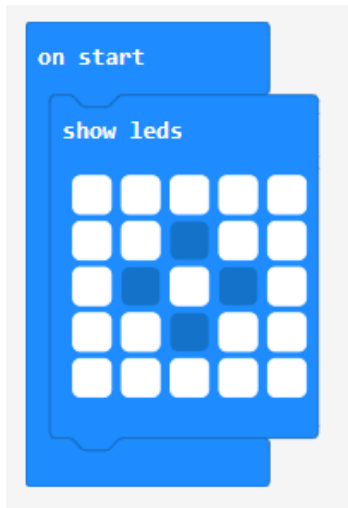# Micro: bit activity card
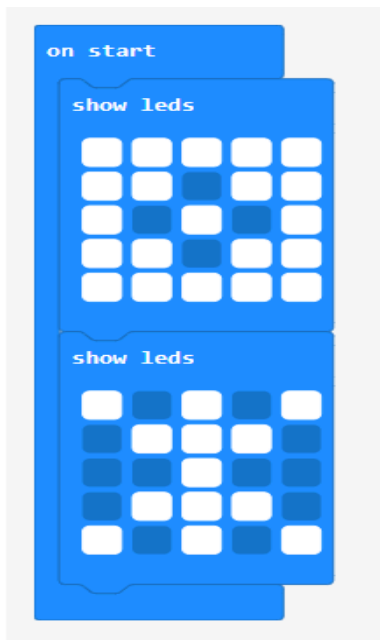## Using basic commands: "Beautiful image"

Skill: To display beautiful images on the micro: bit

Let's learn how to show an image on the LED screen! We will use **show LEDs** to draw an image on the LED screen. It immediately writes it on the screen. Create this pattern:

Challenge 1
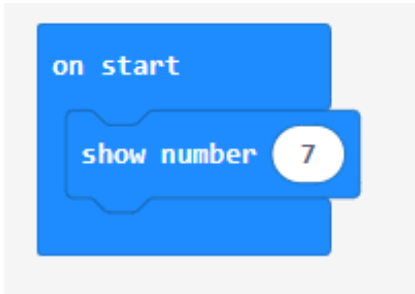Now show a new image to appear on the micro:bit straight after.

Challenge 2
Why don't we create a third image that will show after the other two?

Micro: bit activity card
Using basic commands: "Lucky 7"

Skill: To show a number on the LED screen

Let's learn how to show the lucky number 7 on the screen! We will use **show number** to display a number on the screen. The number **7** needs to be typed into the box:

```
on start
    show number  7
```

Challenge 1
But we also should pause before showing another number. Let's add a pause of 500 milliseconds.

```
on start
    show number  7
    pause (ms)  500 ▼
```

Challenge 2
What about other multiples of 7? Let's display the next multiple of 7 on the screen!

```
on start
    show number  7
    pause (ms)  500 ▼
    show number  14
```
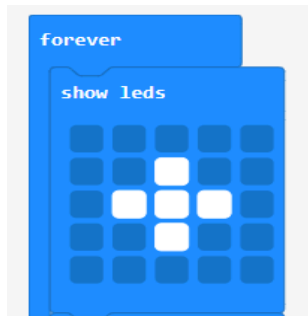
Challenge 3
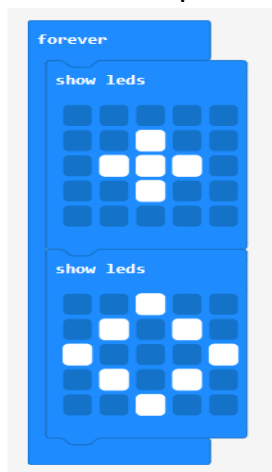Keep displaying multiples of 7 such as 21 and 28… How far can you go?

Using basic commands: "Snowflake fall"

Skill: To design a blinking rectangle animation

Let's learn how to create a **forever** loop that will allow us to repeat the **show LEDs** code. Any code in the forever loop will repeat in the background – forever! Create this pattern:
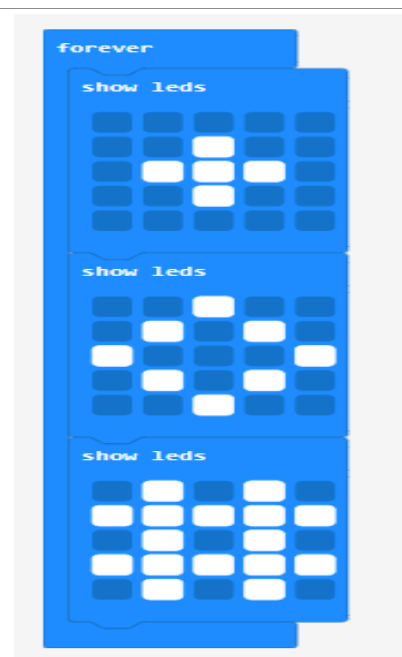

The next step is to add two show LEDS blocks inside the FOREVER loop to repeat an animation.

Challenge 1

To finalise our snowflake fall, let's add a different snowflake pattern.
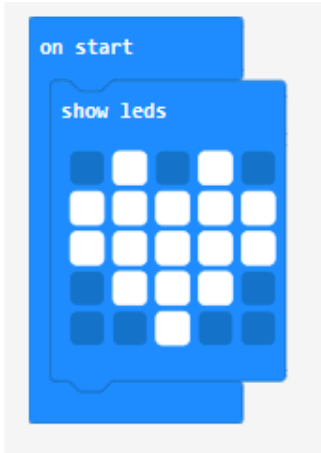

Challenge 2

Add a 4th frame to the current animation – or make your own!

Micro: bit activity card
Using basic commands: "Flashing heart"

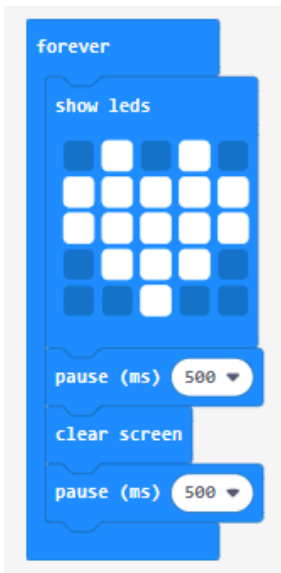Skill: To control images with a variable

Let's learn how to blink an image on the **show LEDs** screen. Create this pattern:

We want to leave the image on the screen for 0.5 seconds (500 milliseconds) then clear the screen. We can **pause** to wait and **clear screen** to turn off the LEDs.
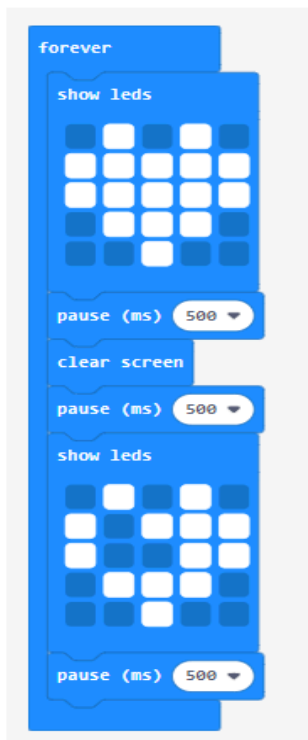

Finally, we can surround this code with a **forever** loop to repeat it and add a **pause** after **clear screen** to keep the screen off for a little while. Create this pattern:

Challenge 1

Let's plot a different image. Let's display a broken heart! To do this, you need to add a block between the last line and the end loop. Add a **show LEDs** block and then add a **pause** of 500 milliseconds.

Challenge 2

Now let's alternate flashing the heart and the broken heart. To do this, we need to add a **clear screen** block and then add a **pause** block of 500 milliseconds under the new code we added in challenge 1.

```
forever
    show leds
    [LED pattern]
    pause (ms) 500
    clear screen
    pause (ms) 500
    show leds
    [LED pattern]
    pause (ms) 500
    clear screen
    pause (ms) 500
```