

Jack syntax

White space and comments	Space characters, newline characters, and comments are ignored. The following comment formats are supported: <pre>// Comment to end of line /* Comment until closing */ /** API documentation comment */</pre>	
Symbols	<pre>()</pre> Used for grouping arithmetic expressions and for enclosing parameter-lists and argument-lists <pre>[]</pre> Used for array indexing; <pre>{ }</pre> Used for grouping program units and statements; <pre>,</pre> Variable list separator; <pre>;</pre> Statement terminator; <pre>=</pre> Assignment and comparison operator; <pre>.</pre> Class membership; <pre>+ - * / & ~ < ></pre> Operators.	
Reserved words	<pre>class, constructor, method, function</pre> <pre>int, boolean, char, void</pre> <pre>var, static, field</pre> <pre>let, do, if, else, while, return</pre> <pre>true, false, null</pre> <pre>this</pre>	<pre>class, constructor, method, function</pre> Program components <pre>int, boolean, char, void</pre> Primitive types <pre>var, static, field</pre> Variable declarations <pre>let, do, if, else, while, return</pre> Statements <pre>true, false, null</pre> Constant values <pre>this</pre> Object reference

Jack syntax (cont.)

Constants	<p><i>Integer</i> constants must be positive and in standard decimal notation, e.g., 1984. Negative integers like -13 are not constants but rather expressions consisting of a unary minus operator applied to an integer constant.</p> <p><i>String</i> constants are enclosed within two quote (") characters and may contain any characters except <i>newline</i> or <i>double-quote</i>. (These characters are supplied by the functions <code>String.newLine()</code> and <code>String.doubleQuote()</code> from the standard library.)</p> <p><i>Boolean</i> constants can be true or false.</p> <p>The constant <code>null</code> signifies a null reference.</p>
Identifiers	<p>Identifiers are composed from arbitrarily long sequences of letters (A-Z, a-z), digits (0-9), and "_". The first character must be a letter or "_".</p> <p>The language is case sensitive. Thus x and X are treated as different identifiers.</p>