

Project 117



Coding School

 micro:bit



Start here

Let's create a reaction and remember challenge game.

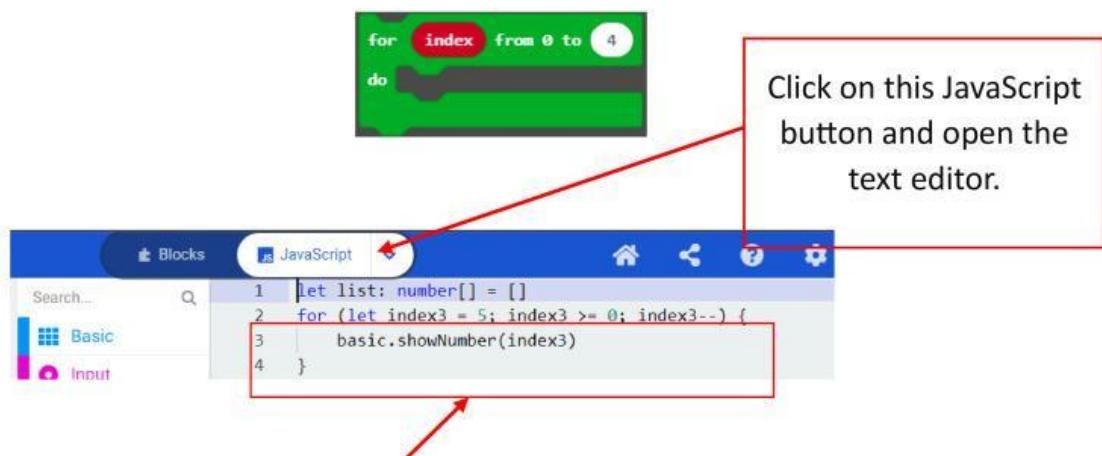
- ❖ In this game, arrows pointing in different directions appear on the screen and disappear, and the user who remembers them must repeat their direction correctly in order. Let's design to add points if said correctly and decrease points if said in wrong order.
- ❖ First drag an on start block. Add the array required for the game to the on start block as follows.
- ❖ To store the points obtained while playing the game, let's define a variable as score as follows.



- ❖ For this, drag the array block in the array tab and drag the empty array block included in the array tab as follows for its value.



- ❖ Then let's create a count down when the game starts. Use a for loop for that. Use this loop in the Loops tab. To change this loop as we need, open the text editor to view the code as follows.



Change the loop like this. Then the block will be displayed as below.

```
for (let index3 = 5; index3 >= 0; index3--) {  
    basic.showNumber(index3)  
}
```

- ❖ Run it like this. Then a countdown from 5 to 0 will be displayed on the screen.
- ❖ Then prepare the code to add 4 random numbers to the defined array. For that, let's use this block in the loops tab.



Drag the add value to end block in the array tab into it.



- ❖ After entering 4 random numbers in the array, let's prepare the code to show arrows related to those 4 numbers. Let's use a for loop for that. By checking the value in each index in the array to the value related to the index in the loop in an if block, the arrows can be shown as follows.



- ❖ The code related to showing an arrow in the north direction is as follows.



Here, if the first value of the list array obtained by the loop, i.e. 0, the index is equal to 1, then an arrow will be shown in the north direction.

- ❖ The code related to showing an arrow in the right direction is as follows.
Let's create an arrow to the right if the randomly received value of the second index of the array is 2.



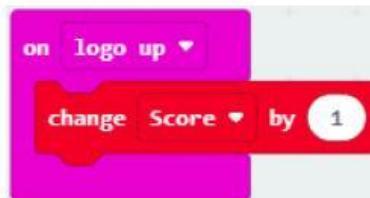
- ❖ The code related to showing an arrow in the east direction is as follows.
Let's create an arrow to show the east if the randomly received value of the third index of the array is 3.



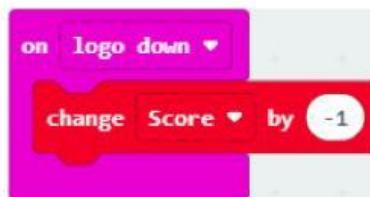
- ❖ The code related to showing an arrow in the western direction is as follows. Let's create an arrow to show the west if the randomly received value of the third index of the array is 4.



- ❖ If the answer is given by remembering the correct pattern, let's design the microbit circuit to add a sign when tilting backwards.



- ❖ If the answer is given in the wrong order, let's design the circuit as follows to decrease a mark while tilting forward.



- ❖ To see the number of points obtained, create the following to be displayed on the screen when button A is pressed.

