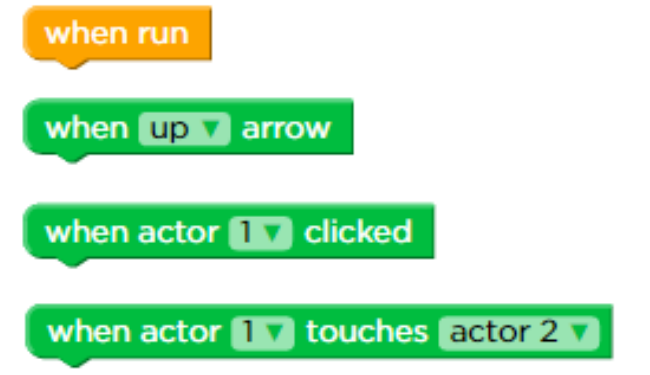
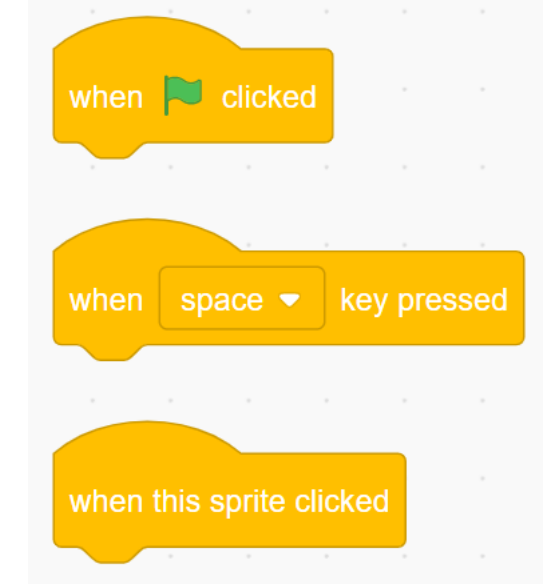
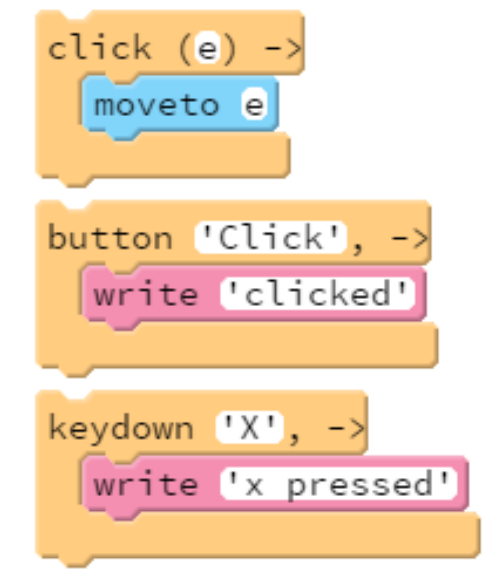

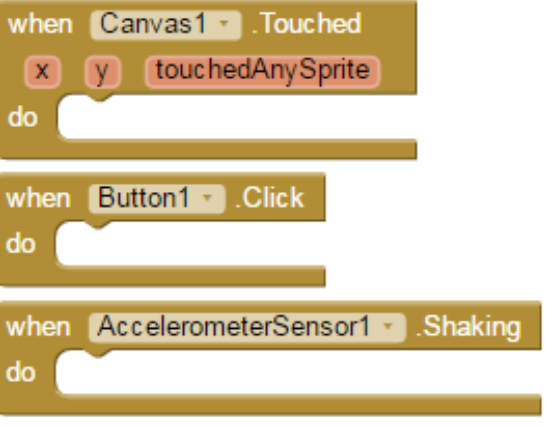
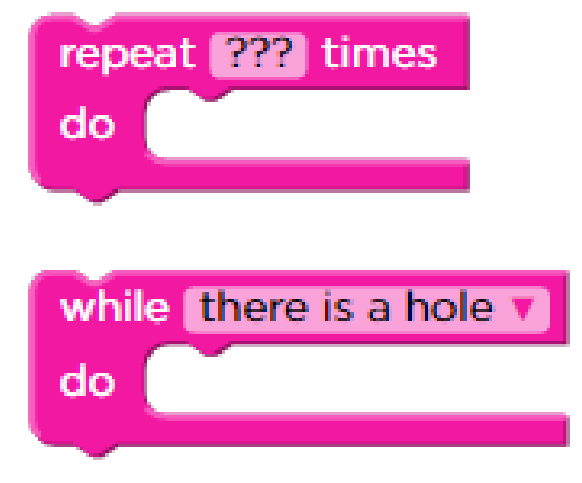
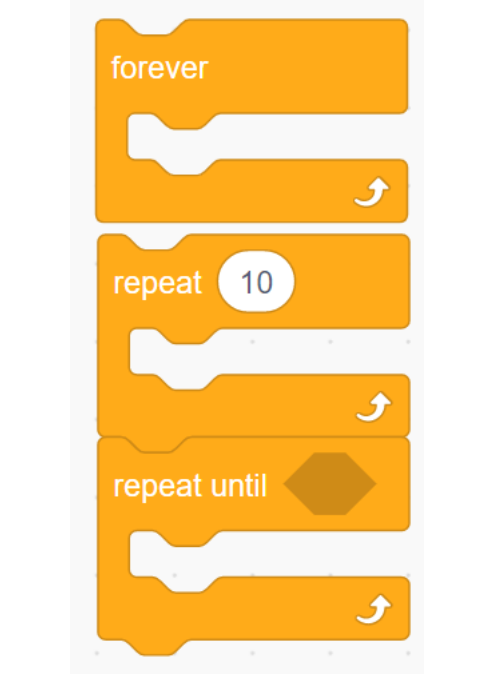
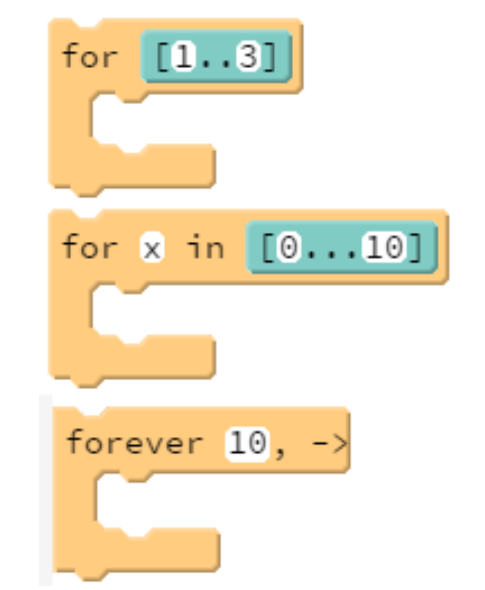
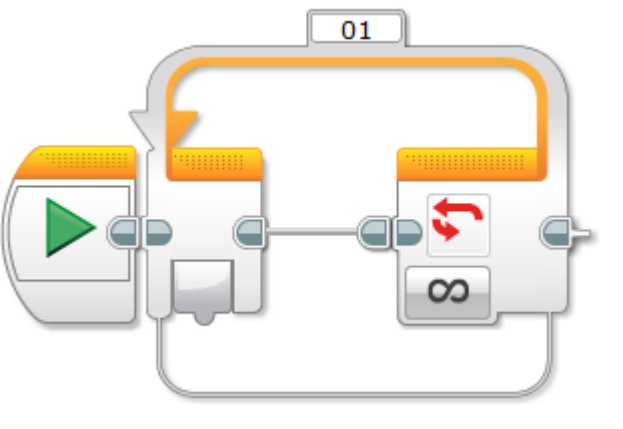

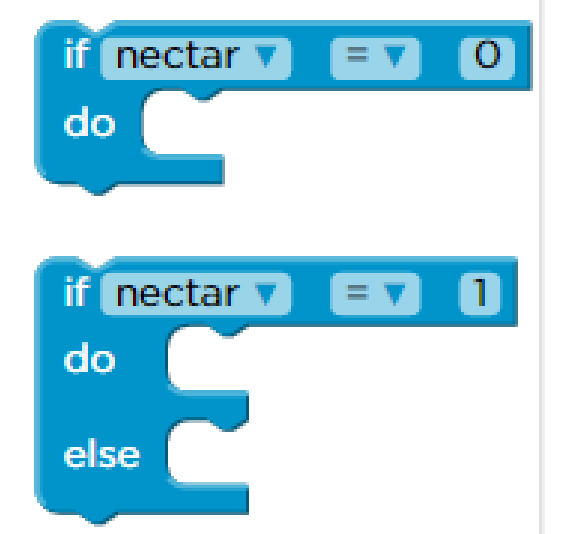
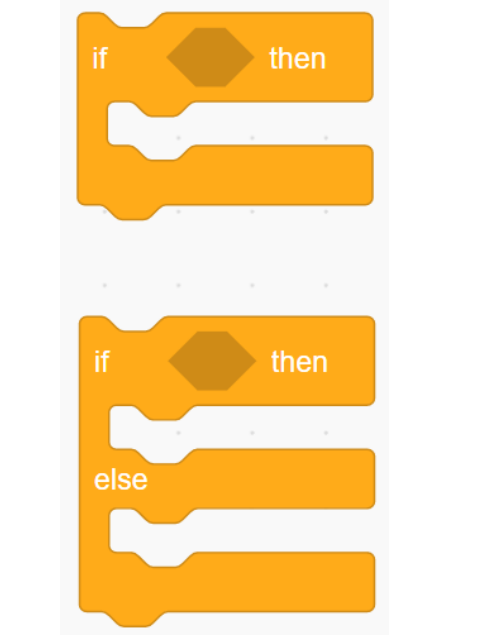
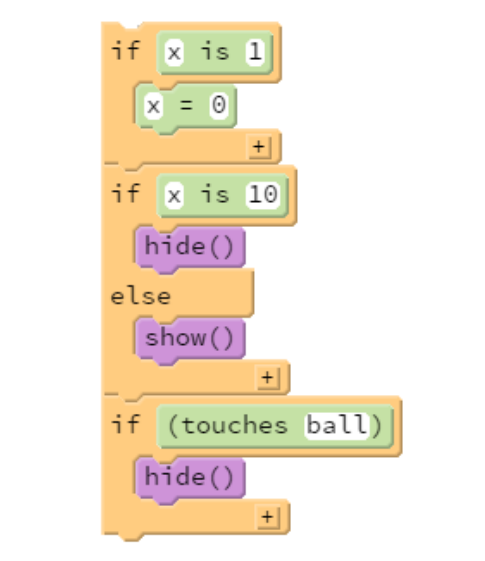
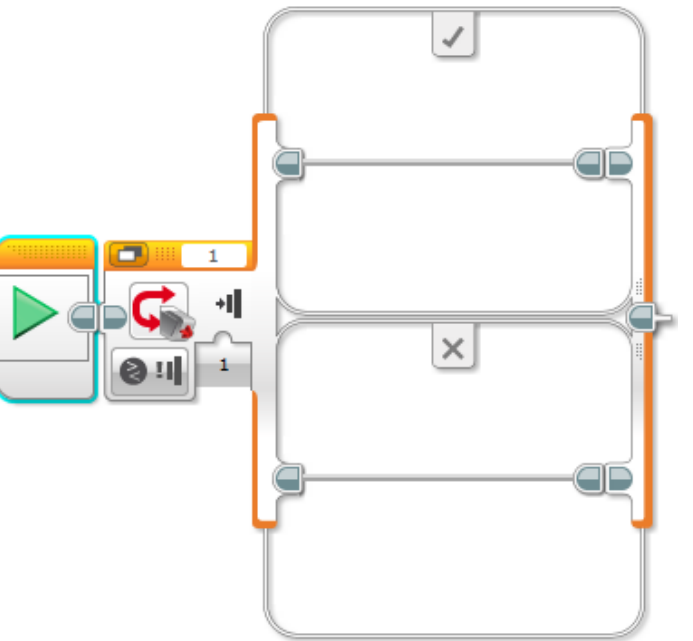
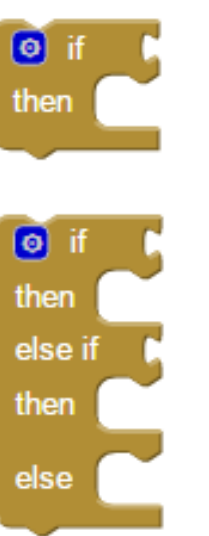
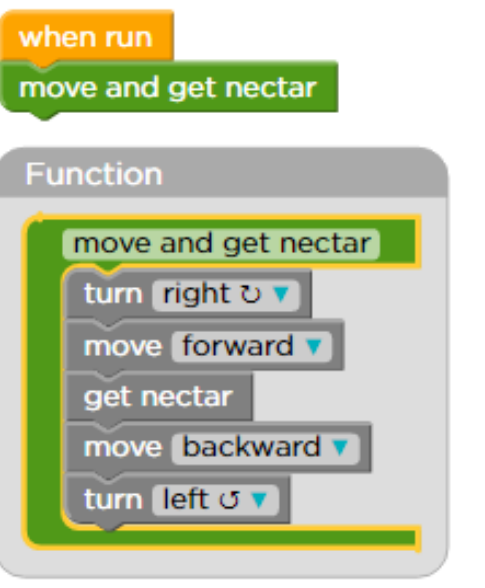
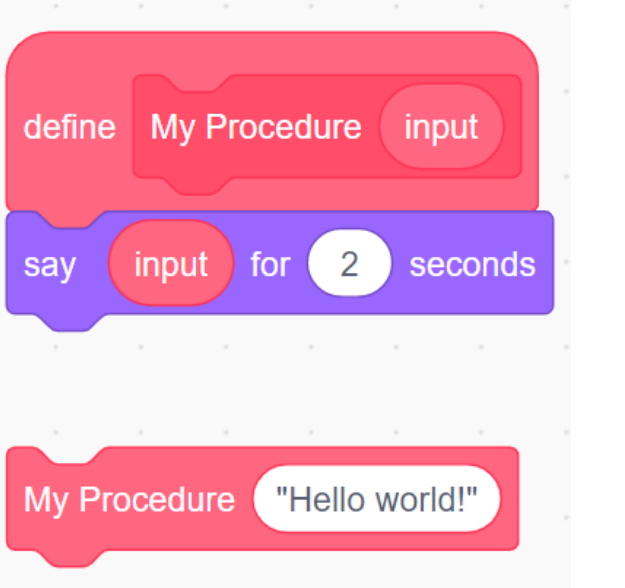
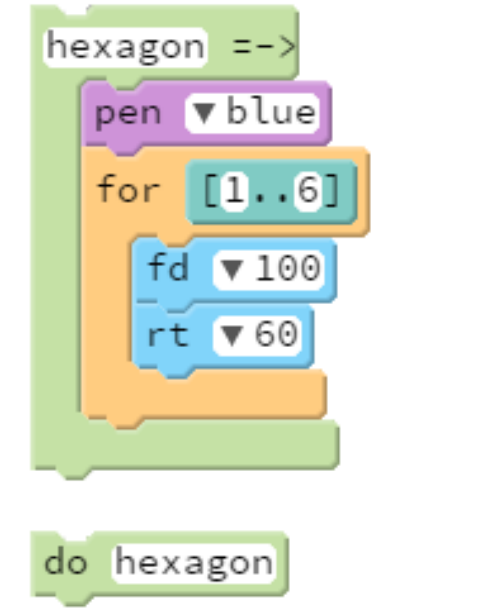

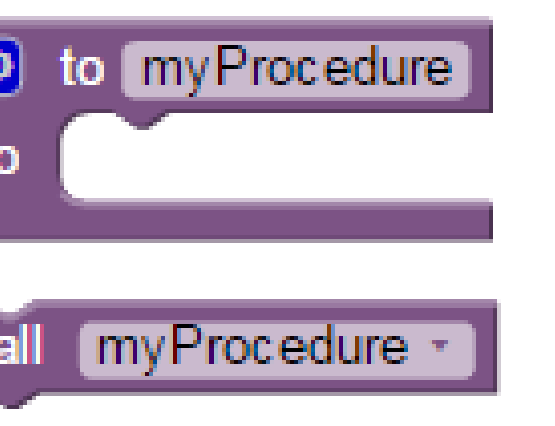
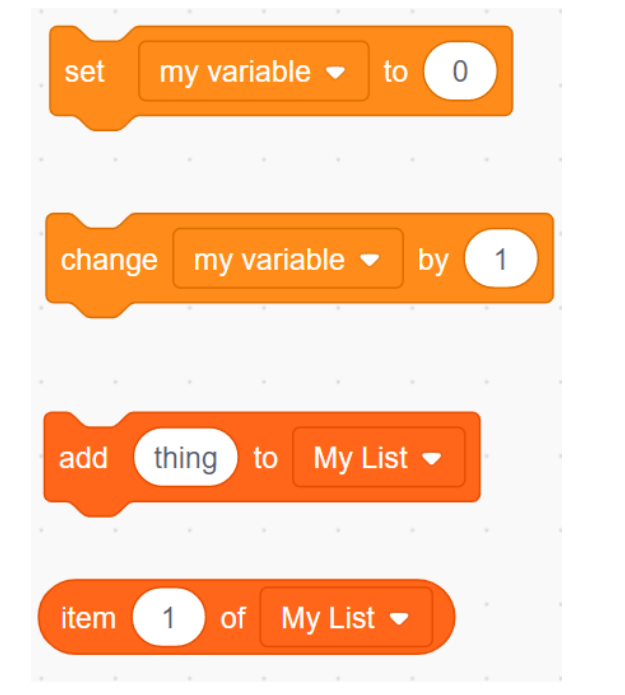
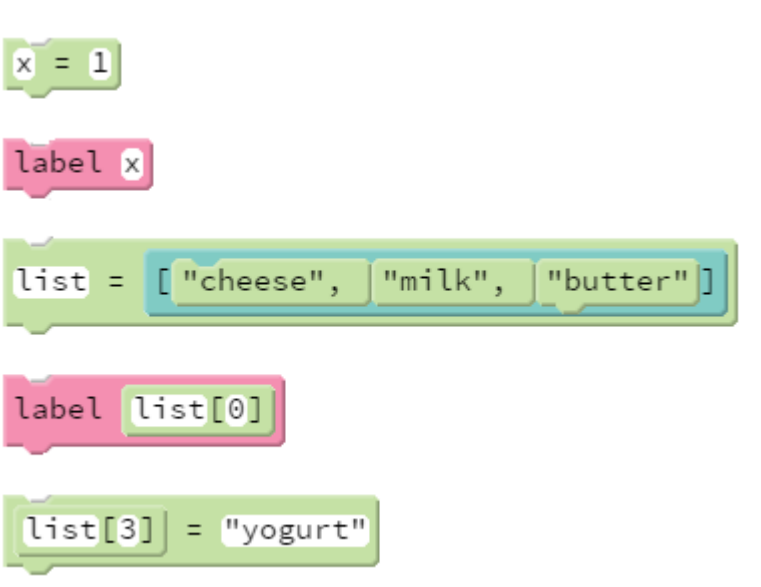

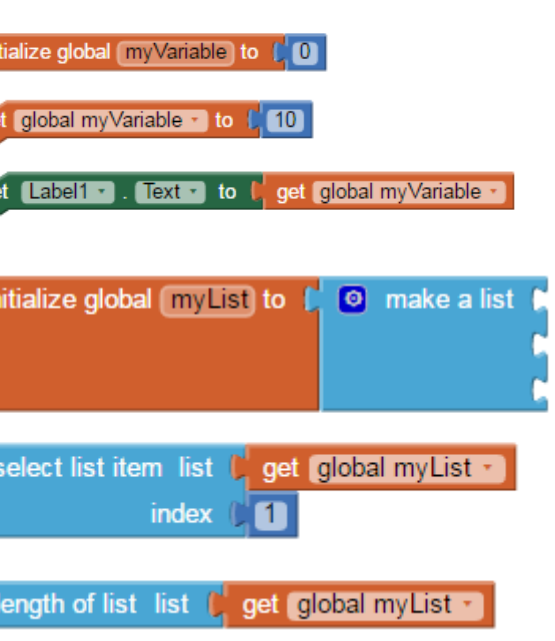


Structure	Code.org (Blockly)	Scratch	Pencil Code (Blocks)	Pencil Code (Text)	LEGO EV3	App Inventor	Python (CMU)
<p>Events</p> <p>An event runs code in response to user input or something that happens in a program.</p>				<pre> 1: click (e) -> 2: moveto e 3: 4: button 'Click', -> 5: write 'clicked' 6: 7: keydown 'X', -> 8: write 'x pressed' </pre>			<pre> 1: def onMousePress(x,y): 2: #Do something 3: 4: def onKeyPress(key): 5: if key == 'space': 6: #Do something 7: 8: def onStep(): 9: #Do something </pre>
<p>Loops</p> <p>A loop repeats a set of commands a fixed number of times or until a condition is met.</p>				<pre> 1: for [1..3] 2: fd 100 3: 4: for x in [0...10] 5: label x 6: 7: forever 10, -> 8: fd 10 9: rt 3 </pre>			<pre> 1: while y < 400: 2: #Do something 3: 4: for i in range(10): 5: #Do something 6: 7: for element in group: 8: #Do something </pre>
<p>Conditionals</p> <p>A conditional splits a program's flow into two or more paths, based on a specified condition.</p>				<pre> 1: if x is 1 2: x = 0 3: 4: if x is 10 5: hide() 6: else 7: show() 8: 9: if (touches ball) 10: hide() </pre>			<pre> 1: if x < 100: 2: #Do something 3: 4: if x<100: 5: #Do something 6: elif x<300: 7: #Do something 8: else: 9: #Do something </pre>
<p>Functions</p> <p>A function names a reusable set of instructions for performing a specific task or calculation.</p>				<pre> 1: hexagon --> 2: pen blue 3: for [1..6] 4: fd 100 5: rt 60 6: 7: do hexagon </pre>			<pre> 1: def myFunction(a, b): 2: c = a * b 3: return c 4: 5: myFunction(5, 7) 6: myFunction(2, 6) 7: </pre>
<p>Variables & Lists</p> <p>A variable stores a single value. A list stores multiple values, each with its own index.</p>			<pre> 1: x = 1 2: label x 3: list = ["cheese", "milk", "butter"] 4: 5: label list[0] 6: 7: list[3] = "yogurt" </pre>	<pre> 1: x = 1 2: label x 3: list = ["cheese", "milk", "butter"] 4: 5: label list[0] 6: 7: list[3] = "yogurt" </pre>			<pre> 1: myVariable = 10 2: 3: myShape.centerX = 200 4: 5: myList = ['a', 'b', 'c'] 6: 7: print(myList[0]) 8: 9: for item in myList: 10: print(item) </pre>
<p>Objects</p> <p>Objects group data about the position, dimensions, properties, and behaviors of sprites and shapes.</p>	