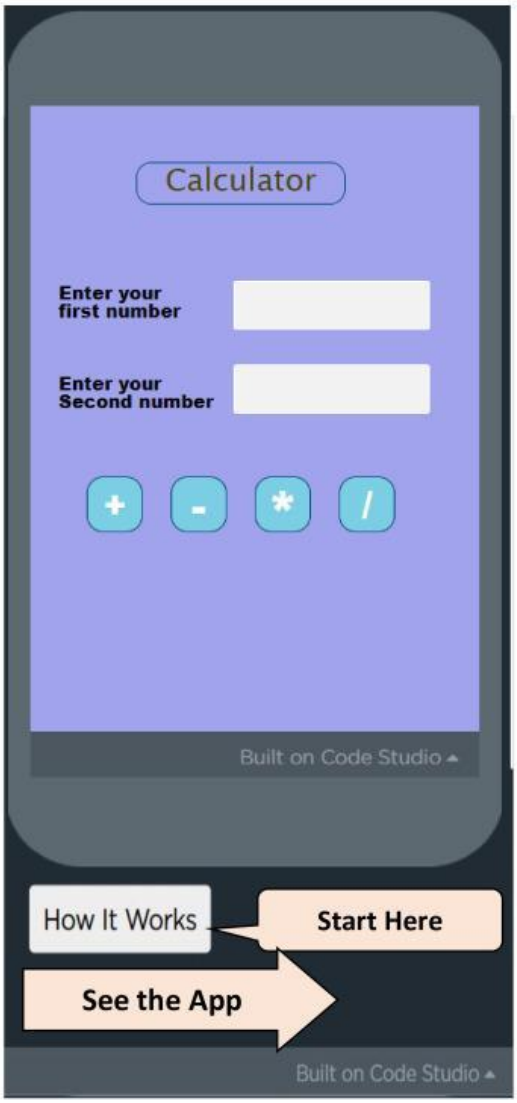
Project 39

DP EDUCATION

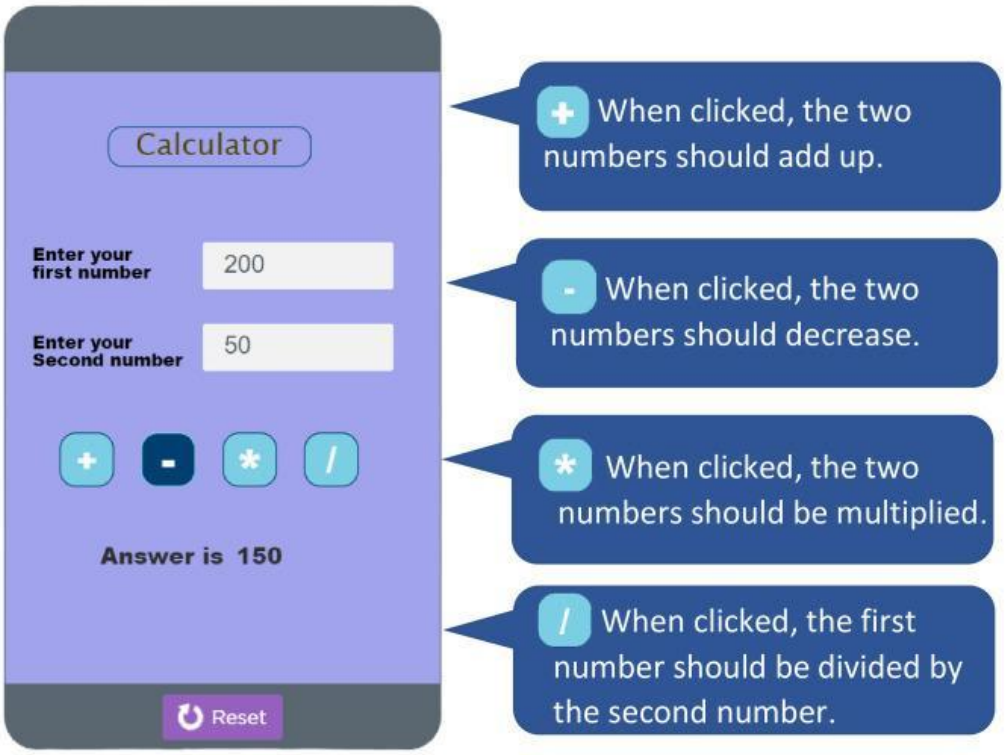
Coding School



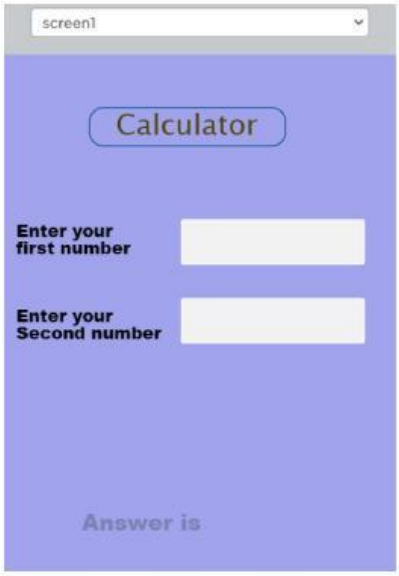
LIVEWORKSHEETS

Project 39.

Let's create a Calculator . here,



❖ The necessary background and basics are provided.



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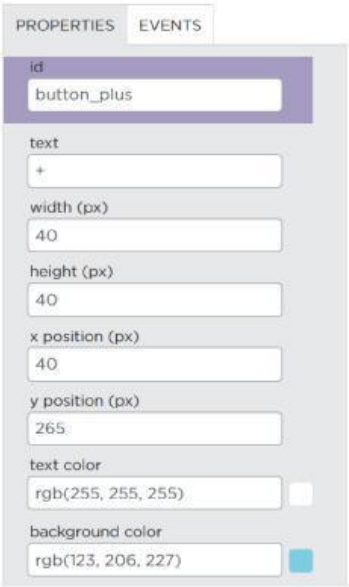
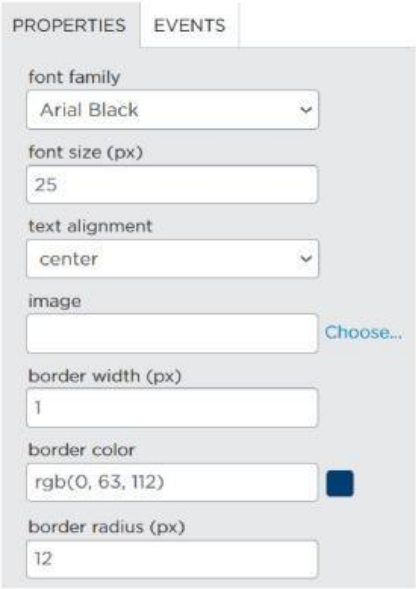
❖ + Button creation.

Click button and drag and drop it on screen1. Then create the properties as follows.



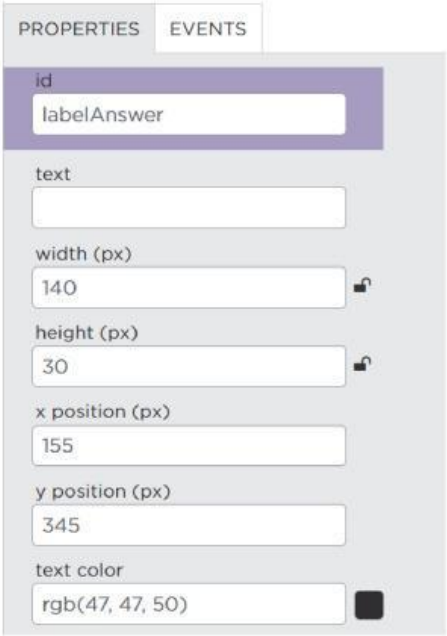


❖ To create the other Buttons, change only the following properties. Other properties are the same as above.

- Button	* Button	/ Button
id: button_minus	id: button_multiply	Id : button_divide
text: -	text: *	text: /
x position (px): 100	x position (px): 160	x position (px): 220

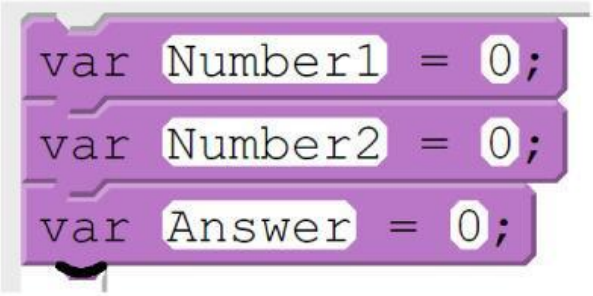
❖ Let's create a label to display the answer when the above buttons are clicked. Create properties as follows.

LIVEWORKSHEETS



- Now the design is all over. Let's start coding now.

- First let's create variable for First number, Second number and Answer.



- When the button is clicked, the first number and the second number should be added and the answer should be set to the "labelAnswer" label.

- And the background color and border color of the Button should be different.

- If another button has been clicked before clicking the button, the background color and border color of that button have changed, so it should be adjusted as before..

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```
onEvent("button_plus", "click", function() {
  Number1 = getNumber("Text_Number1");
  Number2 = getNumber("Text_Number2");
  Answer = Number1 + Number2;
  setNumber("labelAnswer", Answer);
  showElement("labelAnswer");
  showElement("label6");
  setProperty("button_plus", "background-color", "#003F70");
  setProperty("button_plus", "border-color", "#7BCEE3");
  setProperty("button_minus", "background-color", "#7BCEE3");
  setProperty("button_minus", "border-color", "#003F70");
  setProperty("button_multiply", "background-color", "#7BCEE3");
  setProperty("button_multiply", "border-color", "#003F70");
  setProperty("button_divide", "background-color", "#7BCEE3");
  setProperty("button_divide", "border-color", "#003F70");
});
```

- As above, when the other buttons are clicked, perform the calculation related to the button.

  - For - Button

```
onEvent("button_minus", "click", function() {
  Number1 = getNumber("Text_Number1");
  Number2 = getNumber("Text_Number2");
  Answer = Number1 - Number2;
  setNumber("labelAnswer", Answer);
  showElement("labelAnswer");
  showElement("label6");
  setProperty("button_minus", "background-color", "#003F70");
  setProperty("button_minus", "border-color", "#7BCEE3");
  setProperty("button_plus", "background-color", "#7BCEE3");
  setProperty("button_plus", "border-color", "#003F70");
  setProperty("button_multiply", "background-color", "#7BCEE3");
  setProperty("button_multiply", "border-color", "#003F70");
  setProperty("button_divide", "background-color", "#7BCEE3");
  setProperty("button_divide", "border-color", "#003F70");
});
```

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- For * Button

```
onEvent("button_multiply", "click", function() {
  Number1 = getNumber("Text_Number1");
  Number2 = getNumber("Text_Number2");
  Answer = Number1 * Number2;
  setNumber("labelAnswer", Answer);
  showElement("labelAnswer");
  showElement("label6");
  setProperty("button_multiply", "background-color", "#003F70");
  setProperty("button_multiply", "border-color", "#7BCEE3");
  setProperty("button_plus", "background-color", "#7BCEE3");
  setProperty("button_plus", "border-color", "#003F70");
  setProperty("button_minus", "background-color", "#7BCEE3");
  setProperty("button_minus", "border-color", "#003F70");
  setProperty("button_divide", "background-color", "#7BCEE3");
  setProperty("button_divide", "border-color", "#003F70");
});
```

- For / Button

  When a number is divided by 0, the answer is infinity. Therefore, even if division is done when Number2 is equal to 0, it should be displayed as "error".

```
onEvent("button_divide", "click", function() {
  Number1 = getNumber("Text_Number1");
  Number2 = getNumber("Text_Number2");
  if (Number2 == 0) {
    setText("labelAnswer", "Error");
    showElement("labelAnswer");
    showElement("label6");
  }
  if (Number2 != 0) {
    Answer = Number1 / Number2;
    setNumber("labelAnswer", Answer);
    showElement("labelAnswer");
    showElement("label6");
  }
  setProperty("button_divide", "background-color", "#003F70");
  setProperty("button_divide", "border-color", "#7BCEE3");
  setProperty("button_plus", "background-color", "#7BCEE3");
  setProperty("button_plus", "border-color", "#003F70");
  setProperty("button_minus", "background-color", "#7BCEE3");
  setProperty("button_minus", "border-color", "#003F70");
  setProperty("button_multiply", "background-color", "#7BCEE3");
  setProperty("button_multiply", "border-color", "#003F70");
});
```

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Choose the correct answer.

1. When a number is divided by 0, what blocks are used to display as Error?

```
if (Number2 = 0) {
  setText("labelAnswer", "Error");
  showElement("labelAnswer");
  showElement("label6");
}
```

```
if (Number2 == 0) {
  setText("labelAnswer", "Error");
  showElement("labelAnswer");
  showElement("label6");
}
```

```
if (Number2 = "ZERO") {
  setText("labelAnswer", "Error");
  showElement("labelAnswer");
  showElement("label6");
}
```

2. Which of the following statements regarding this block is correct?

```
onEvent("button_plus", "click", function() {
  setProperty("button_plus", "background-color", "#003F70");
  setProperty("button_plus", "border-color", "#7BCEE3");
});
```

When the button is clicked, the background color of the button changes.

When the button is clicked, the border color of the button changes.

When the button is clicked, the background color and border color of the button will change.

3. What happens with the following blocks?

```
Answer = Number2 - Number1;
```

From Number1, subtract Number2

From Number2, subtract Number1

Divide Number1 by Number2

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4. Which blocks are used to divide only when Number2 is not equal to 0?

```
if ( Number2 != 0 ){
  Answer = Number1 / Number2;
  setNumber(▼"labelAnswer", Answer);
  showElement(▼"labelAnswer");
  showElement(▼"label6");
}
```

```
if ( Number2 < 0 ){
  Answer = Number1 / Number2;
  setNumber(▼"labelAnswer", Answer);
  showElement(▼"labelAnswer");
  showElement(▼"label6");
}
```

```
if ( Number2 == 0 ){
  Answer = Number1 / Number2;
  setNumber(▼"labelAnswer", Answer);
  showElement(▼"labelAnswer");
  showElement(▼"label6");
}
```

LIVEWORKSHEETS

5. When Number2 is equal to 0, when / button is clicked, what blocks are used to display as "error" and emit a sound??

```
onEvent("button_divide", "click", function() {
  Number1 = getNumber("Text_Number1");
  Number2 = getNumber("Text_Number2");
  if (Number2 == 0) {
    setText("labelAnswer", "Error");
    showElement("labelAnswer");
    showElement("label6");
  }
  if (Number2 != 0) {
    Answer = Number1 / Number2;
    setNumber("labelAnswer", Answer);
    showElement("labelAnswer");
    showElement("label6");
  }
  playSound("sound://default.mp3", false);
});
```

```
onEvent("button_divide", "click", function() {
  Number1 = getNumber("Text_Number1");
  Number2 = getNumber("Text_Number2");
  if (Number2 = 0) {
    setText("labelAnswer", "Error");
    showElement("labelAnswer");
    showElement("label6");
    playSound("sound://default.mp3", false);
  }
  if (Number2 != 0) {
    Answer = Number1 / Number2;
    setNumber("labelAnswer", Answer);
    showElement("labelAnswer");
    showElement("label6");
  }
});
```

LIVEWORKSHEETS