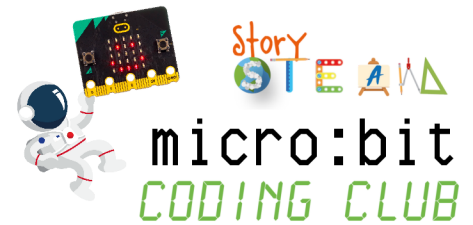


Catch the Duck!

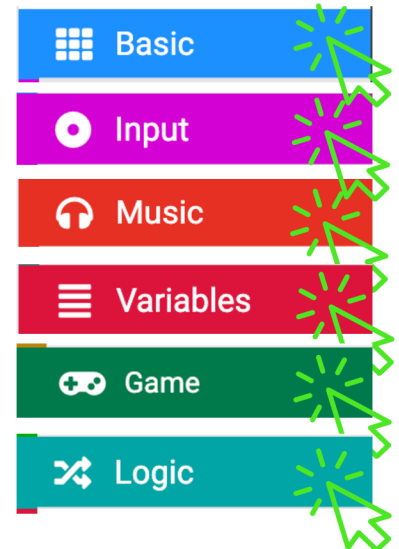
Imagine the tiny dot (LED) is a duck.
Try to catch it as it swims past.



```

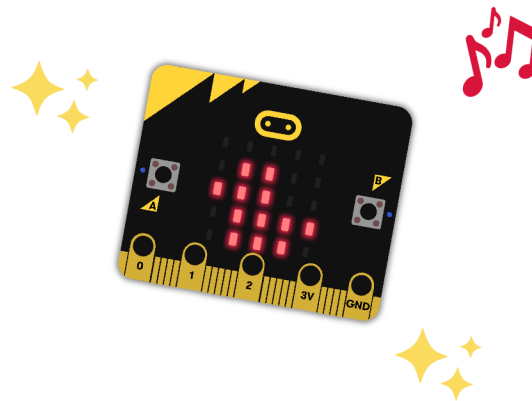
on start
  show icon [grid icon]
  pause (ms) 200
  play [giggle] in background
  set sprite to create sprite at x: 2 y: 2
  set life 4
  set score 0
  
```

We start with 4 lives so you miss 4 times, its game over!



```

forever
  sprite move by 1
  sprite if on edge, bounce
  pause (ms) 500
  
```



```

on button A pressed
  if [sprite x = 2] then
    change score by 1
    play [melody power up] in background
  else
    remove life 1
    play [melody power down] in background
  
```

```

on button B pressed
  pause
  
```

```

on button A+B pressed
  resume
  
```

How many ducks can you catch?



Catch the Duck 2!

Log into MakeCode and let's get coding!

<https://makecode.microbit.org/>

```

on start
  set score to 0
  set running to 1
  set timer to 60
  
```

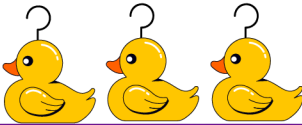
In this version of the game, we create a duck animation using a scrolling image.

To score points, we need to click the A button when the duck is in the middle of the LED screen.

We have 1 minute to catch as many ducks as we can.

```

forever
  if running = 1 then
    create big image
    scroll image
    with offset 1 and interval (ms) 200
  
```



We can make the game trickier by adjusting the speed the duck scrolls.

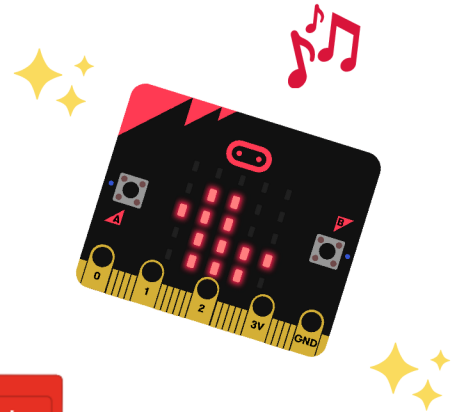
```

forever
  if button A is pressed and point x 1 y 1 and point x 2 y 1 then
    set running to 0
    change score by 1
    play tone Middle G for 1/4 beat until done
    play tone High C for 1/2 beat until done
    set running to 1
  else if button A is pressed then
    set running to 0
    play tone Low G for 1/4 beat until done
    play tone Low C for 1 beat until done
    set running to 1
  
```

Catch the Duck 2 continued

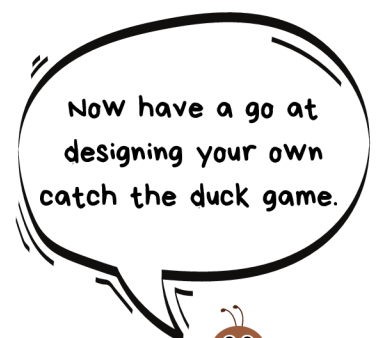
```
forever
  if <running> = 1 then
    pause (ms) 1000
    if <timer> > 0 then
      change timer by -1
    else
      clear screen
      set running to 0
      play melody [C4, D4, E4, F4, G4, A4, B4, C5] at tempo 160 (bpm) in background
      show string "TIME UP"
      show string "SCORE:"
      show number score
      +
      +
```

This code controls the timer that we set at the start.



```
on button B pressed
  if <timer> > 0 then
    set running to 0
    show string "SCORE:"
    show number score
    pause (ms) 2000
    clear screen
    set running to 1
    +
```

This code allows us to pause the game and check our score.



Now have a go at designing your own catch the duck game.