Abbey: Hi, Jason

Jason: Aww, hello Abbey, what’s up?

Abbey: I’ve heard that that you had a programming tutorial! Do you want to do the next one together?

Jason: Yes, I’d love to! I know this part is about images, fonts and colors. I think it will be a lot of fun!

Abbey: Ok, lets’ start!

Jason: Oh! Look! A bug! Let’s take a photo of it!

Abbey: Ok…

Jason: Look how cute is it!

Abbey: How could we load it into a program?

Jason: Firstly, convert it into 32 bit PNG file and make sure that it is not bigger than SwinGame Screen, which is 800x600 pixels.

Abbey: Ok… What should we do next?

Jason: We have to copy this image into our Project Resources folder. Open “My Documents”, then open “Visual Studio 2008”. Go to “Progects” -> “Hello World”. Open “HelloWorld”. Here is the folder named “Resources” . Open “images” and paste the picture.

Abbey: Ok… What’s next?

Jason: Now we can load this image into our program.

*Tutorial….part 1*

Abbey: I don’t get it! What’s the point?

Jason: Let me explain…

Jason: Now we can tell the program to draw an image on the screen by using image’s name.

Abbey: Cool! I get it! So, do you think that it is possible to draw more than one image onto the screen?

Jason: Why not?! But you have to consider the order of the images.

Jason: You see, our program is executing each instruction sequentially. Which means the instruction to draw the background image must be executed first.

Abbey: Does that mean that if we want an image to be drawn on top of the background, we have to tell the computer to draw it after the background?

Jason: Yes, exactly! So, as I said before we should have the instructions in a particular order order in order to have the desirable result. This is called layering.

Abbey: Oh, I’m a bit confused…

Jason: Tell the computer to draw the background first, then, draw another picture. And see the result – it will be more understandable.

*Tutorial… Part 2*

Jason: Great job! It would be cool to draw a text with the nice font!

Abbey: Do you know how?

Jason: Well, it is same as images. We need to paste a font into “Fonts” folder under “Recourses” of our project. Then, load it into the program and draw it on the screen. The only difference is that we are using slightly different functions. For example, to load font into the program use NewFont() sub call and for drawing the text on the screen use DrawText() sub call.

Abbey: Ok.. I’ll try…

*Tutorial… Part 3*

Abbey: That’s so cool!

Abbey: You know, I read something interesting about colors…

Jason: Oh, what is it about?

Abbey: It was about RGB and RGBA color models.

Jason: What are they?

Abbey: RGB stands for Red Green Blue. This color model enables us to represent and display images in electronic systems. Each color displayed on the screen is a combination of Red, Green and Blue.

Abbey: Have a look at the model to understand how it works.

Jason: WOW!

Abbey: Also, there is the RGBA color model, which introduces the Alpha channel.

Abbey: Alpha channel is an opacity channel. If a pixel has a value of 0% or 0 in its alpha channel, it is fully transparent ( invisible), whereas a value of 100% or 255 in the alpha channel gives a fully opaque pixel (opaque is an opposite to transparent, traditional digital images).

Jason: So, could we tell what color is by knowing its RGBA values?

Abbey: Of course, you need to look at values of Red, Green, Blue and Alpha channels and decide which color could be and what its opacity is. For example, (0, 0, 255) is Blue.

Jason: Hmm… I’d love to try more…

*Tutorial ….Part 4*