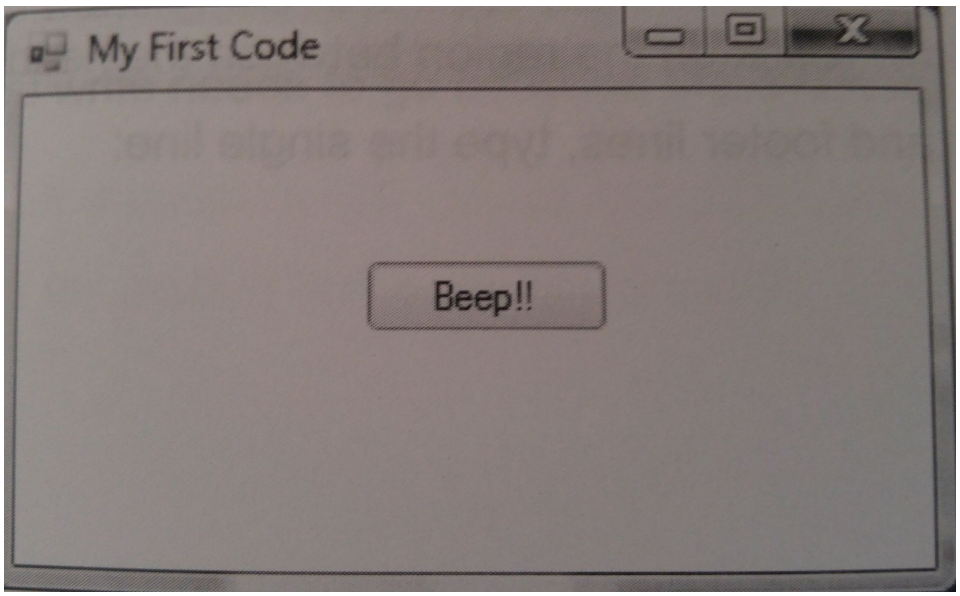
Daily Progress: Day 1

Daily Class Goals:

- Get through the first three chapter of the textbook
- Introduce Instructor and Students
- Familiarize Students with Visual Studio & Visual C#
- Open an existing project in Visual C#
- Successfully Compile a Project in Visual C#
- Complete a Simple Project, with a Button Control that runs code.

Activities

- **Sample**
    - Students opened a sample project and explored various settings to get a quick feel for Visual C#.
- **FirstTry**
    - Students created a project called FirstTry in order to learn the basic structure of a C# program.
    - Students became familiar with the Solution, Project, Form, and Controls.
    - Students learned the basics of an event, including naming conventions.
- **Beep**
    - Students created a project called Beep to demonstrate reacting to an event in a project by making a button beep every time it is clicked.
    - Students learned the naming conventions for Controls and the structure of events.



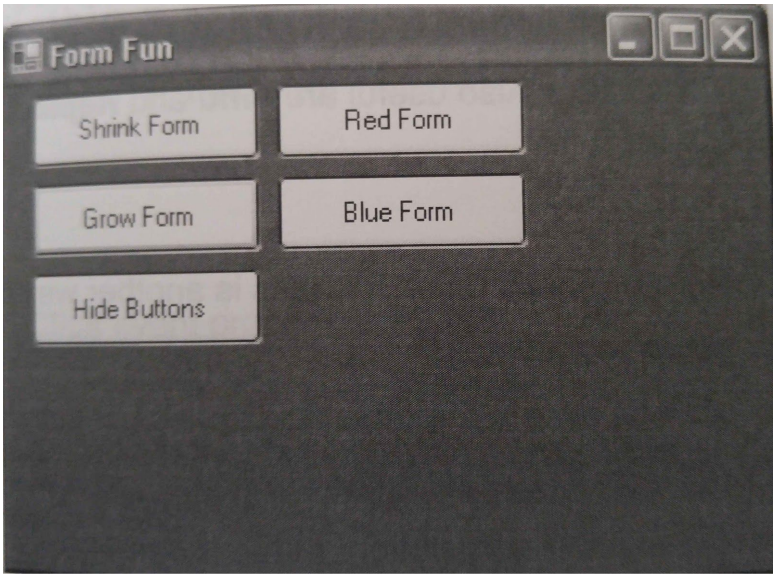
Daily Progress: Day 2

Daily Class Goals:

- Discuss the idea of "Project Design"
- Learn how to create Events for Controls
- Learn the controls: Forms, Buttons
- Learn the basic datatypes of C#
- Guided Project: Form Fun
- Complete Extra Project 1: StopWatch

Activities

- **Experimenting With Properties**
  - Students learned new properties of the Form and Buttons.
  - Students learned the important events for the Form and Buttons.
- **The C# Language**
  - Students learned about the assignment operator.
  - Students learned about data types such as int and Boolean and objects such as Color.
  - Students learned about String objects and how to comment their code.
- **Form Fun**
  - Students completed a project to show off the different features they learned today.
  - This project utilizes Buttons and their events and properties, the Form and its events and properties, and teaches code that can be used to change these properties.



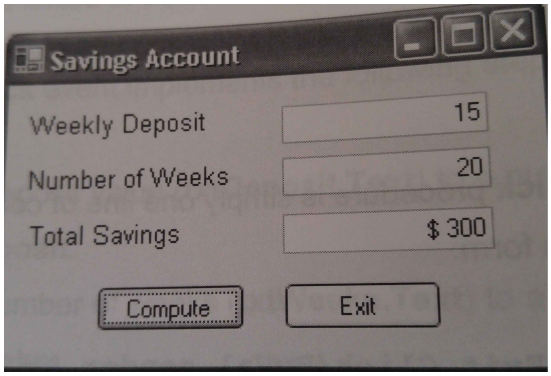
Daily Progress: Day 3

Daily Class Goals:

- Discuss the Three Types of Errors
- Learn the controls: Labels and TextBox
- Learn about Working with Variables and Converting Types
- Guided Project: Saving Account

Activities

- **Labels and TextBoxes**
    - Students were taught the difference between Syntax, Runtime, and Logical errors.
    - Students learned the important properties and events for Labels.
    - Students learned the important properties and events for TextBoxes.
    - Students were taught about “focus” in terms of a computer program.
- **The C# Language**
    - Students learned about naming and using variables, and the difference between global and locally scoped variables.
    - Students learned a new floating point data type, double.
    - Students learned how to type cast between different data types.
    - Students were taught different arithmetic operators in order to manipulate data, and the order of operations that is present in programming.
    - Students learned about calling methods, as well as two methods that can be used to convert from Strings to numbers and vice versa.
    - Students were two ways to perform String concatenation
- **Savings Account**
    - Students utilized Labels and TextBoxes in order to create a savings calculator.
    - Students computed the total savings using variables and arithmetic operators along with savings formulas.



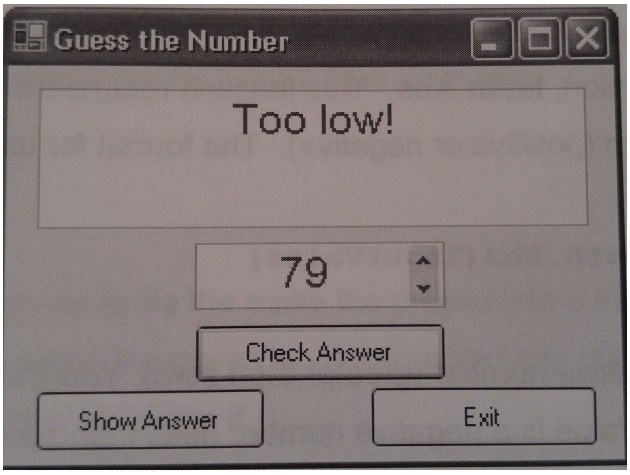
Daily Progress: Day 4

Daily Class Goals:

- Discuss the Three Types of Errors
- Learn the controls: UpDown Control
- Learn about If Statements and Random Numbers
- Guided Project: Guess the Number Game
- Extra Project 2: Times Tables

Activities

- **Numeric Controls**
  - Students learned UpDown Controls as well as the important properties and events associated with them.
- **The C# Language**
  - Students were taught different comparison operators in order to create logical statements within their code.
  - Students learned logical operators such as AND and OR in order to create more complex logical statements in their code.
  - Students were introduced to if, else if, and else statements in order to create control flow in their programs.
  - Students learned the process of creating random numbers in a program.
- **Guess the Number**
  - Students created a program that asks the user to guess a random number.
  - Students used their knowledge of random number generation to create a random number.
  - Students used their knowledge of control flow and logical statements to tell whether the guessed number was correct.



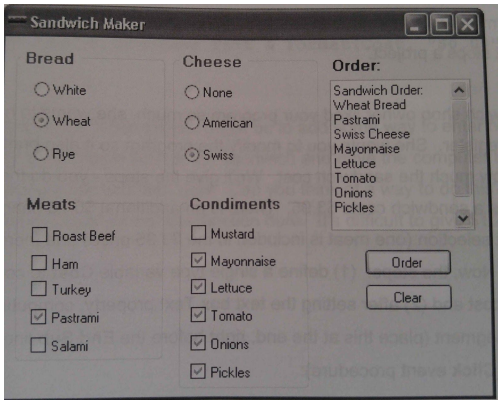
Daily Progress: Day 5

Daily Class Goals:

- Discuss the importance of grouping controls and how that can help create more complex interactivity between input and output (as opposed to just simple buttons).
- Learn the controls: Icons, Group Boxes, Check Boxes, Radio Button
- Learn about Switch Statements
- Guided Project: Sandwich Maker

Activities

- **Grouping Controls**
    - Students learned about .ico files work to create program icons.
    - Students were taught about grouping controls with Group Boxes, and how they can be used to group items as one big item.
    - Students learned about CheckBoxes, their properties and important events, and how they are best used in a GroupBox.
    - Students learned about RadioButtons, their properties and important events, and how they are best used in a GroupBox.
- **The C# Language**
    - Students learned a new logical expression, switch, in order to switch between different inputs.
    - Students learned new keywords such as break, case, and default to create more complex logic statements.
- **Sandwich Maker**
    - Students created a project that uses icons, Radio Buttons, and CheckBoxes to create an interactive sandwich making project.
    - Students used switch statements along with other logic to get a list of ingredients to print when the order was placed.



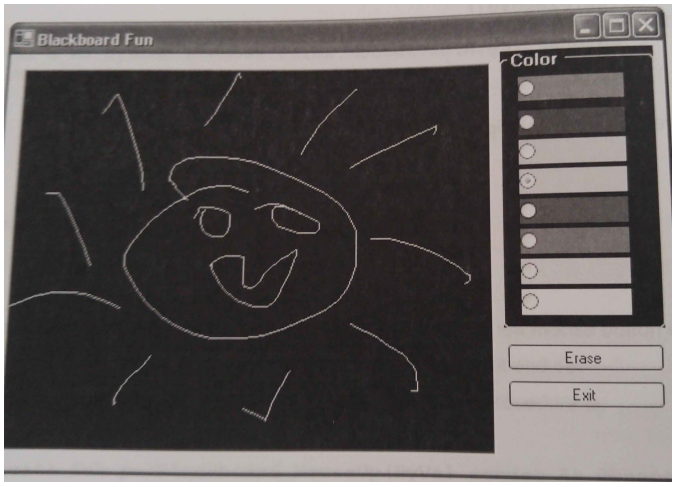
Daily Progress: Day 6

Daily Class Goals:

- Learn how to draw shapes in Visual Basic
- Learn how to use panels to add custom graphics to your designs
- Learn how to use the mouse as a source of input
- Guided Project: Blackboard Fun

Activities

- **Panel Control**
  - Students learned the important properties of a Panel and the similarities to a GroupBox.
- **The C# Language**
  - Students learned how to create a Graphics object in order to draw on a Panel.
  - Students learned how to create a Color object to represent color in a program.
  - Students were taught how to create and dispose of a Pen object, which is used to draw on a Panel.
  - Students learned the coordinate system for Visual C#, which is different from the coordinate system they may be used to.
  - Students learned methods to draw lines on the screen.
  - Students were taught Mouse Events along with the button properties and events needed to use them.
- **BlackBoard Fun**
  - Students used MouseEvents as well Panels and Graphics objects to create a small paint program.
  - Students used logic in order to draw lines on a screen when given mouse inputs.



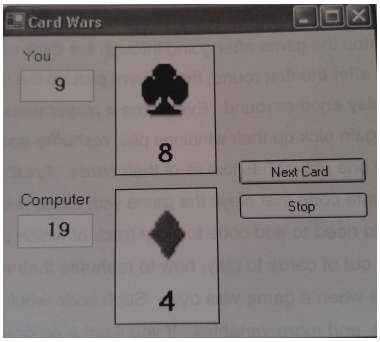
Daily Progress: Day 7

Daily Class Goals:

- Learn how to display images in order to create more sophisticated user interfaces
- Explore the importance of using data structures such as arrays to hold data
- Learn properties of different image types
- Learn how to loop through data with For loops
- Guided Project: Card Wars
- Complete Extra Project 3: Dice Rolling

Activities

- **PictureBox Control**
  - Students learned about PictureBox Controls, their important properties, and their important events.
  - Students were introduced to a few common image formats such as Bitmaps and JPEGs.
- **The C# Language**
  - Students learned about storing multiple and accessing values inside of arrays.
  - Students were taught how to repeat parts of code using loops.
  - Students learned the difference between local and global variables and learned how to create local variables.
  - Students learned an algorithm for shuffling items in a list in a random order.
- **Card Wars**
  - Students created a game similar to the card game War.
  - Students used PictureBoxes to display the graphics in this project.
  - Students utilized loops and the shuffle algorithm in order to shuffle a deck of cards.
  - Students used logic in order to program an opponent and to tell who won on each round.



Daily Progress: Day 8

Daily Class Goals:

- Learn how to use Timers in a program in order to execute code at specific intervals
- Learn new ways to use Graphics objects to draw on panels
- Learn the basics of programming driven animation
- Learn about basic collision handling between animated elements
- Explore optimization techniques for animating images
- Learn how to utilize keyboard inputs
- Learn about ASCII values
- Guided Project: Beach Balls
- Extra Project: Memory Game

Activities

- **Timer Control**
    - Students learned about Timers, their important properties, and their important event.
- **The C# Language**
    - The students learned new Graphics methods for drawing more complex shapes
    - The students were taught how to handle collisions between two moving objects in a program.
    - Students learned how timers could be used to create animation in a program.
    - Students learned different KeyBoard events whenever a key is pressed on the keyboard.
    - Students learned the ASCII encoding scheme describing how characters on a keyboard are represented on a computer.
- **Beach Balls**
    - Students created a game that uses elements of animation, collision detection, and keyboard events in order to guide an arrow to pop falling beach balls.
    - Students utilized Timers in order to animate their game.
    - Students utilized logic in order to program player movement and collision detection.