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. Chapter 5 is provided as a download for lecture 5.2.

Problem 1 – Create a project and add content

Start up the IDE and create a new MonoGame Windows Project (or appropriate MonoGame project for your OS) named Lab5.

Save the project in a reasonable location on the computer.

In Windows, OS X, or Linux, create a folder named Lab5Content in the same folder as the Lab5 sln file. Follow the instructions in Appendix B (provided as a download for lecture 5.3) to create a new Pipeline project named Lab5Content in your Lab5Content folder. Add any three items you like into the graphics folder of your Pipeline project, then build and close the project.

Follow the instructions in Section 5.3. to add your content to your MonoGame project.

Problem 2 – Load sprites

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

```
public const int WindowWidth = 800;
public const int WindowHeight = 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 = WindowWidth;
graphics.PreferredBackBufferHeight = WindowHeight;
```

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.