

| Topics:   | Student Teachers  |
|---|---|
| <ul style="list-style-type: none"> <li>• Programming Constructs</li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ Primitive data types</li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ boolean (True/False)</li> </ul> </li> </ul> </li> </ul>  | Ryan Cosner, Dana Shekter, Mathew Kordonsky, Barbara Garrison, Olivia Orrell-Jones, Francisco MelDeFontenay, Priya Chatwani, Matt O'Brian, Kanoa Benedetti, Cameron Ibrahim, Connor Tobin, Ian Rappoport  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ int</li> </ul> </li> </ul> </li> </ul>   | Ryan Cosner, Mathew Kordonsky, Erica Wenger, Griffin Heier, Matt Rice, Olivia Orrell-Jones, Francisco MelDeFontenay, Priya Chatwani, Matt O'Brian, Kanoa Benedetti, Crystal Yu, Kelsey Chaykowski, Cameron Ibrahim, Sidney Nemzer, Connor Tobin, Ian Rappoport                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ double</li> </ul> </li> </ul> </li> </ul>  | Mathew Kordonsky, Erica Wenger, Griffin Heier, Barbara Garrison, Matt Rice, Olivia Orrell-Jones, Francisco MelDeFontenay, Priya Chatwani, Matt O'Brian, Kanoa Benedetti, Crystal Yu, Kelsey Chaykowski, Cameron Ibrahim, Risha Rohera, Sidney Nemzer, Connor Tobin, Ian Rappoport |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ void (a.k.a. ignore me)</li> </ul> </li> </ul> </li> </ul>   | Olivia Orrell-Jones, Priya Chatwani, Risha Rohera   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Arrays[] (a.k.a. fixed length lists)</li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• Indexing</li> </ul> </li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• two-dimensional (a.k.a. matrix)</li> </ul> </li> </ul> </li> </ul> </li> </ul>                           |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• array.length</li> </ul> </li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• arrays of objects</li> </ul> </li> </ul> </li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• initialized arrays such as <code>int[] x = {1,2,3}</code></li> </ul> </li> </ul> </li> </ul> </li> </ul> |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>○ Declarations</li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Constant</li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Variable</li> </ul> </li> </ul> </li> </ul>  | Erica Wenger, Barbara Garrison, Matt Rice, Olivia Orrell-Jones, Priya Chatwani, Matt O'Brian, Kanoa Benedetti, Cameron Ibrahim, Connor Tobin  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Class</li> </ul> </li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Interface</li> </ul> </li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Method</li> </ul> </li> </ul> </li> </ul>  | Barbara Garrison, Olivia Orrell-Jones, Priya Chatwani, Cameron Ibrahim  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• Parameter</li> </ul> </li> </ul> </li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• Return</li> </ul> </li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Generics (a.k.a. <code>&lt;CLASS&gt;</code>)</li> </ul> </li> </ul>  |   |

| Topics:  | Student Teachers  |
|--|---|
| <ul style="list-style-type: none"> <li>○ Primitive type casting</li> </ul>   | Mathew Kordonsky, Matt Rice, Olivia Orrell-Jones, Priya Chatwani, Matt O'Brian, Kanoa Benedetti, Kelsey Chaykowski, Cameron Ibrahim, Risha Rohera, Tyler Summers, Ian Rappoport                           |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ (int) (a.k.a. make me an int)</li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ (double) (a.k.a. make me a double)</li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li>○ Operators</li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Relational</li> </ul> </li> </ul>   | Mathew Kordonsky, Erica Wenger, Barbara Garrison, Matt Rice, Olivia Orrell-Jones, Priya Chatwani, Matt O'Brian, Crystal Yu, Kelsey Chaykowski, Cameron Ibrahim, Risha Rohera, Sidney Nemzer, Connor Tobin |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• == (a.k.a. equals)</li> </ul> </li> </ul> </li> </ul>   | Ian Rappoport   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• != (a.k.a. not equal to)</li> </ul> </li> </ul> </li> </ul>   | Ian Rappoport   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• &gt;, &lt;, &gt;=, &lt;= (a.k.a. Greater than, Less than, Greater than or equal to, Less than or equal to, ≥, and ≤)</li> </ul> </li> </ul> </li> </ul> | Corey Chang   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Assignment</li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• = (a.k.a. equals)</li> </ul> </li> </ul> </li> </ul>  | Erica Wenger, Matt Rice, Olivia Orrell-Jones, Matt O'Brian, Crystal Yu, Sidney Nemzer, Connor Tobin   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• ++ (a.k.a. Increment)</li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• -- (a.k.a. Decrement)</li> </ul> </li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• +=, -=, /=, *=, %= (a.k.a. compound assignments)</li> </ul> </li> </ul> </li> </ul>   |   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Logical</li> </ul> </li> </ul>  | Maxwell Lin, Barbara Garrison, Matt Rice, Olivia Orrell-Jones, Matt O'Brian, Kanoa Benedetti, Cameron Ibrahim   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• &amp;&amp; (a.k.a. Logical AND)</li> </ul> </li> </ul> </li> </ul>  | Ian Rappoport   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>•    (a.k.a. Logical OR)</li> </ul> </li> </ul> </li> </ul>   | Erica Wenger, Priya Chatwani, Ian Rappoport   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• ! (a.k.a. Logical NOT)</li> </ul> </li> </ul> </li> </ul>   | Erica Wenger, Priya Chatwani  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Arithmetic</li> </ul> </li> </ul>   |   |

| Topics:   | Student Teachers  |
|---|---|
| <ul style="list-style-type: none"> <li>• +, -, *, /, %<br/>(a.k.a. Add, Subtract, Multiply, Divide, Modulo or remainder)</li> </ul> | Mathew Kordonsky, Griffin Heier, Matt Rice, Olivia Orrell-Jones, Matt O'Brian, Corey Chang, Cameron Ibrahim, Sidney Nemzer, Tyler Summers                                       |
| <ul style="list-style-type: none"> <li>▪ String Operators</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>• + (a.k.a. concatenation or “putting strings together”)</li> </ul>                          | Erica Wenger, Barbara Garrison, Olivia Orrell-Jones, Priya Chatwani, Matt O'Brian, Corey Chang, Cameron Ibrahim, Sidney Nemzer, Ian Rappoport                                   |
| <ul style="list-style-type: none"> <li>• += (a.k.a. compound concatenation)</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>○ Loops</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>▪ for</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• for</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• for each</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>• for (type x : values)</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>▪ while</li> </ul>   | Mathew Kordonsky, Erica Wenger, Priya Chatwani, Matt O'Brian, Spencer Ahn, Crystal Yu, Dylan Mibu, Cameron Ibrahim, Risha Rohera, Connor Tobin                                  |
| <ul style="list-style-type: none"> <li>○ Conditionals</li> </ul>  | Mathew Kordonsky, Erica Wenger, Barbara Garrison, Matt Rice, Priya Chatwani, Spencer Ahn, Crystal Yu, Cameron Ibrahim, Risha Rohera, Sidney Nemzer, Connor Tobin, Ian Rappoport |
| <ul style="list-style-type: none"> <li>▪ if</li> </ul>  | Matt O'Brian, Kelsey Chaykowski   |
| <ul style="list-style-type: none"> <li>▪ if else</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>○ Classes</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>▪ Constructors</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>▪ new operator</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>▪ Methods</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• public</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>• private</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• static</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>• overloading</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>▪ static variables</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>▪ static final variables (a.k.a. constants)</li> </ul>                                       |   |
| <ul style="list-style-type: none"> <li>▪ null type</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>▪ Inheritance</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• interface</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• abstract</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>• extends</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>• implements</li> </ul>  |   |
| <ul style="list-style-type: none"> <li>• super class</li> </ul>   |   |

| Topics:  | Student Teachers   |
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| <ul style="list-style-type: none"> <li>○ calling the constructor</li> </ul>  |  |
| <ul style="list-style-type: none"> <li>○ calling a method</li> </ul>   |  |
| <ul style="list-style-type: none"> <li>○ using this</li> </ul>   |  |
| <ul style="list-style-type: none"> <li>• Standard Java Libraries/Classes</li> </ul>  |  |
| <ul style="list-style-type: none"> <li>○ System.out</li> </ul>   | Erica Wenger, Barbara Garrison, Matt Rice, Olivia Orrell-Jones, Priya Chatwani, Matt O'Brian, Cameron Ibrahim, Sidney Nemzer |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ print</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ println</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li>○ String class</li> </ul>   |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Methods</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• compareTo</li> </ul> </li> </ul> </li> </ul>                                |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• equals</li> </ul> </li> </ul> </li> </ul>                                   |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• length</li> </ul> </li> </ul> </li> </ul>                                   |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• substring</li> </ul> </li> </ul> </li> </ul>                                |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• indexOf(String s)</li> </ul> </li> </ul> </li> </ul>                        |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Escape sequences in literal strings</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• \n (a.k.a. new-line)</li> </ul> </li> </ul> </li> </ul>                     |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• \\ (a.k.a. "so how do I make a \ then?")</li> </ul> </li> </ul> </li> </ul> |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• \" (a.k.a. the quote mark)</li> </ul> </li> </ul> </li> </ul>               |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Interface</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• comparable&lt;T&gt;</li> </ul> </li> </ul> </li> </ul>                      |  |
| <ul style="list-style-type: none"> <li>○ Integer class</li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Methods</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• Integer(int x) - Constructor</li> </ul> </li> </ul> </li> </ul>             |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• intValue</li> </ul> </li> </ul> </li> </ul>                                 |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• toString</li> </ul> </li> </ul> </li> </ul>                                 |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• equals</li> </ul> </li> </ul> </li> </ul>                                   |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• compareTo</li> </ul> </li> </ul> </li> </ul>                                |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Constants</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• .MIN_VALUE, .MAX_VALUE</li> </ul> </li> </ul> </li> </ul>                   |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Interface</li> </ul> </li> </ul>  |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• comparable&lt;T&gt;</li> </ul> </li> </ul> </li> </ul>                      |  |
| <ul style="list-style-type: none"> <li>○ Double class</li> </ul>   |  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Methods</li> </ul> </li> </ul>  |  |

| Topics:   | Student Teachers |
|---|------------------|
| <ul style="list-style-type: none"> <li>• Double(double x)<br/>- Constructor</li> </ul>                            |                  |
| <ul style="list-style-type: none"> <li>• doubleValue</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>• toString</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>• equals</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>• compareTo</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>▪ Interface</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>• comparable&lt;T&gt;</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>○ Math</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>▪ abs(int x) (a.k.a. absolute value of integer)</li> </ul>                 |                  |
| <ul style="list-style-type: none"> <li>▪ abs(double x) (a.k.a. absolute value / real number)</li> </ul>           |                  |
| <ul style="list-style-type: none"> <li>▪ pow(double base, double exp) (a.k.a. <math>base^{exp}</math>)</li> </ul> |                  |
| <ul style="list-style-type: none"> <li>▪ sqrt(double x) (a.k.a. <math>\sqrt{x}</math>)</li> </ul>                 | Cameron Ibrahim  |
| <ul style="list-style-type: none"> <li>▪ random() (a.k.a. random number between 0-1)</li> </ul>                   |                  |
| <ul style="list-style-type: none"> <li>○ List&lt;E&gt; Interface</li> </ul>                                       |                  |
| <ul style="list-style-type: none"> <li>○ ArrayList&lt;E&gt;</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>▪ Constructor</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>▪ add</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>▪ get</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>▪ set</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>▪ remove</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>▪ size</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>▪ equals</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>• Exceptions</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>○ NullPointerException (a.k.a. no return value error)</li> </ul>           |                  |
| <ul style="list-style-type: none"> <li>○ ArrayIndexOutOfBoundsException (a.k.a. array index error)</li> </ul>     |                  |
| <ul style="list-style-type: none"> <li>○ ArithmeticException (a.k.a. divide by 0 error)</li> </ul>                |                  |
| <ul style="list-style-type: none"> <li>○ IllegalArgumentException (a.k.a. wrong type parameter error)</li> </ul>  |                  |
| <ul style="list-style-type: none"> <li>○ ClassCastException (a.k.a. Not a descendent class error)</li> </ul>      |                  |
| <ul style="list-style-type: none"> <li>• Recursion</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>• Preconditions</li> </ul>   |                  |
| <ul style="list-style-type: none"> <li>• Post-conditions</li> </ul>   |                  |