Lesson 17: Physical Inputs and Buttons

LEVEL -2

```
//This code creates a button attached to pin "A1"
var buzzButton = createButton("A1");
var newButton = createButton("A6");
var myLed = createLed("A4");

//This code buzzes when buzzButton goes down
onBoardEvent(buzzButton, "down", function() {
  buzzer.frequency(200, 100);
});
//1) Use an onBoardEvent() to detect when the buzzButton is released up
onBoardEvent(buzzButton, "up", function() {
  buzzer.frequency(1000, 500);
  myLed.toggle();
});
onBoardEvent(newButton, "down", function() {
  myLed.toggle();
});
```

LEVEL 3

```
//This code creates a button attached to pin "A1"
var buzzButton = createButton("A1");
var newButton = createButton("A6");
var myLed = createLed("A4");

//This code buzzes when buzzButton goes down
onBoardEvent(buzzButton, "down", function() {
  buzzer.frequency(200, 100);
});
//1) Use an onBoardEvent() to detect when the buzzButton is released up
onBoardEvent(buzzButton, "up", function() {
  buzzer.frequency(1000, 500);
  myLed.toggle();
});
onBoardEvent(newButton, "down", function() {
  myLed.toggle();
});
```

LEVEL 4 - Same code as level 3

LEVEL 5

a. Color Changer

```
//1) Create three button variables on pins "A4", "A5", and "A6"
var red = createButton("A4");
var blue = createButton("A5");
var green = createButton("A6");
onBoardEvent(red, "down", function() {
  setProperty("screen1", "background-color", "red");
});
onBoardEvent(blue, "down", function() {
  setProperty("screen1", "background-color", "blue");
});
onBoardEvent(green, "down", function() {
  setProperty("screen1", "background-color", "green");
});

//2) Use three onBoardEvent() blocks to detect when each of your buttons is "down"

//3) Update the background color when a button is pressed
```

b. Mini Piano

```
//1) Create three button variables on pins "A1", "A5", and "A7"
var hi = createButton("A1");
var hello = createButton("A5");
var good = createButton("A6");
onBoardEvent(hi, "down", function() {
  buzzer.playNotes(["G3"], 120);
});
onBoardEvent(hello, "down", function() {
  buzzer.playNotes(["C3"], 120);
});
onBoardEvent(good, "down", function() {
  buzzer.playNotes(["D3"], 120);
});

//2) Use three onBoardEvent() blocks to detect when each of your buttons is "down"
```

c. Whack-A-Mole Game

```
var score = 0;
//1) Create three button variables on pins "A1", "A2", and "A7"
var button1 = createButton("A1");
var button2 = createButton("A4");
var button3 = createButton("A6");
onBoardEvent(button1, "down", function() {
  score = score + 1;
  setText("scoreLabel", score);
});
onBoardEvent(button2, "down", function() {
  score = score + 2;
  setText("scoreLabel", score);
});
onBoardEvent(button3, "down", function() {
  score = score + 3;
  setText("scoreLabel", score);
});
```

d. Conductive Materials

```
var testButton = createButton("A0");
onBoardEvent(testButton, "down", function() {
  buzzer.frequency(500, 100);
});
```