

My First App

Label, Button and Text Input

1. Introduction

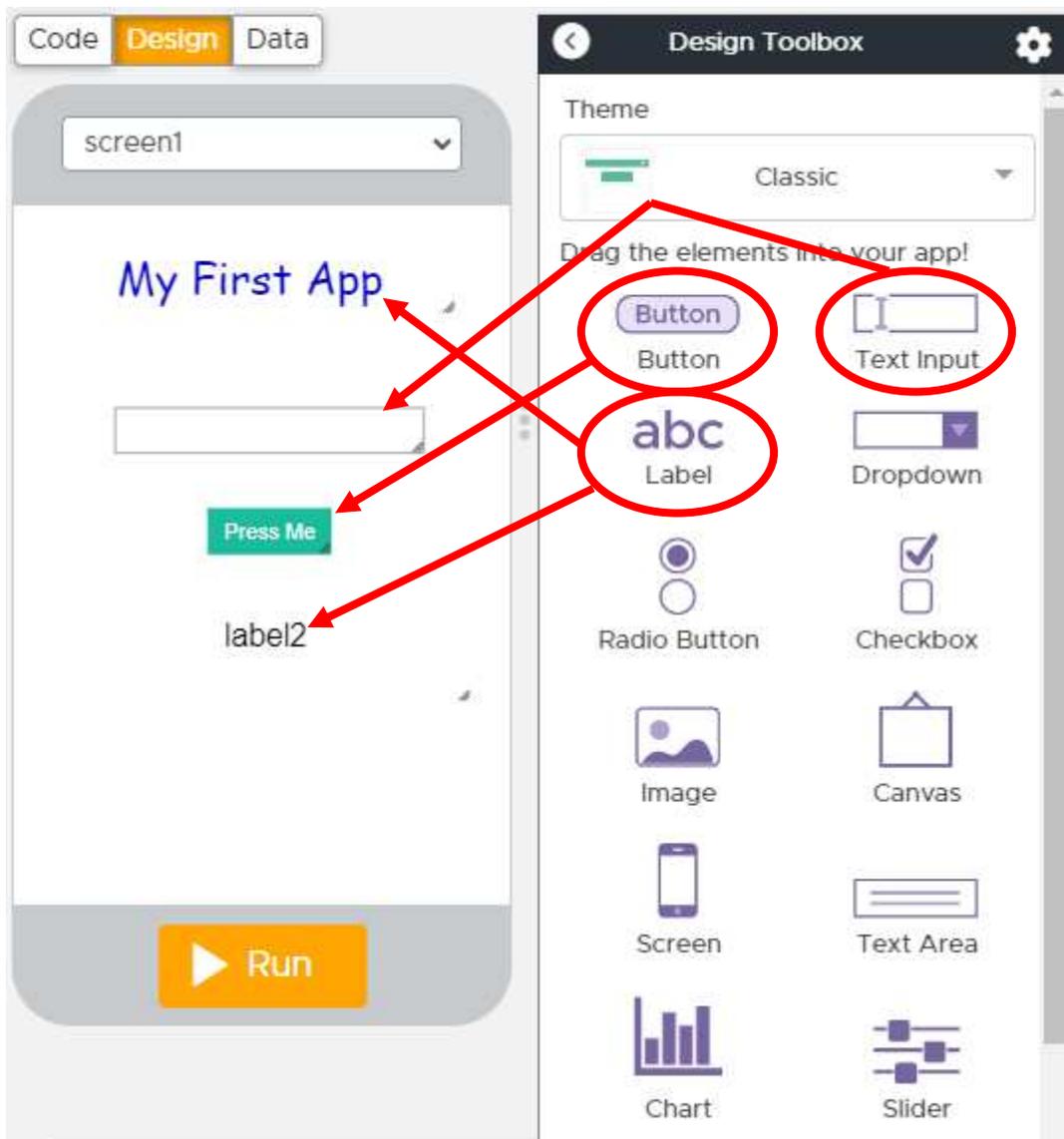
Labels are for displaying text messages from the program.

Buttons are for clicking to start an event.

Text Inputs are for inputting data into the program.

2. User Interface Layout

From the Design Toolbox, drag the elements that you want onto the screen.



Every element has its own properties and events. Customize the properties to your liking.

The image shows a 'PROPERTIES' panel for a UI element named 'label1'. The panel is divided into two tabs: 'PROPERTIES' and 'EVENTS'. The 'PROPERTIES' tab is active, showing various attributes for the element. The 'id' property is highlighted with a purple background and contains the text 'label1'. To the right of the 'id' field are three buttons: 'Delete' (red), 'Duplicate' (teal), and 'Apply Theme' (teal). Below the 'id' field are several other properties, each with a text input field and a lock icon to its right:

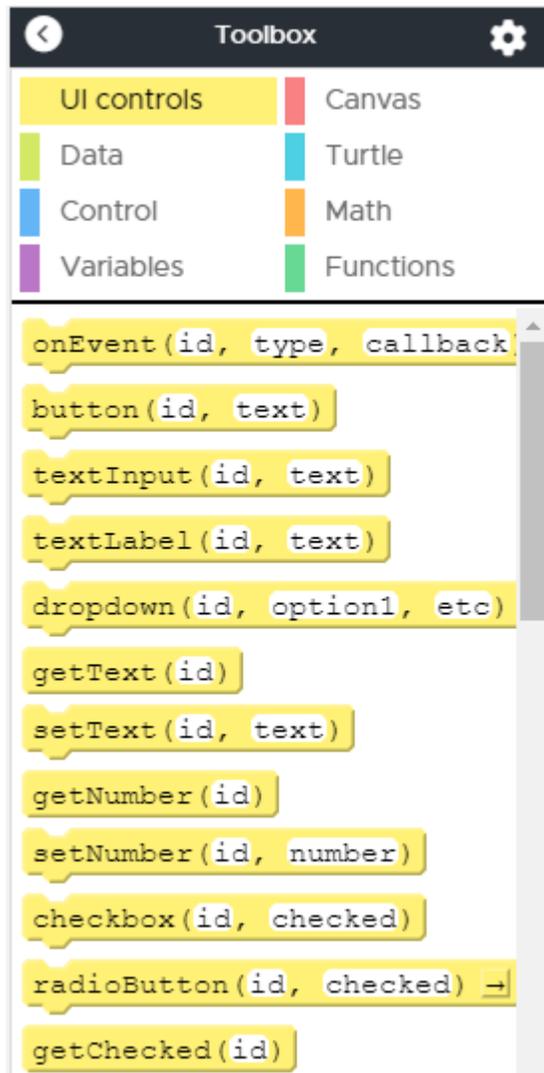
- text:** Input field contains 'My First App'.
- width (px):** Input field contains '265'.
- height (px):** Input field contains '40'.
- x position (px):** Input field contains '20'.
- y position (px):** Input field contains '30'.
- text color:** Input field contains 'rgb(0, 0, 200)' and a small blue color swatch.
- background color:** Input field contains 'rgba(0, 0, 0, 0)' and a small white color swatch.

At the top right of the panel, there is a dropdown menu showing 'label1'.

3. Coding

All the available command blocks are listed in the Code Toolbox under various categories.

All the user interface command blocks are under the yellow **UI controls** group.

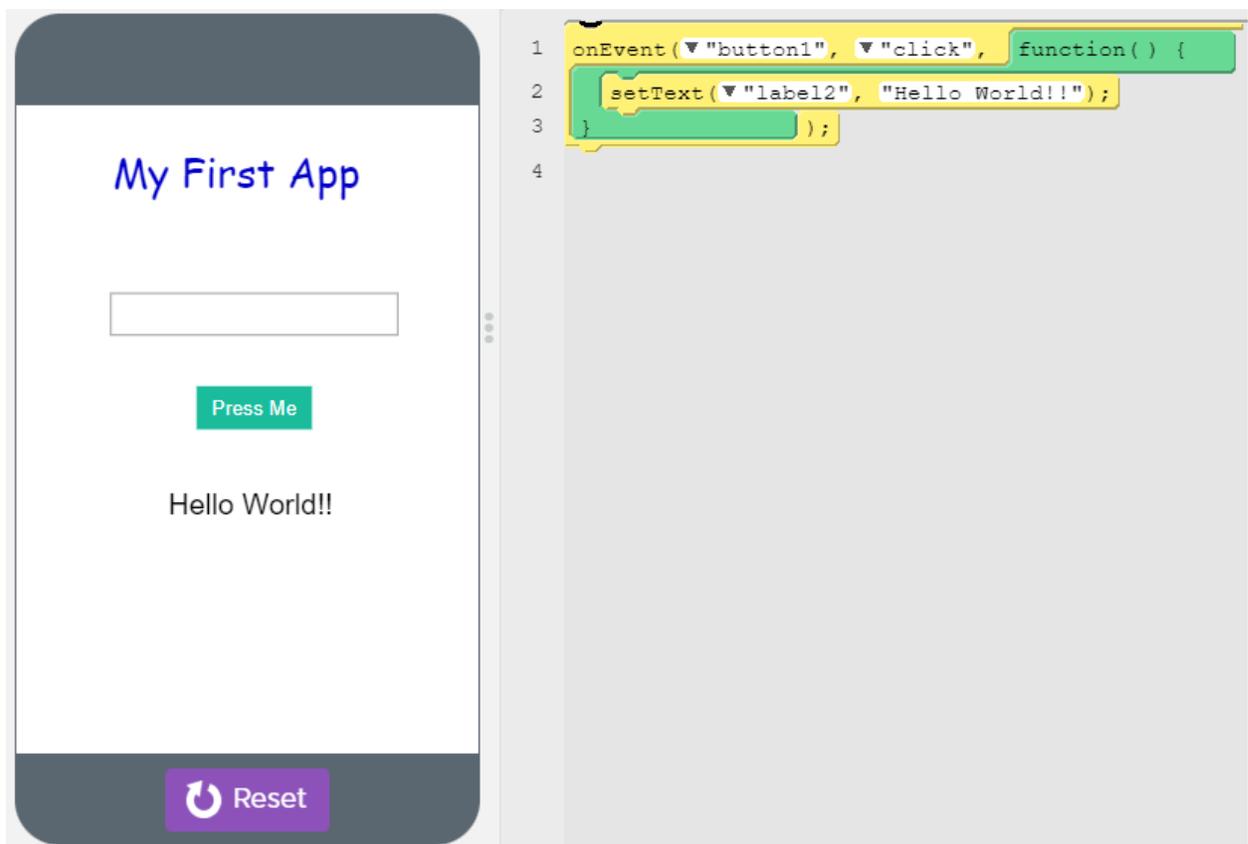


If we want the computer to execute some blocks (instructions) when a certain event occurs, we use the onEvent block.

All the blocks inside the onEvent block are executed sequentially when the button is clicked.

```
1 onEvent (▼ "button1", ▼ "click", function() {  
2   setText (▼ "label2", "Hello World!!");  
3 } );
```

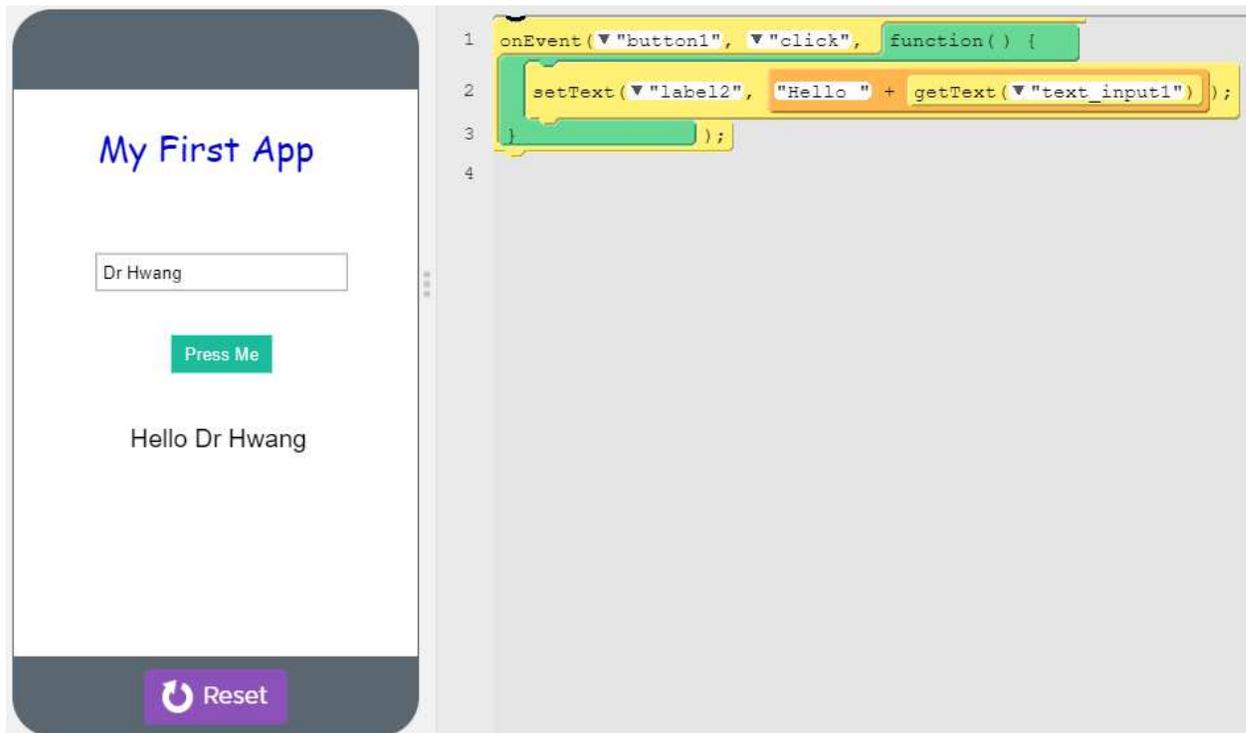
Displays the message “Hello World!!” when the button is pressed.



Displays the message “Hello <name>” where <name> is whatever the user typed in the text input when the button is pressed.

The `getText` block is to get the text that the user has entered in the Text input box.

The `+` symbol is to concatenate two text strings together.



Problems (Questions with an * are more difficult)

- 1) Write a program with two buttons and a label. One button has the word “Apple” and the other button has the word “Orange.” When the “Apple” button is pressed, display the message “I like apples” in the label. When the “Orange” button is pressed, display the message “I like oranges” in the label.
- 2) Write a program with two Text input boxes for the user to type in two different kinds of fruits. After typing in the two fruits the user will press the button. When the button is pressed the program will display the message “I like <fruit1> and <fruit2>” where <fruit1> is whatever fruit the user entered into the first text input box and <fruit2> is whatever fruit the user entered into the second text input box.
- 3) Try this.

```
1 var x = 0;
2 onEvent(▼"button1", ▼"click", function() {
3   if (x == 0) {
4     x = 1;
5     setText(▼"label2", "Welcome " + (getText(▼"text_input1") + "\nto La Sierra University"));
6     playSound(▼"https://studio.code.org/blockly/media/example.mp3");
7   } else {
8     x = 0;
9     setText(▼"label2", "OK, you just pressed me again");
10  }
11  });
```