Week of January 11, 2015

Topics for this week: Programs and Data

Activity Checklist

	Read chapter 2 in the course packet
	Review the slides Programs and Data
	Review the sample program C# Style
	Review the sample program Primitive Data Types and String
	Review the video Writing your First GUI Program
	Review the video Data
	Complete lab #2, due by 11:59pm on Tuesday.
	Complete lab #3, due by 11:59pm on Thursday.

Learning Goals

It is expected that you will meet the objectives outlined here by the end of the week. You might want to test yourself to see how well you fare. You can be guaranteed that you will be tested on these concepts on your first midterm. By the end of this unit, you should be able to:

- Describe the way that data is stored in the computer.
- Describe the object model of programming.
- Create proper identifiers in a C# program.
- Describe the difference between an object and simple data.
- Describe the difference between a reference variable and a value variable.
- Describe the simple data types in the C# language.
- Write a simple program in C# that correctly
  - uses declarations
  - uses assignment statements
  - uses literal data
  - uses the Console class
  - formats simpe floating point data for output

Reading Assignment

All reading should be done before you come to class. Your ability to understand the material discussed in class will be greatly enhanced when you come to class prepared.

1. Read the second chapter in the course packet, Programs and Data. It is important to understand the role that data plays in a program, and how to use the many different kinds of data available to us in a program.
2. Slides on Programs and Data - These slides discuss the role of data in a program, explains how to declare and use data, and shows you where data is stored in the computer's memory.

The slides on the course web site are used to focus the presentation of the course material in class. Be sure to go through the practice material at the end of each slide set on your own. These practice sessions will help make sure that you understand the material presented.

Key Concepts

Data in a program can represent many different things; numbers, characters, words, images, and more.

1. When analyzing a problem it is important to know what kind of data to use.
2. Different kinds of data are stored in different ways in the computer's memory.
3. Before you can use data in a program, you have to declare it.
4. Data that represents or models things in the real works is stored as an object. Objects are made up of many pieces of simple data.
5. An identifier associates a name with a location in the computer's memory.
6. Data is stored at a location in the computer's memory by using an assignment statement.
7. Objects of the String class are used to store words.
8. Methods in the Console class are used to write data on the svcreen and read data from the keyboard.

Lab Assignment

This week you should complete labs 2 and 3.
* Lab #2 will introduce you to programs that use a Graphical User Interface (GUI).
* Lab #3 investigates the simple data types in C#.


Don't give up when you have a question or a problem that you can't solve. Talk to your instructor or use the forum.