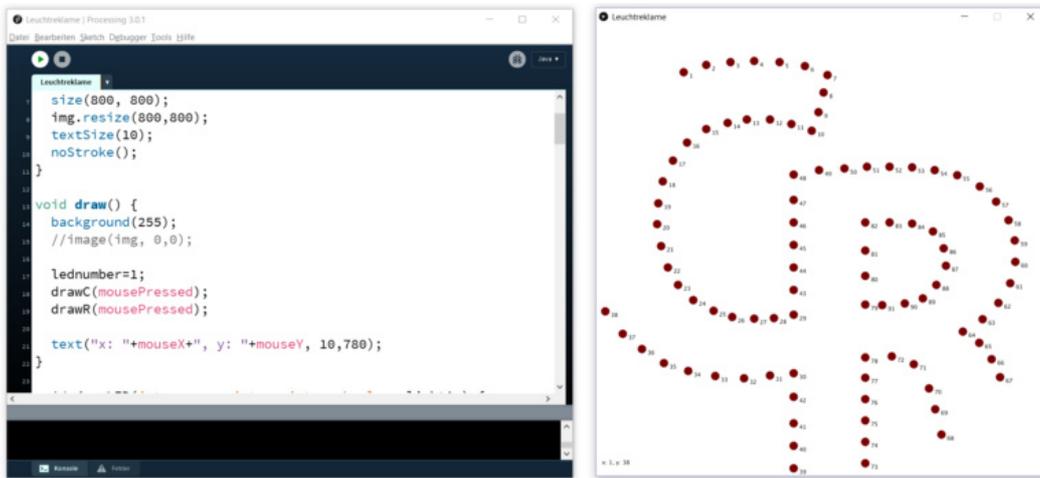


1. Simulation of the neon sign



The first step is to create a draft of the neon sign in the form of a simulation. To give an idea of possible solutions have a look on these [examples of LED-signs](#).

design and simulation

Design a neon sign in the programming environment Processing. Use the example code available in the information section to generate the most realistic simulation of the advertisement.

... information

Simulation of a neon sign

The simulation of the neon sign can be implemented well with the help of the programming environment “Processing”.

For more information on Processing, check out the [Fundamentals of Processing course](#).

The principal procedure for creating the simulation is as follows:

- An image of the desired illuminated advertising is selected as a bitmap and displayed in the simulation.
- Suitable positions for the mounting of LEDs are selected and programmed.
- Desirable animations are implemented.

- A drill template will be generated



Simulation result



Drill template of the sign

The following sample code shows the implementation of the school logo of the Carl-Reuther Berufskolleg.

```

PImage img;
int lednumber=1;
boolean printerFriendly = false;

void setup() {
  img = loadImage("logo.png");

  size(800, 800);
  img.resize(800,800);
  textSize(10);
  noStroke();
}

void draw() {
  background(255);
  if(!printerFriendly) {
    image(img, 0,0);
  }

  lednumber=1;
  drawC(mousePressed);
  drawR(mousePressed);

  text("x: "+mouseX+", y: "+mouseY, 10,780);
}

void drawLED(int nummer, int x, int y, boolean lightOn) {

```

```

void drawLED(int nummer, int x, int y, boolean lichtAn) {
    if(lichtAn)
        fill(255,0,0);
    else
        fill(120,0,0);

    if(printerFriendly) {
        fill(255);
        stroke(0);
    }

    ellipse(x, y, 15, 15);
    if(printerFriendly) {
        for(int i=-7; i<7; i++) {
            point(x+i,y);
            point(x,y+i);
        }
    }

    fill(0);
    text(nummer, x+10, y+10);
}

void drawC(boolean lichtAn) {
    drawLED(lednumber++, 155,83,lichtAn);
    drawLED(lednumber++, 195,70,lichtAn);
    [...]
    drawLED(lednumber++, 47,548,lichtAn);
    drawLED(lednumber++, 16,508,lichtAn);
}

void drawR(boolean lichtAn) {
    //39
    drawLED(lednumber++, 350, 787,lichtAn);
    drawLED(lednumber++, 350, 747,lichtAn);
    [...]
    drawLED(lednumber++, 547, 494,lichtAn);
    drawLED(lednumber++, 507, 497,lichtAn);
}

```

You can download the complete processing code [here](#).

