### Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buttons touched</strong></td>
<td><strong>Set motor speeds</strong></td>
</tr>
<tr>
<td>grey: ignore the button, red: must be touched</td>
<td>Set left and right motor and wheel speeds.</td>
</tr>
<tr>
<td><strong>Obstacle detectors</strong></td>
<td><strong>Set top colour</strong></td>
</tr>
<tr>
<td>grey: ignore detector, white: object close, black: object far</td>
<td>Set a mixture of red, green and blue to robot’s top.</td>
</tr>
<tr>
<td><strong>Ground detectors</strong></td>
<td><strong>Set bottom colour</strong></td>
</tr>
<tr>
<td>grey: ignore detector, while: ground, black: no ground</td>
<td>Set a mixture of red, green and blue to robot’s bottom.</td>
</tr>
<tr>
<td><strong>Robot tapped</strong></td>
<td><strong>Play music</strong></td>
</tr>
<tr>
<td>Robot received a shock.</td>
<td>Choose pitch, white twice the duration of black.</td>
</tr>
<tr>
<td><strong>Hand clapped</strong></td>
<td></td>
</tr>
<tr>
<td>Robot heard a strong noise.</td>
<td></td>
</tr>
</tbody>
</table>

### Constructing your program

Drag and drop events to the left square, actions to the right square. When event happens, the robot executes the action. Multiple actions associated with a single event. When event happens, the robot executes all the actions.

### Sensors are combined with AND in an event

If two sensors are selected, both conditions must be true for the event to happen. **Left and right** must be touched or have an object close.

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Advanced Mode

Events

Remote control arrows
Signal from the remote control, arrows buttons.

Remote control keypad
Signal from the remote control, keypad buttons.

Obstacle detectors
Sliders set high (object close) and low (object far) thresholds.

Ground detectors
Sliders set high (white / ground close) and low (black / ground far) thresholds.

Robot tapped
Robot received a shock.

Pitch accelerometer
Pitch (forwards / backwards) is within the red segment.

Roll accelerometer
Roll (left / right) is within the red segment.

Timer elapsed
The timer has timed out.

Actions

Start timer
Timer elapsed event will occur after some duration.

Set robot’s state
Set the four-bit internal state of the robot.

Events can be combined with a state
The robot’s response to an event can depend on the robot’s state. The event is considered only if the state corresponds the value of the green icon.