

Lecture 2: More Java Review, Pre- and Post-Conditions

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Course web page: <http://www.cs.pomona.edu/classes/cs062>

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Card Deck Examples

- CardInterface -- interface
 - AbsCard
 - abstract class, implements CardInterface
 - Card extends AbsCard
 - OtherCard extends AbsCard
- } *alternate implementations*
- Deck
 - Class using cards

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Java Keywords

- Abstract class -- can't be instantiated
 - usually some methods missing
- Information hiding qualifiers:
 - public
 - private
 - protected
- Static -- copy associated with class, not objects
- Final -- only assigned to once
 - in its declaration or constructor

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Interfaces & Inheritance

- Class implements interface if supports all methods defined in interface
- Interface can extend another by adding methods
 - If A extends B and x has type A, then also has type B
- One class can extend another
 - inherits fields and methods
 - can override existing methods, add new ones
- instanceof & casts

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JavaDoc

- Stylized form of comments, w/tools to extract

```
/**  
 * comments here  
 */
```

- Common tags:
 - @author *author name*
 - @version *date*
 - @param *param name and description.*
 - @return *value returned, if any*
 - @throws *description of any exceptions thrown.*

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Pre and Post-conditions

- Pre-condition: Specification of what must be true for method to work properly
- Post-condition: Specification of what must be true at end of method if precondition held before execution.
- See Ratio class example

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