

# Sequential Execution and Scripts

1-26-2011

# Opening Discussion

- Minute Essays
  - Difficulty of the quiz.
  - Usefulness of hex.
  - Do I play ultimate?
  - Types of escape characters. When to use them.
  - Grade return times.
  - Why both hex and octal?
  - Meaning of A-F I hex.
  - “Number “+8+7 is (“Number “+8)+7
  - Need for commands.

# Variables

- It is very common to want to represent values with names.
- A variable is a name that we use to represent a value.
- In Scala we can declare variables using `val` or `var`.
  - `val name:Type = expression`
  - `var name:Type = expression`
- A `val` can't change its value, a `var` can.
- The colon and type generally optional.

# Tuples

- Another type in Scala is the Tuple type.
- A tuple has comma separated values in parentheses.
- They give us a way to handle a fixed set of associated values.
- Assignment into a tuple does pattern matching.

# Scripts

- We have spent most of our time in the REPL entering one statement at a time.
- When we want to do things repeatedly it is nice to put the commands in a file called a script.
- We can use vi to write a script and put Scala commands in the file.
- We can run it by specifying the file name after the command scala.
- Alternately, we can load it into the REPL.

# Sequential Execution

- When you put commands into a script, they are normally executed one after the other from top to bottom.
- This is what we call sequential execution and it is the default way things happen.
- Order can be very significant for the instructions in a program.

# Standard Input

- Scala provides a whole set of functions you can call to read from standard input.
  - `readInt()`
  - `readDouble()`
  - `readLine()`
  - And many more
- This can make your scripts far more useful as they can be used with different values each time you run them.

# Some Problems

- We are still a little limited in that we can only do simple math and formatting, but let's try to do some things with that in scripts.
- We'll start with formatting money.
- Calculating hourly wages?
- Taking averages of grades?
- Suggestions?



# Minute Essay

- What questions do you have about things?
- The next IcP is Monday.