CSE 115/503

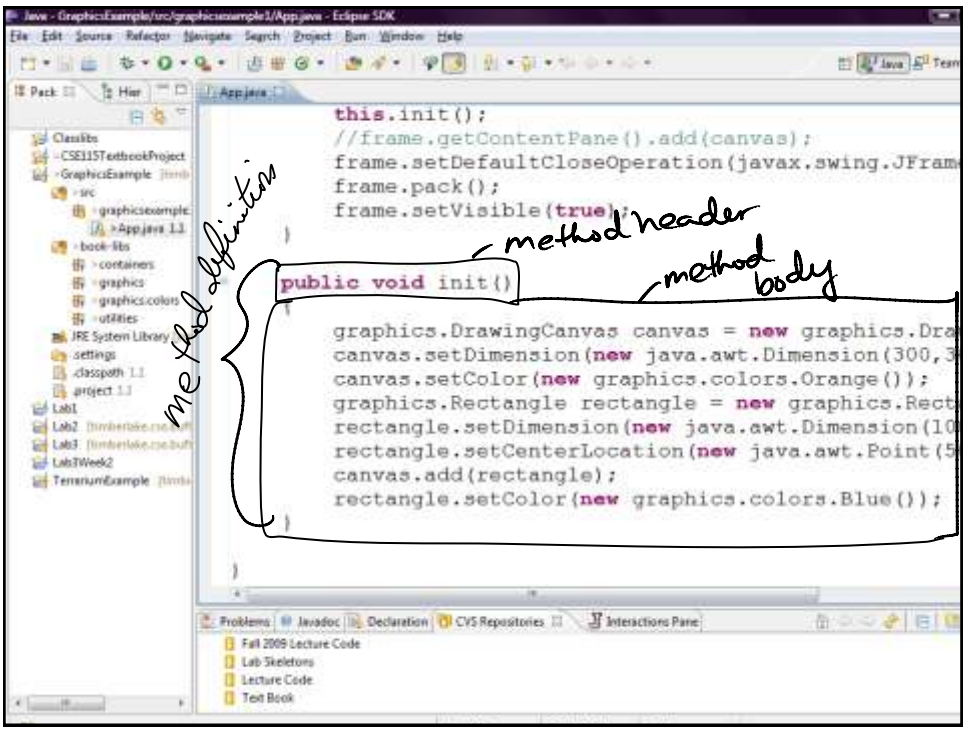
February 15-19, 2010

Announcements

- Lab 3 (part 2) in recitation this week
- Exam 2 is Friday, February 19th – review in class on Wednesday, February 17th
- Review sheet posted

Method Definitions

- Method header
- Method body



Method header

public returnType identifier ()

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public: (keyword) access control modifier – allows access to all.

Method header

public returnType identifier ()

- Type of information that is returned from the method.
  - Type in this sense is the same as type of a variable, so if it can be a type of a variable, it can be a return type.
  - If nothing is returned, return type is void (void is a keyword)

Method header

public returnType identifier ()

The name of the method.

Style is the same as for local variables.

Method header

public returnType identifier ()

Parameter list: additional information that is needed so that the method can perform its task.

Parameter lists

- Can be empty
  - No additional information needed for method
- Can contain one parameter
  - Parameter declaration syntax:
    - type identifier
    - Looks like a local variable declaration; same style rules apply
- Can contain more than one parameter
  - Comma-separated list of “one parameters”
    - i.e. each parameter needs a type and an identifier

Calling Methods

- Methods are not executed until they are called.
  - Similar to the fact that objects do not exist until created
- We write a method definition and then need to call it.

Method call syntax (Review)

objectReference.methodName()

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- Recall that in the method call, the () is called the argument list because when calling a method, we pass in the arguments (actual values) to the method

Method call syntax (Review)

objectReference.methodName()

- If calling a method that is internal to the same class, we use the keyword this for the object reference in the method call

Instance Variables

- The way to encode the properties of a class
- Sometimes called fields
- Class-level variables (indicates their scope – inside the class)
- Useful when multiple methods need to refer to the same information

Instance Variables

- Like all variables in Java, instance variables need to be declared before they are used.
- They are declared inside the class, but outside all of the methods of the class.

Syntax for Instance Variable Declaration

private type identifier;

Syntax for Instance Variable Declaration

private type identifier;

private (keyword) access control modifier indicating access only available inside the current class.

Syntax for Instance Variable Declaration

private type identifier;

The type of the variable – same as with local variables, all instance variables need a type.

Syntax for Instance Variable Declaration

private type identifier;

Style of instance variables is to use same as local variables, but precede the name with an underscore

Eg. _myInstanceVariable