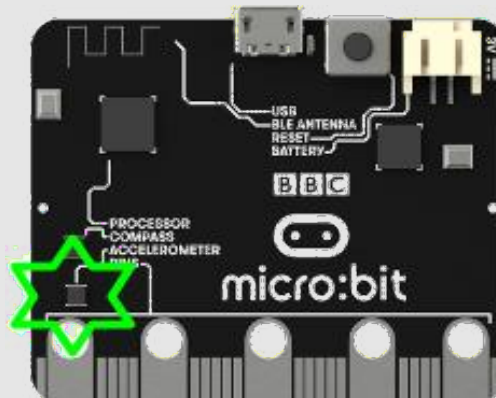


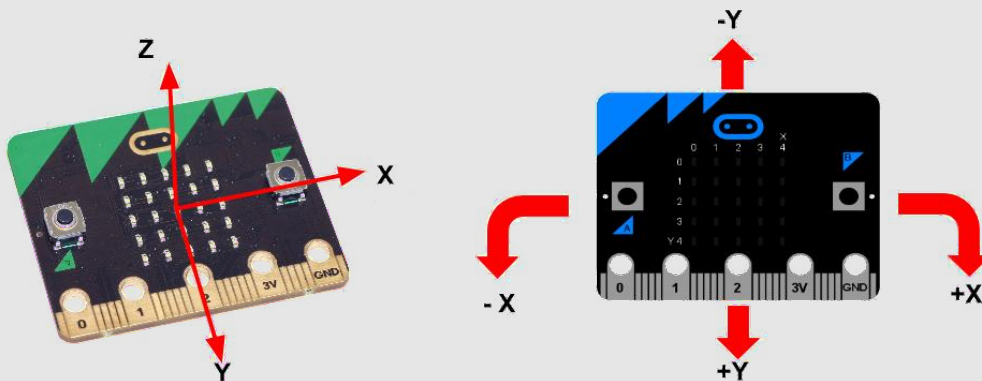


Kotaljenje

BBC micro:bit



Napravica BBC micro:bit ima vgrajen merilec pospeška. Meri pospeške med $-2g$ in $+2g$, kjer je g težni pospešek na Zemlji, približno 10m/s^2 . Pri prostem padu na Zemlji se hitrost vsako sekundo poveča za 10m/s .



Definicija problema

Naredi simulacijo kotaljenja svetleče diode po matriki. Dioda se naj prižigajo v odvisnosti od nagiba naprave tako, da ustvarja videz kotaljenja.

```

on start
  set x_ to 2
  set y_ to 2
  plot x x_ y y_

forever
  unplot x x_ y y_
  if (acceleration (mg) x > 100)
  then
    change x_ by 1
    if (x_ > 4)
    then
      set x_ to 4
  else
    if (acceleration (mg) x < -100)
    then
      change x_ by -1
      if (x_ < 0)
      then
        set x_ to 0
  if (acceleration (mg) y > 100)
  then
    change y_ by 1
    if (y_ > 4)
    then
      set y_ to 4
  else
    if (acceleration (mg) y < -100)
    then
      change y_ by -1
      if (y_ < 0)
      then
        set y_ to 0
  plot x x_ y y_
  pause (ms) 100

```

Napotek

Rešujete na spletni strani micro:bit: <https://makecode.microbit.org>

Slovarček

- on start → *ob zagonu*
- forewer → *ponavljaj v nedogled*
- plot/unplot → *prižgi/ugasni*
- set to → *postavi na*
- if then else → *če potem sicer*
- acceleration (mg) → *pospešek v tisočinkah g*
- change by → *spremeni za*