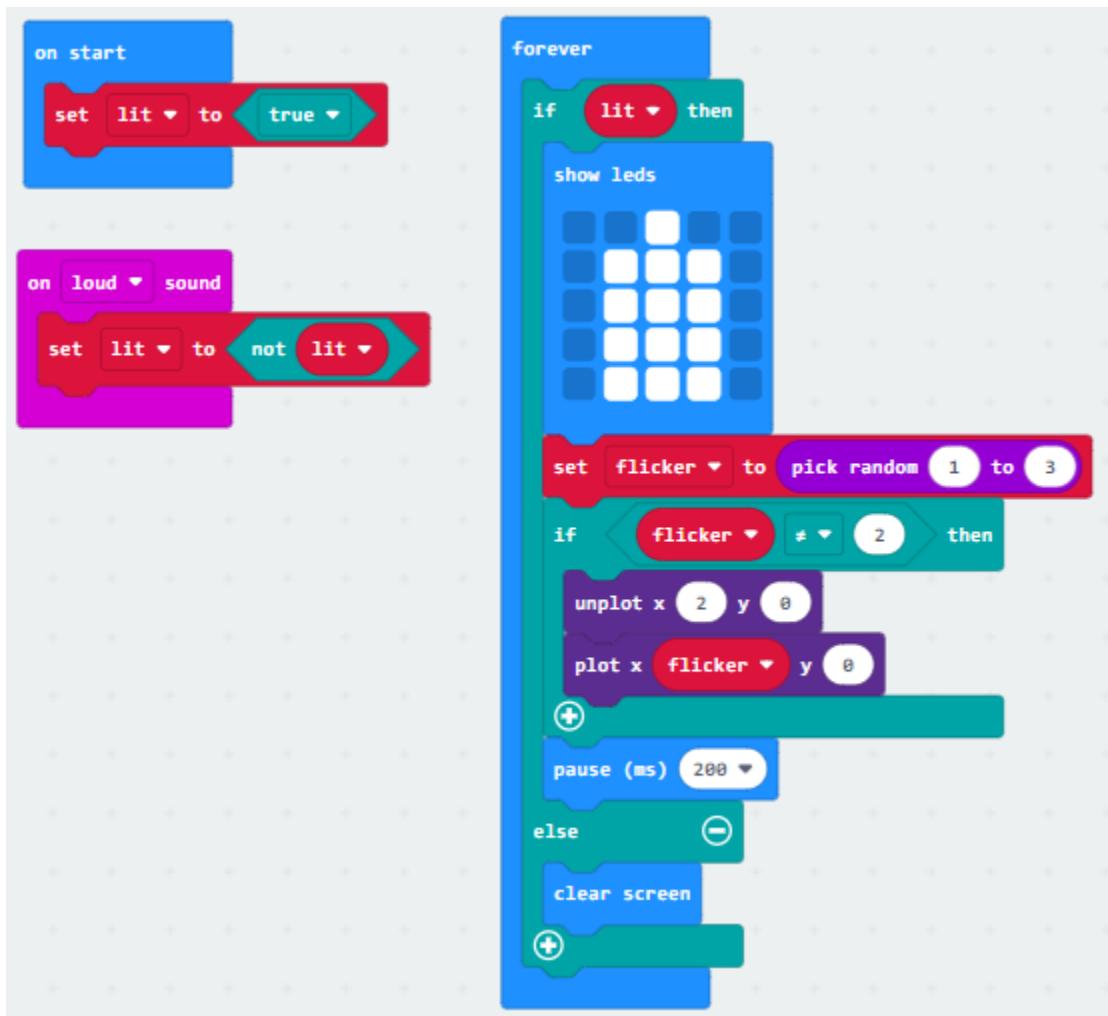


Candle

- A random number between 1 and 3 is stored in variable called flicker.
- This number is used to turn LEDs on and off at random to look like a flame flickering.
- The micro:bit's LEDs are arranged in a grid with columns and rows numbered from 0 to 4. The program plots (turns on) and un-plots (turns off) different LEDs in the top row depending on the random number stored in the flicker variable.
- Co-ordinates for the LEDs are always given with the column across first (the x-axis) and then the row up and down (the y-axis). The middle of the flame is at co-ordinate 2, 0.
- A forever loop keeps the animation running.
- The program also uses a variable called lit to keep track of the whether the candle is lit or not. This is a Boolean variable. Boolean variables can only have two values: true (on) or false (off).
- When the microphone sensor detects a loud sound, for example when you blow on it, the code toggles the value of lit by setting it to be not lit. So, when you blow on the microphone, if lit is true, it becomes false and the screen is cleared, turning off the LEDs.
- If lit was false, it becomes true and we switch the animation back on.

Code



Load this on a micro:bit when you are done and have it checked off.