CODING TIPS

First Pieces of Advice

- Practice, practice, practice

- You will get much faster

- If you are stuck, ask for help

Learning to Program

- Recognizing mistakes

- Reading code

- Problem solving

- Writing code

Programming Note

- If you are confused

- Set a breakpoint see what it does

- Step through the code

- Ask yourself, is it doing what I expected?

- Why or why not?

If you are not sure what you expect

- Valid!!

- Write out what you want to happen in code

- Find the inconsistency in your code and understanding

- Ask yourself in a comment

- Make the best guess

- Mention you are guessing

Tracing and Asserts

- Use Debug.WriteLine() in regular code

- Use Console.WriteLine() in tests

- Use Debug.Assert() in regular code

- Use Assert.IsTrue or Assert.AreEqual in tests projects

Reversing the Direction

- A problem solving trick is to reverse the direction that we loop over stuff

- Look for a "counter example" as opposed to proving something is true

Consider the Test Cases

- Make them explicit

- Don't solve every problem right away

- Sometimes code is "good enough"

- That is where documentation is important

Use Braces

- If statements and loops don't require curly braces

- However, it can make code easier to read and avoid errors

Use Variables

- While learning, break complex expressions down into smaller ones

- Assign sub-expressions to variables

- Yes your code is longer, but easier to find mistakes

- You can also debug easier

Comments

- Don't put too many

- Don't state the obvious

- They are for you and the reader

- Tell us something useful

- Code should speak for itself

Don't Leave Unused Code in a File

- It can be confusing to yourself and others

For Note:

- Don't monkey with the loop index

What was

- 0xFFul - hexadecimal number 255, typed as a 64 bit unsigned number (long)

- 123.45f – single precision floating point number

- TIP: When using the "var" declaration hover the mouse over the var