

FEATURE	DESCRIPTION	EXAMPLE
↙ NAMESPACES	You have to prefix model elements when referring to them. The following prefixes exist: <b>dp:</b> for datapool items, <b>ev:</b> for events, <b>v:</b> for local variables, <b>f:</b> for functions	<pre>dp:x = 100; // set a datapool item fire ev:back(); // fire an event f:trace_string("hello world"); // call a function</pre>
↙ ACCESSING DATAPOLool ITEMS	Write a datapool item by placing it at the left side of an assignment. Read a datapool item by using it anywhere else in an expression. The redirect reference ( <b>=&gt;</b> ) is a special form of datapool item assignment.	<pre>dp:x = 5; // writing to x dp:x = dp:y + dp:z; // reading y and z length dp:aList; // read the length of a list datapool item dp:refX =&gt; dp:x; // redirect</pre>
↙ SENDING EVENTS	Syntax: <b>fire ev:&lt;identifier&gt;(&lt;parameter-list&gt;);</b>  Events can be fired after a timeout. This delayed event can be canceled with the <b>cancel_fire</b> expression.  Syntax: <b>fire_delayed &lt;timeout&gt;, ev:&lt;identifier&gt;(&lt;parameter-list&gt;);</b> <b>cancel_fire ev:&lt;identifier&gt;;</b>	<pre>fire ev:back(); fire ev:mouseClick(10, 20);  fire_delayed 3000, ev:back(); // send the event                                 "back" in 3 seconds. cancel_fire ev:back; // cancel the event</pre>
↙ REACTING ON EVENTS	To react on events, use <b>match_event</b> . This is a special form of the <b>if-then-else</b> statement. <b>If</b> and <b>else</b> branch must have the same type. If used at the right side of an assignment, the <b>else</b> branch is mandatory.  Syntax: <b>match_event v:&lt;identifier&gt; = ev:&lt;identifier&gt;</b> <b>in &lt;sequence&gt;</b> <b>else &lt;sequence&gt;</b>	<pre>match_event v:event = ev:back in {     f:trace_string("back event received"); }  v:this.x = match_event v:event = ev:back in 10 else 0;</pre>
↙ ACCESSING EVENT PARAMETERS	The <b>in</b> expression of a <b>match_event</b> has access to the event parameters. Use the dot notation to access event parameters.	<pre>match_event v:event = ev:mouseClick in {     v:this.x = v:event.x;     v:this.y = v:event.y; }</pre>
↙ ACCESSING WIDGET PROPERTIES	If a script is part of a widget (widget actions, input reactions), it has access to the properties of that widget. A special local variable called <b>v:this</b> is available referring to the current widget. Use the dot notation to address widget properties.	<pre>v:this.text = "hello world"; v:this.x = 10;</pre>
↙ NAVIGATING THE WIDGET TREE	If a script is part of a widget, it has access to the properties of other widgets. Use the widget tree navigation operator: <b>-&gt;</b> . To access the parent widget, use the identifier: <b>^</b> .	<pre>v:this-&gt;^-&gt;caption.text = "Play";     // goto parent, goto caption, property text v:this-&gt;^.x = 1; // goto parent, property x</pre>
↙ STRING FORMATTING	The <b>+</b> operator concatenates strings. For more string conversion functions, refer to the documentation.	<pre>v:this.text = "current speed: " + f:int2string(dp:speed) + "km/h";</pre>

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↙ CONSTANTS	String constants may be written without quotes. Color constants are RGBA quadruples.	<pre> "hello world" // string constant Napoleon // string constant 5 // integer constant color:0,235,0,255 // EB green                     </pre>
↙ ARITHMETIC, LOGIC AND ASSIGNMENT OPERATORS	Addition and string concatenation: <b>+</b> , subtraction: <b>-</b> , multiplication: <b>*</b> , division: <b>/</b> , modulo: <b>%</b> , greater-than: <b>&gt;</b> , less-than: <b>&lt;</b> , greater-or-equal: <b>&gt;=</b> , less-or-equal: <b>&lt;=</b> , equal: <b>==</b> , not-equal: <b>!=</b> , and: <b>&amp;&amp;</b> , or: <b>  </b> , not: <b>!</b> , assignment: <b>=</b> , assign-increment: <b>+=</b> , assign-decrement: <b>-=</b>	<pre> dp.myString = "Hello" + "World"; dp.count += 1; // increment one                     </pre>
↙ SEQUENCING	A sequence is either a single expression or a series of expressions enclosed in curly braces. The last expression in a sequence is the value of the sequence.	<pre> if( dp:something )     dp:x = 5; // single expression if( dp:other ) {     dp:x = 5; // sequence enclosed     dp:y = 10; // in curly braces }                     </pre>
↙ LOCAL VARIABLES	Use <b>let</b> bindings to introduce local variables. It is not allowed to use uninitialized variables. <b>let</b> bindings may be nested.  Syntax: <b>let</b> <b>v</b> :<identifier> = <expression>; <b>v</b> :<identifier2> = <expression>; ... <b>in</b> <sequence>	<pre> let v:x = 42;     v:text = "hello world"; in {     v:this.x = v:x;     v:this.text = v:text; }                     </pre>
↙ WHILE LOOP	The <b>while</b> loop consists of two expressions: the condition and the body. The body is repeatedly evaluated until the condition yields false.  Syntax: <b>while</b> ( <expression> ) <sequence>	<pre> dp:i = 0; while( dp:i &lt;= 10 ) {     dp:sum += i;     dp:i += 1; }                     </pre>
↙ IF-THEN-ELSE	<b>if-then-else</b> behaves like the ternary conditional operator in C and Java. If it is used at the right side of an assignment, the <b>else</b> branch is mandatory and both branches must have the same type.  Syntax: <b>if</b> ( <expression> ) <sequence> <b>else</b> <sequence>	<pre> if( dp:buttonClicked ) {     v:this.x = dp:x; } else {     v:this.x = 0; }  v:this.x = if( dp:buttonClicked ) dp:x else 0;                     </pre>
↙ COMMENTS	C style block comments and C++ style line comments are allowed.	<pre> /* this is a C style block comment */ // this is a C++ style line comment                     </pre>
↙ RETURN VALUE	The last expression in a script is the return value. To force a return value of type void, use <b>unit</b> or <b>{}</b> .	<pre> dp:x + 2; // returns datapool item x plus 2                     </pre>