

Course Wrapup

We've done a lot this semester!

Three major aspects of the material –

Course Wrapup

- syntax and semantics of Java – what you can write down and what it means
 - variables, expressions, statements (assignment, conditionals, loops), arrays, subroutines/functions, classes/objects, inheritance, ...
 - should be memorized and come automatically
 - practice!
 - while the material is new, have an easily-accessible list of the forms and representative examples to refer to

Course Wrapup

- going from idea to program
 - usage and structure patterns
 - e.g. "write a program..." →

```
public class X {  
    public static void main ( String[] args ) {  
    }  
}
```
 - e.g. storing information → variable
 - e.g. making a choice → if + structural variations (do or don't do, choose exactly one alternative, choose at most one alternative)
 - e.g. repeat → loop + structural variations (repeat until, repeat as long as, repeat n times, repeat from a to b by interval c)

Course Wrapup

- going from idea to program
 - working out algorithms
 - pseudocode
 - iterative refinement
 - drawing before-and-after pictures / examples
 - development tactics
 - start with the easy stuff
 - incremental development
 - placeholder variables and function/method bodies, to stand in for code not written yet
 - program organization
 - identifying subroutines/functions/helper methods
 - identifying classes and public methods
 - textual analysis

Course Wrapup

- learning new things
 - navigating information sources
 - what they are
 - what they are good for
 - extracting information
 - knowing what to memorize and what can be looked up
 - strategies for memorization
 - e.g. create easy-to-reference summaries of key things
 - practice!