Project 38

DP EDUCATION

Coding School

38

Smart Canteen

Noodles Rs. 100

[-] [0] [+]

Water Rs. 50

[-] [0] [+]

Cool Drink Rs. 80

[-] [0] [+]

Buy

Built on Code Studio ▲

How It Works   **Start Here**

See the App

Built on Code Studio ▲
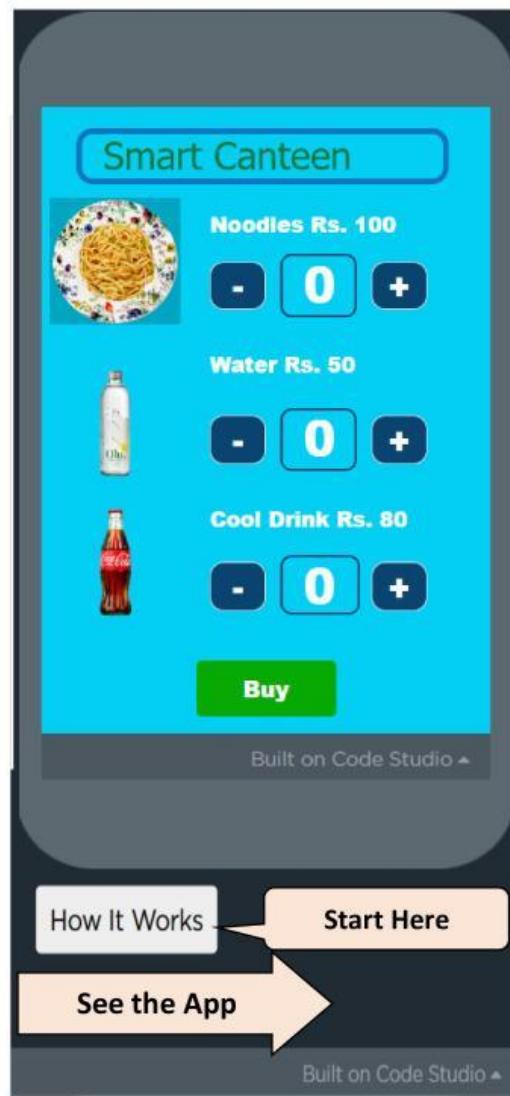
Project 38

Let's create the Smart Canteen app for the school canteen. there,

+	When clicked, the count of the relevant item should
-	When clicked, the count of the relevant item should
Buy	When clicked, the tota price of the items should be
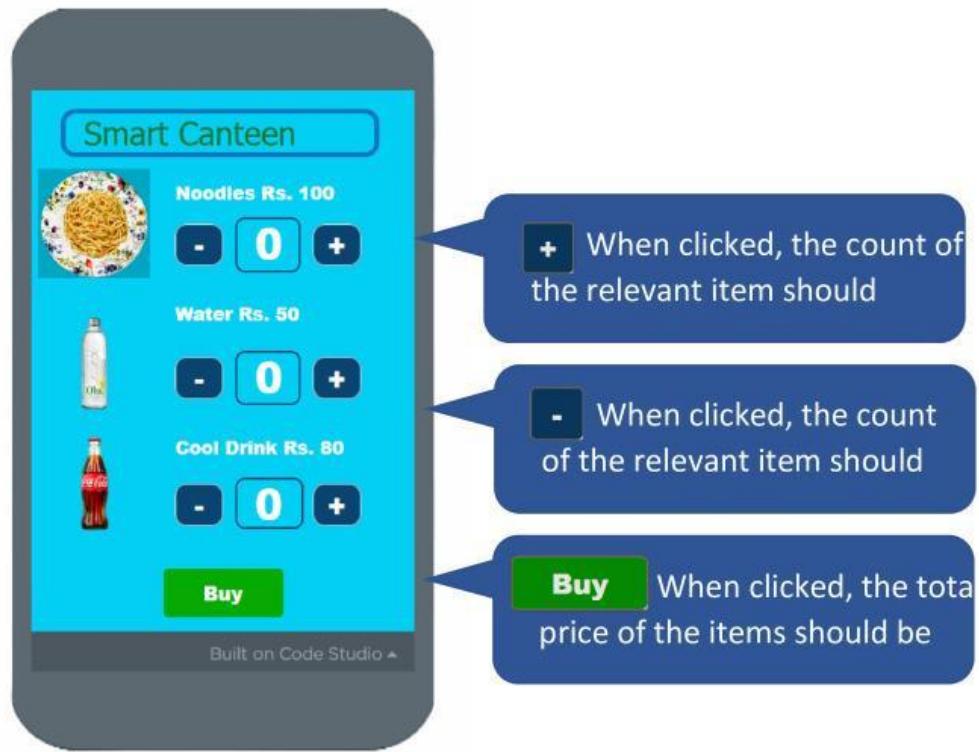
❖ The background and basics you need are provided. (screen1 and screen2)
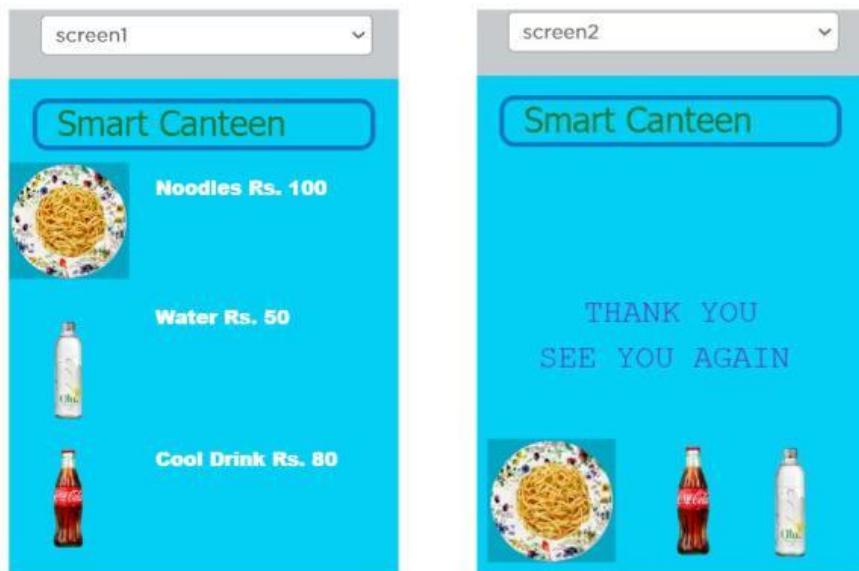
❖ Creating this **-** button for Noodles.

Click button and drag and drop it on screen1. Then create properties.
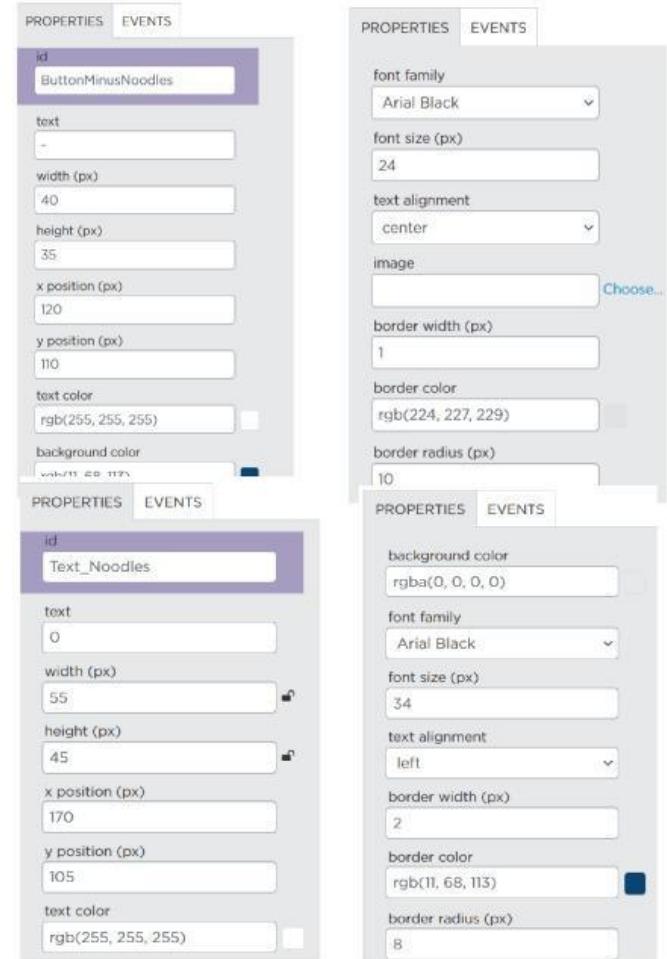
PROPERTIES   EVENTS

id
ButtonMinusNoodles

text
-

width (px)
40

height (px)
35

x position (px)
120

y position (px)
110

text color
rgb(255, 255, 255)

background color
rgb(11, 68, 113)

PROPERTIES   EVENTS

font family
Arial Black

font size (px)
24

text alignment
center

image
Choose...

border width (px)
1

border color
rgb(224, 227, 229)

border radius (px)
10

❖ Creating the Label for Noodles.

Click and drag the label and drop it on screen1. Then create properties.

PROPERTIES   EVENTS

id
Text_Noodles

text
0

width (px)
55

height (px)
45

x position (px)
170

y position (px)
105

text color
rgb(255, 255, 255)

PROPERTIES   EVENTS

background color
rgba(0, 0, 0, 0)

font family
Arial Black

font size (px)
34

text alignment
left

border width (px)
2

border color
rgb(11, 68, 113)

border radius (px)
8

❖ Creating this **+** button for Noodles

Click button and drag and drop it on screen1. Then create properties.
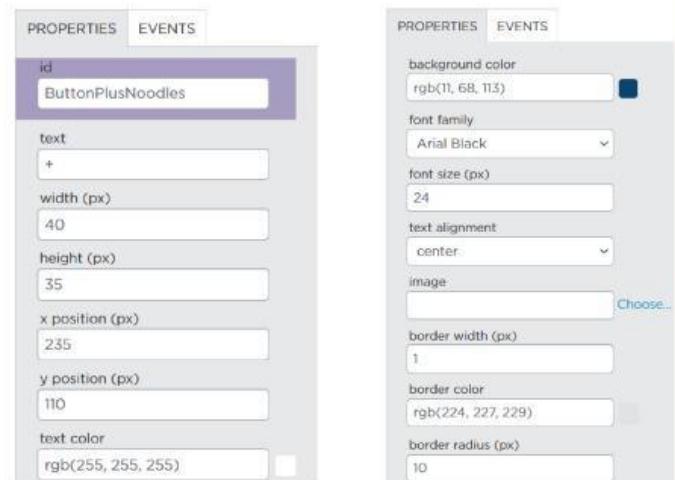
PROPERTIES   EVENTS

id
ButtonPlusNoodles

text
+

width (px)
40

height (px)
35

x position (px)
235

y position (px)
110

text color
rgb(255, 255, 255)

PROPERTIES   EVENTS

background color
rgb(11, 68, 113)

font family
Arial Black

font size (px)
24

text alignment
center

image
Choose...

border width (px)
1

border color
rgb(224, 227, 229)

border radius (px)
10

❖ Let's create buttons and labels for water and cool drink as above. Only id, "x position" and "y position" of buttons and labels should change.

Water

- Button

Id : ButtonMinusWater

x position (px) : 120

y position (px) : 220

Label

Id : Text_Water

x position (px) : 170

y position (px) : 215

+ Button

Id : ButtonPlusWater

x position (px) : 235

y position (px) : 220

Cool Drink

- Button

Id : ButtonMinusCoolDrink

x position (px) : 120

y position (px) : 220

Label

Id : Text_Cool_Drink

x position (px) : 170

y position (px) : 320

+ Button

Id : ButtonPlusWater

x position (px) : 235

y position (px) : 325

❖ Now let's design the buy button. Now create the properties.

PROPERTIES   EVENTS

id
ButtonBuy

text
Buy

width (px)
100

height (px)
40

x position (px)
110

y position (px)
395

text color
rgb(255, 255, 255)

background color
rgb(6, 170, 2)

PROPERTIES   EVENTS

font family
Arial Black

font size (px)
16

text alignment
center

image
Choose...

border width (px)
0

border color
rgb(77, 87, 95)

border radius (px)
4

❖ When the buy button is clicked, go to screen 2 and the total price for the selected items should be displayed there.

❖ For that, let's make the relevant total price to be displayed by the label. Create properties for that.

PROPERTIES   EVENTS

id
Total_price_Input

text
0

width (px)
120

height (px)
45

x position (px)
205

y position (px)
110

text color
rgb(255, 255, 255)

background color
rgba(0, 0, 0, 0)

PROPERTIES   EVENTS

font family
Arial Black

font size (px)
22

text alignment
left

border width (px)
0

border color
rgb(77, 87, 95)

border radius (px)
0

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

❖ ➕ When the button is clicked, the count should increase by one in relation to that item. For that, let's first take the count as 0 for each item. Let's create 3 separate variables for each item.

Also "NoodlesCount" for Noodles,
Also "WaterBottelCount" for water
As "CoolDrinkCount" for Cool Drink
Let's create 3 variables.

```
var NoodlesCount = 0;
var WaterBottleCount = 0;
var CoolDrinkCount = 0;
```

❖ Let's take 3 variables for each item to calculate the relevant total price when the buy button is clicked.

"NoodlesPrice" for Noodles,

"WaterBottelPrice" for water bottle, as
"CoolDrinkPrice" for cool drink.
Let's create 3 variables

```
var NoodlesPrice = 100;
var WaterBottlePrice = 50;
var CoolDrinkPrice = 80;
```

❖ To calculate the total price Let's create 4 variables as "Total_of_Noodles", "Total_of_WaterBottel", "Total_of_CoolDrink" and "TotalPrice".

```
var Total_of_Noodles = 0;
var Total_of_WaterBottel = 0;
var Total_of_CoolDrink = 0;
var TotalPrice = 0;
```

❖ Noodles සඳහා,
- ➕ When button ("ButtonPlusNoodles") is clicked, the count of Noodles should increase by one. Accordingly, every time ➕ the button is clicked, the "NoodlesCount" variable should increase by one. And the value of "NoodlesCount" variable should be set to "Text_Noodles" label.

```
onEvent(▼ "ButtonPlusNoodles", ▼ "click", function() {
    NoodlesCount = NoodlesCount + 1;
    setNumber(▼ "Text_Noodles", NoodlesCount);
});
```

- ➖ When the button is clicked ("ButtonMinusNoodles"), the count of Noodles should decrease by one. Accordingly, every time ➖ the button is clicked, the "NoodlesCount" variable should decrease by one.

When the value of the "NoodlesCount" variable is 0, when **-** the button is clicked "NoodlesCount"
- To stop the value of the variable from going negative, the value of the "NoodlesCount" variable should be 0 whenever the value of the "NoodlesCount" variable is reduced to 0 by the if condition.
- - And the value of "NoodlesCount" variable should be set to "Text_Noodles" label.
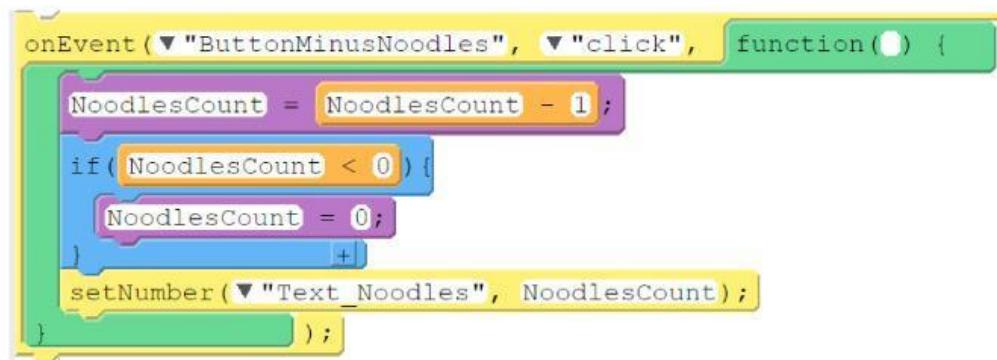
```
onEvent(▼"ButtonMinusNoodles", ▼"click", function() {
    NoodlesCount = NoodlesCount - 1;
    if(NoodlesCount < 0){
        NoodlesCount = 0;
    }
    setNumber(▼"Text_Noodles", NoodlesCount);
}
);
```

❖ In the same way as above, create the **-** button for Water and Cool Drink and the count variable and the label to change when the button is clicked.
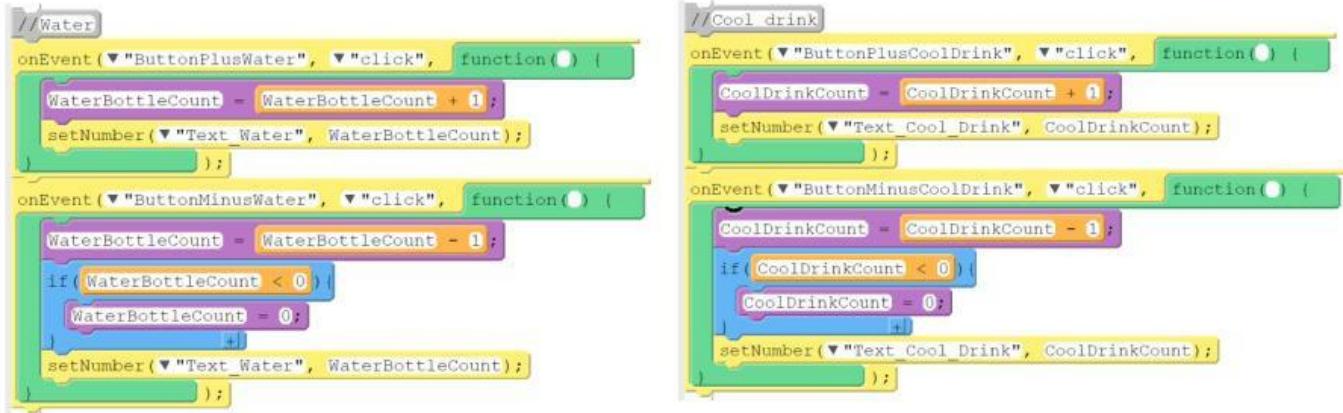
```
//Water
onEvent(▼"ButtonPlusWater", ▼"click", function() {
    WaterBottleCount = WaterBottleCount + 1;
    setNumber(▼"Text_Water", WaterBottleCount);
}
);
onEvent(▼"ButtonMinusWater", ▼"click", function() {
    WaterBottleCount = WaterBottleCount - 1;
    if(WaterBottleCount < 0){
        WaterBottleCount = 0;
    }
    setNumber(▼"Text_Water", WaterBottleCount);
}
);
```

```
//Cool_drink
onEvent(▼"ButtonPlusCoolDrink", ▼"click", function() {
    CoolDrinkCount = CoolDrinkCount + 1;
    setNumber(▼"Text_Cool_Drink", CoolDrinkCount);
}
);
onEvent(▼"ButtonMinusCoolDrink", ▼"click", function() {
    CoolDrinkCount = CoolDrinkCount - 1;
    if(CoolDrinkCount < 0){
        CoolDrinkCount = 0;
    }
    setNumber(▼"Text_Cool_Drink", CoolDrinkCount);
}
);
```

❖ **Buy** When the button is clicked, the total price should be calculated. Also, switch from screen1 to screen2 and set the calculated total price to the "Total_price_Input" label.
- - Here the total price is the sum of the product of the count of the item and the price of the item for each item.
- To calculate the total price, first of all, let's calculate the price according to the number of noodles.

- The price related to the noodles count is the product of the number of noodles and the price.

Price_of_Noodles = NoodlesCount * NoodlesPrice

- - Likewise, the price related to the Water Bottle is as follows.

Price_of_WaterBottle = WaterBottleCount * WaterBottlePrice

-

Similarly, the price related to the cool drink is as follows.

Price_of_cool_drink = CoolDrinkCount * CoolDrinkPrice

- Now let's take the total price as below.

TotalPrice = Price_of_Noodles + Price_of_WaterBottle + Price_of_cool_drink

```
onEvent(▼"ButtonBuy", ▼"click", function() {
    Total_of_Noodles = NoodlesCount * NoodlesPrice;
    Total_of_WaterBottel = WaterBottleCount * WaterBottlePrice;
    Total_of_CoolDrink = CoolDrinkCount * CoolDrinkPrice;
    TotalPrice = Total_of_Noodles + Total_of_WaterBottel + Total_of_CoolDrink;
    setScreen(▼"screen2");
    setNumber(▼"Total_price_Input", TotalPrice);
});
```

Select the correct answer

1. What blocks are used to prevent the cool drink count from falling below ?

```
if( CoolDrinkCount > 0 ){
    CoolDrinkCount = 0;
}
```

```
if( CoolDrinkCount - 0 ){
    CoolDrinkCount = 0;
}
```

```
if( CoolDrinkCount < 0 ){
    CoolDrinkCount = 0;
}
```

2. Suppose you have 300 rupees, when you spend more than 300, the screen turns red and the label "Thank You See You Again" disappears, what are the blocks?

```
if ( TotalPrice > 300 ){
    setProperty( ▼ "screen2", ▼ "background-color", ▼ "red" );
    hideElement( ▼ "label_Thank_You" );
}  +
```

```
if ( TotalPrice < 300 ){
    setProperty( ▼ "screen2", ▼ "background-color", ▼ "red" );
    hideElement( ▼ "label_Thank_You" );
}  +
```

```
if ( TotalPrice == 300 ){
    setProperty( ▼ "screen2", ▼ "background-color", ▼ "red" );
    hideElement( ▼ "label_Thank_You" );
}  +
```

3. + What is related to display the count of noodles when the button is clicked?

```
onEvent( ▼ "ButtonPlusNoodles", ▼ "click", function() {
    NoodlesCount = NoodlesCount + 1 ;
    setNumber( ▼ "Text_Noodles", NoodlesCount );
} );
```

```
onEvent( ▼ "ButtonPlusNoodles", ▼ "click", function() {
    NoodlesCount = NoodlesCount / 1 ;
    setNumber( ▼ "Text_Noodles", NoodlesCount );
} );
```

```
onEvent( ▼ "ButtonPlusNoodles", ▼ "click", function() {
    NoodlesCount = NoodlesCount - 1 ;
    setNumber( ▼ "Text_Noodles", NoodlesCount );
} );
```

4. When the count of Cool Drink is 0, what blocks are used to make a sound when **-** the button is clicked?

```
onEvent( ▼ "ButtonMinusCoolDrink", ▼ "click", function() {
    CoolDrinkCount = CoolDrinkCount - 1 ;
    if( CoolDrinkCount < 0 ){
        CoolDrinkCount = 0;
    }
    setNumber( ▼ "Text_Cool_Drink", CoolDrinkCount);
    playSound( ▼ "sound://category_achievements/vibrant_game_game_gold_tresure_chest_open.mp3", ▼ false); 
});
```

```
onEvent( ▼ "ButtonMinusCoolDrink", ▼ "click", function() {
    playSound( ▼ "sound://category_achievements/vibrant_game_game_gold_tresure_chest_open.mp3", ▼ false); 
    CoolDrinkCount = CoolDrinkCount - 1 ;
    if( CoolDrinkCount < 0 ){
        CoolDrinkCount = 0;
    }
    setNumber( ▼ "Text_Cool_Drink", CoolDrinkCount);
});
```

```
onEvent( ▼ "ButtonMinusCoolDrink", ▼ "click", function() {
    CoolDrinkCount = CoolDrinkCount - 1 ;
    if( CoolDrinkCount < 0 ){
        CoolDrinkCount = 0;
        playSound( ▼ "sound://category_achievements/vibrant_game_game_gold_tresure_chest_open.mp3", ▼ false); 
    }
    setNumber( ▼ "Text_Cool_Drink", CoolDrinkCount);
});
```

5. Cool Drink has a maximum count of 9 and when the count is 9, what blocks are used to make a sound when the button is clicked?

```
onEvent( ▼ "ButtonPlusCoolDrink", ▼ "click", function() {
    CoolDrinkCount = CoolDrinkCount + 1 ;
    if( CoolDrinkCount > 9 ){
        CoolDrinkCount = 9;
    }
    setNumber( ▼ "Text_Cool_Drink", CoolDrinkCount);
    playSound( ▼ "sound://category_achievements/vibrant_game_game_gold_tresure_chest_open.mp3", ▼ false); 
});
```

```
onEvent( ▼ "ButtonPlusCoolDrink", ▼ "click", function() {
    CoolDrinkCount = CoolDrinkCount + 1 ;
    if( CoolDrinkCount > 9 ){
        CoolDrinkCount = 9;
        playSound( ▼ "sound://category_achievements/vibrant_game_game_gold_tresure_chest_open.mp3", ▼ false); 
    }
    setNumber( ▼ "Text_Cool_Drink", CoolDrinkCount);
});
```

```
onEvent( ▼ "ButtonPlusCoolDrink", ▼ "click", function() {
    CoolDrinkCount = CoolDrinkCount + 1 ;
    if( CoolDrinkCount < 9 ){
        CoolDrinkCount = 9;
        playSound( ▼ "sound://category_achievements/vibrant_game_game_gold_tresure_chest_open.mp3", ▼ false); 
    }
    setNumber( ▼ "Text_Cool_Drink", CoolDrinkCount);
});
```