Video Name: Static Methods

Topics:

- static methods
- static vs final

Java Class(es): Conversions, UseConversions, Troll

Static method

- method that does not require an object
- commonly used by Math class (abs, pow, many others)
- makes sense – don’t need a Math object
  - math functions: pass values in, return result
  - doesn’t make use of any data particular to a Math instance
- static methods are called using the class name (e.g., Math.abs)
- if called from within the same class, don’t need the class name. But good to always use class name, just for clarity.
- also sometimes called class functions

MOST methods will be regular/instance methods! You should not make a method static unless you have a good reason to do so.

main must be static – it starts the program. Prior to starting, there are no objects... so main must be static!

static does not mean constant!! The final keyword is used for constants (similar to const in C++)

Software engineering. Cannot make a static reference to the non-static field [name of field]

- a static method is called with NO OBJECT
- it can only access variables that are static (one per class)
- DO NOT just make all variables static! This is appropriate for constants and a few other special purpose reasons (e.g., lastAccountNum in the last video... there should only be one of those)
- COMMON ERROR: make all variables static.
- If you can’t explain why a method should be static, it probably shouldn’t be.
- Conversions: OK to be static, just like Math functions (take in parameters, return results)

Java Class(es): Troll

Software engineering. main is generally very short!