



```

on start
  set start_speed to 5
  set runs_at_this_speed to 2
  set decrease_speed_by to 1
  set fastest_speed to 1

function wait_start
  show icon [Micro:bit icon]
  while not [button A is pressed]
    do pause (ms) 100
  for index from 0 to 4
    do show number [5 - index]

function run
  digital write pin PB to 1
  show icon [Micro:bit icon]
  pause (ms) 600
  digital write pin PB to 0
  if left
    then show arrow [West]
  else show arrow [East]
  set left to not left
  pause (ms) [speed this time - 1] 1000

function finished
  digital write pin PB to 1
  show icon [Micro:bit icon]
  pause (ms) 3000
  digital write pin PB to 0
  pause (ms) 3000

forever
  call function wait_start
  set speed_this_time to start_speed
  set left to true
  while speed_this_time > fastest_speed
    do set count to runs_at_this_speed
      while count > 0
        do call function run
          change count by -1
      set speed_this_time to speed_this_time - decrease_speed_by
  call function finished
  
```

Getting Started

## Pre-Written Program

- Go to [www.microbit.org/code](http://www.microbit.org/code) and open the JavaScript Blocks Editor.
- Drag the file **microbit-beeptest-jsb.hex** onto the work area.
- **Download** the program onto your BBC micro:bit.

```

1 from microbit import *
2
3 start_speed = 5
4 runs_at_this_speed = 2
5 decrease_speed_by = 1
6 fastest_speed = 1
7 left = True
8
9 def wait_start():
10     display.show(Image.TSHIRT)
11     while not button_a.was_pressed():
12         sleep(100)
13     for i in range(5,0,-1):
14         display.show(str(i))
15         sleep(400)
16
17 def run():
18     global left
19     pin0.write_digital(1)
20     display.show(Image.SQUARE)
21     sleep(600)
22     pin0.write_digital(0)
23     if left:
24         display.show(Image.ARROW_W)
25     else:
26         display.show(Image.ARROW_E)
27     left = not left
28     sleep((speed_this_time-1)*1000)
29
30 def finished():
31     pin0.write_digital(1)
32     display.show(Image.YES)
33     sleep(3000)
34     pin0.write_digital(0)
35     sleep(3000)
36
37 while True:
38     wait_start()
39     speed_this_time = start_speed
40     left = True
41     while speed_this_time >= fastest_speed:
42         count = runs_at_this_speed
43         while count > 0:
44             run()
45             count -= 1
46         speed_this_time -= decrease_speed_by
47     finished()
    
```

## Pre-Written Program

- Go to [www.microbit.org/code](http://www.microbit.org/code) and open the **Python Editor**.
- Drag the file **beepetest.py** onto the work area.
- **Download** the program onto your BBC micro:bit.