

CS 240

Data Structures and Algorithms I

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Java Summary

- `TemperatureConversion.java`
 - Basic structure (classes, main, braces/indentation conventions, ...)
 - Methods (`celsiusToFahrenheit`)
 - **final** variables
 - Basic output (`System.out.println`, `printf`)
 - **for**-loops
 - Exceptions
- `Throttle.java` & `TestThrottle.java`
 - **private** instance variables
 - Constructors, creating & using classes
 - Casting
 - Putting classes one-to-a-file, `CLASSPATH`
- `ScannerExample.java`
 - `java.util.Scanner` usage
 - **static** methods & variables
 - Object parameters & return values
 - Getters, setters
 - Multiple classes in one file

Questions From Last Time

- What values are variables initialized to?
 - See `InitializationExamples.java`
 - Slides from first lecture have been amended
- How do you set the CLASSPATH?
 - On Windows:

```
set CLASSPATH=C:\some\directory
```
 - On Unix (bash):

```
export CLASSPATH=$CLASSPATH:/some/directory
```
 - On Unix (csh):

```
set CLASSPATH=($CLASSPATH:/some/directory)
```
 - See [http://en.wikipedia.org/wiki/Classpath_\(Java\)](http://en.wikipedia.org/wiki/Classpath_(Java)) and <http://www.linuxheadquarters.com/howto/classpath.shtml>

All The Rest...

- There's a lot to Java
- We won't use nearly all of it
- Cover sticking points as necessary throughout the course

In Class Exercise

Hints:

- Files can be opened by passing the filename string to the `File` constructor (from `java.io`)
- `Scanner` has constructors for both `File` objects and `PrintStream` objects (like `System.in`)
- The following `Scanner` methods may be useful
 - `hasNext()`, `next()` (the next “word”)
 - `hasNextInt()`, `nextInt()`
 - `hasNextLine()`, `nextLine()`