you get the mouse state. If the left mouse button is pressed and the click started flag is `false`, set the click started flag to `true`. Otherwise (else if), if the left mouse button is released and the click started flag is `true`, set the click started flag to `false` and move the code that plays a sound effect based on the quadrant into this else if clause.