Lab 5 – XNA Basics

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.

If you run into problems, you should look at the Section 5.3 in the book before asking someone else for help.

Problem 1 – Create a project and add content

XNA Users

Start up the IDE and create a new Windows Game (4.0) project named Lab5.

Save the project in a reasonable location on the computer − and remember where that location is!

Add any three image file you like to the Lab5Content project folder where you saved the project on your computer in the previous step.

Add the images to the Lab5Content project by right-clicking the project, selecting Add -> Existing Item …, selecting the image files, and clicking the Add button.

MonoGame Users

Start up the IDE and create a new MonoGame solution named Lab5.

Mac Users: Read the "Creating a New Mac MonoGame Solution" document on the MonoDevelop Resources course page to learn how to do this.

Linux Users: Read the "Creating a New Linux MonoGame Solution" document on the MonoDevelop Resources course page to learn how to do this.

Save the project in a reasonable location on the computer − and remember where that location is!

Read the "Adding Content to a MonoGame Project" document on the MonoDevelop Resources course page to learn how to add content to your project.

Problem 2 – Load sprites

Add two constants to the `Game1` class just above the declaration of the `graphics` variable:

```
const int WINDOW_WIDTH = 800;
const int WINDOW_HEIGHT = 600;
```

Just below the line that says `SpriteBatch spriteBatch;` near the top of the `Game1` class, add variable declarations for three `Texture2D` objects. These variables will hold the three sprites you're going to draw.

Declare three `Rectangle` variables below the three variables you just declared; these will be the draw rectangles you use for each of the sprites.

Just below the line that says `Content.RootDirectory = "Content";` near the top of the `Game1` constructor, add the following two lines of code:

```
graphics.PreferredBackBufferWidth = WINDOW_WIDTH;
graphics.PreferredBackBufferHeight = WINDOW_HEIGHT;
```

In the `Game1 LoadContent` method, replace the comment that says

```
// TODO: use this.Content to load your game content here
```

with a comment and the code to load the three sprites into the `Texture2D` variables you declared above.

Add a comment and code just below the code you just added to create the draw rectangles for each of the sprites. It doesn't matter where you draw each of the sprites (as long as they're in the window!) but you should make each of the sprites draw at their actual size.

Problem 3 – Draw sprites

In the `Game1 Draw` method, replace the comment that says

```
// TODO: Add your drawing code here
```

with a comment and the code to have the `spriteBatch` draw each of the three sprites. Don't forget to begin and end the `spriteBatch` appropriately.