Part 4: 3 days extension
\[ \alpha = L \]
\[ b = a + \text{res} \]

\[ \text{while (} \alpha < R \text{)} \{ \]
  \[ \vdots \]
  \[ a = b \]
  \[ b = a + \text{res} \]
\[ \} \]
Ex. FileIO.java

Ex. FileIO2.java

Ex. Try-Catch.java

note: some can throw more than one type of exception.
try {
    // ops that may throw multiple 
    // exceptions
    try {
        catch (ExceptionType1 e1) {
            // code handling e1
            catch (ExceptionType2 e2) {
                // code handling e2
            }
        }...
    } finally {
        // code that handles any other 
        // exception
    }
}
Rules

- try-catch looks a lot like if-else. It's better not to think of it that way.
- try-finally must have at least one catch() clause.
- braces if are always necessary.

Ex. Cat.java

Exercise: Create More.java that simulates more operation in Unix.
How to throw an exception.

Ex. Aread.java

Ex. SelectionSort.java

<table>
<thead>
<tr>
<th>7</th>
<th>3</th>
<th>66</th>
<th>3</th>
<th>5</th>
<th>22</th>
<th>-77</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>-77</td>
<td>3</td>
<td>66</td>
<td>3</td>
<td>5</td>
<td>22</td>
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<td>2</td>
</tr>
</tbody>
</table>
\[-77 \quad -5 \quad 2 \quad 3 \quad 3 \quad 22 \quad 7 \quad 66\]

<table>
<thead>
<tr>
<th>Sorted</th>
<th>Unsorted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorted</td>
<td></td>
</tr>
</tbody>
</table>

\[-77 \quad -5 \quad 2 \quad 3 \quad 3 \quad 7 \quad 22 \quad 66\]

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Bubble Sort in Java

Ex.

\[ s \rightarrow 4 \ 3 \ 2 \ 1 \ \text{unsoted} \]

\[ 4 \ 3 \ 2 \ 1 \ \text{unsoted} \]

\[ 1 \ 2 \ 3 \ 4 \ 5 \ \text{sorted} \]

\[ \text{sorted} \]

\[ \text{sorted} \]