

A simple introduction to kicad

Kicad sticks, Kicad cream, Kicad bowl

Kicad can be consumed in different ways

- ✗ What kicad does
- ✗ How to use kicad
- ✗ Why kicad is super cool





Hello!

I am Carlo Maragno

I hack stuff, sometimes it's software, sometimes it's not

You can find me at **@CarloMara1**

I.

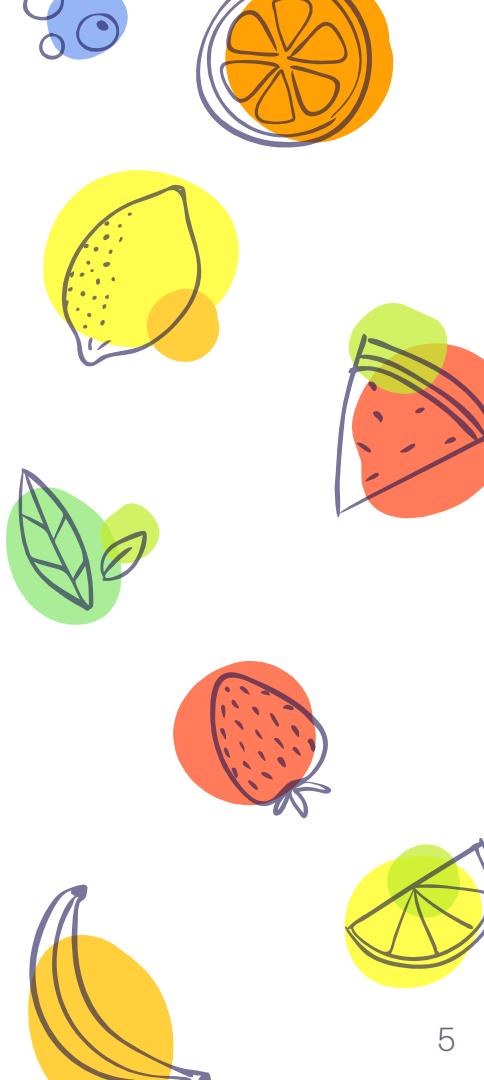
Kicad sticks

What kicad does



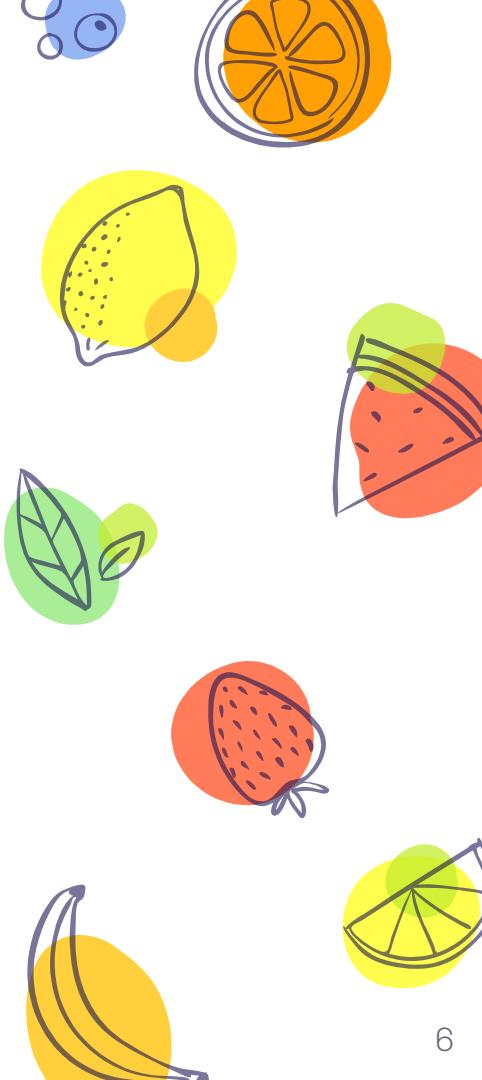
Kicad is an open source EDA sw

- ✖ It can be used to create circuit boards
- ✖ Arduino shields, robot brains, IoT projects
- ✖ It's free as in free speech



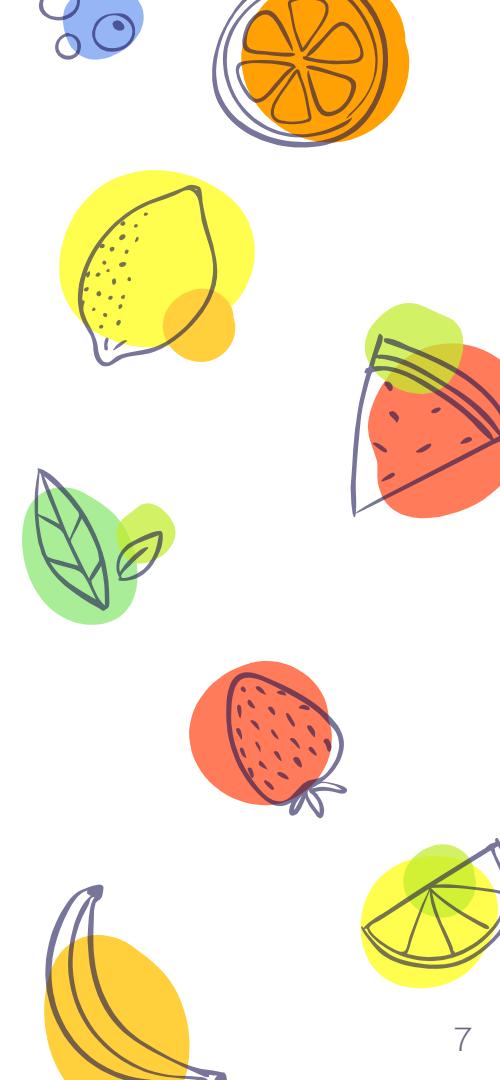
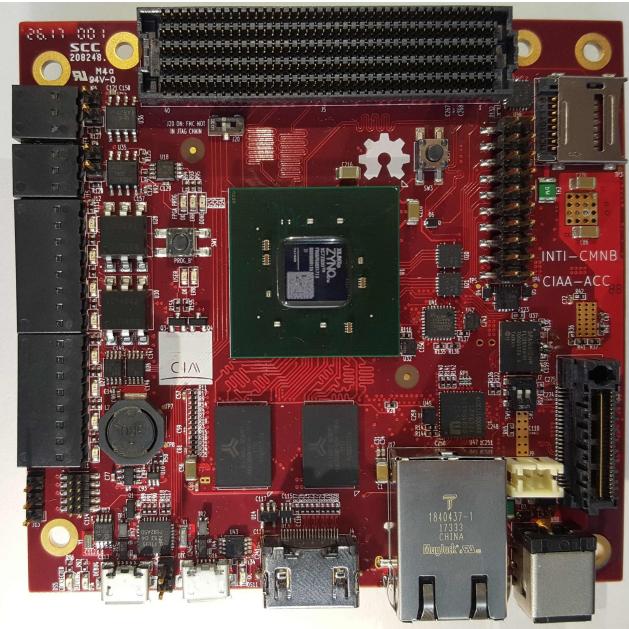
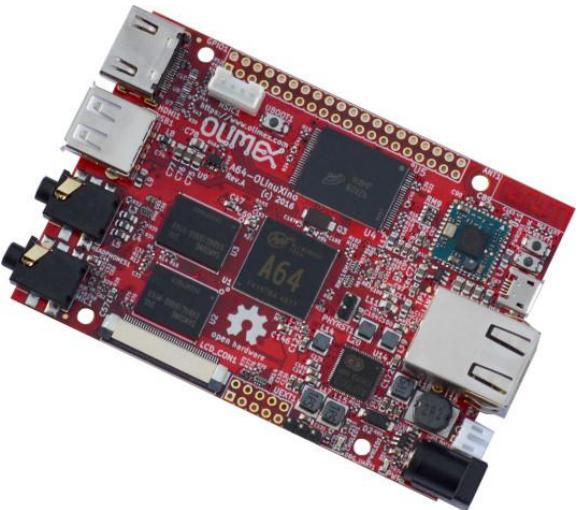
Things done with kicad

Lots



Things done with kicad

Single board computers



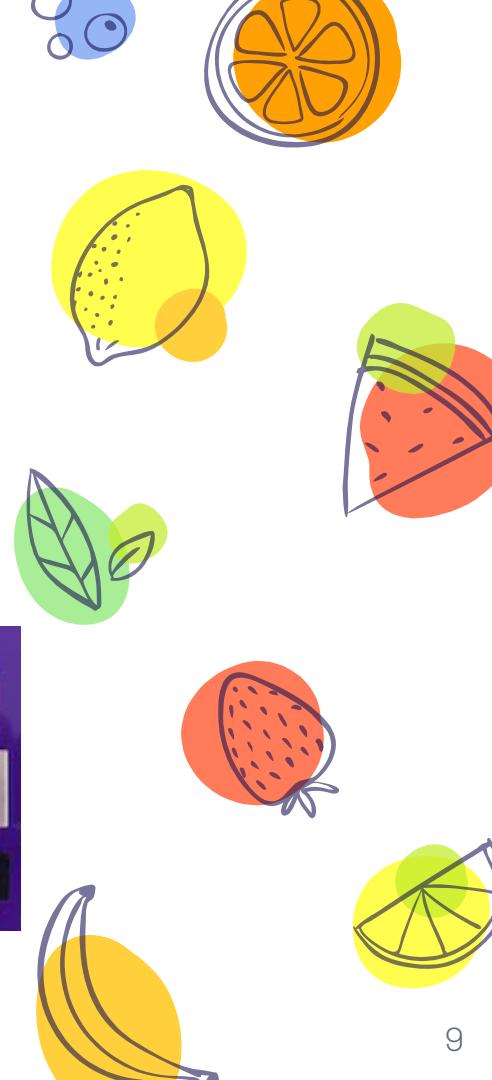
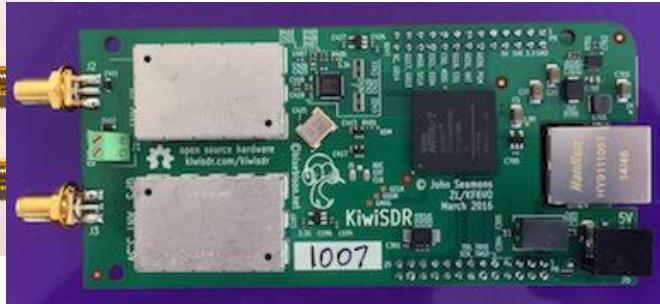
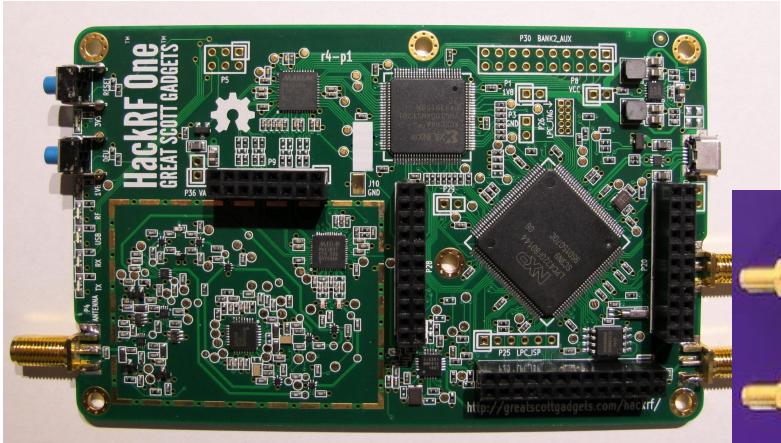
Things done with kicad

Quadcopers



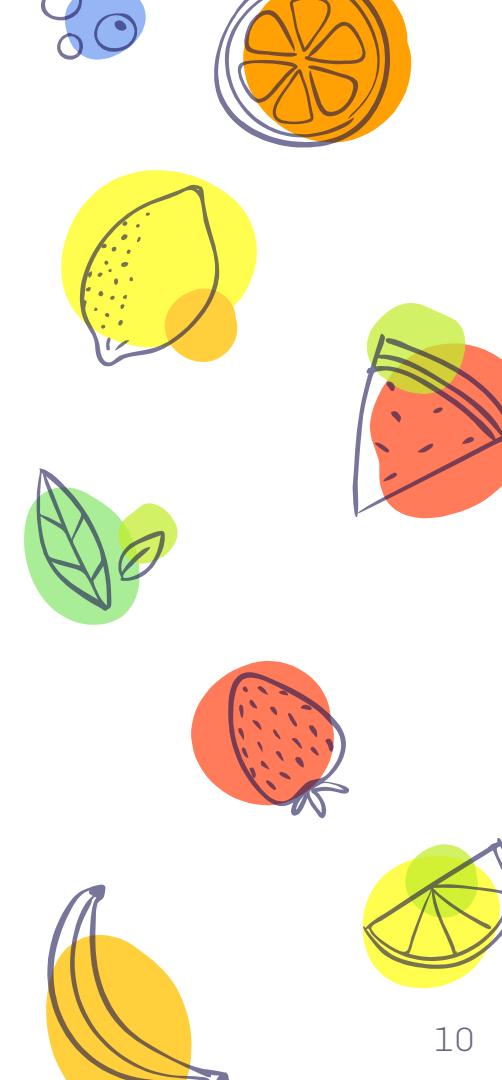
Things done with kicad

Software Defined Radios



Things done with kicad

Satellites



Kicad is flexible

Everything can be done with kicad

2.

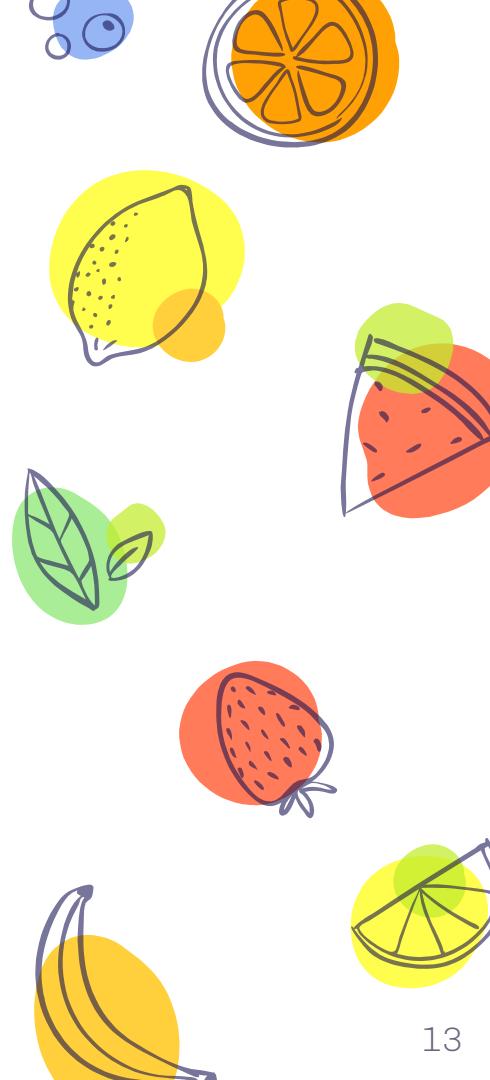
Kicad cream

How to use kicad



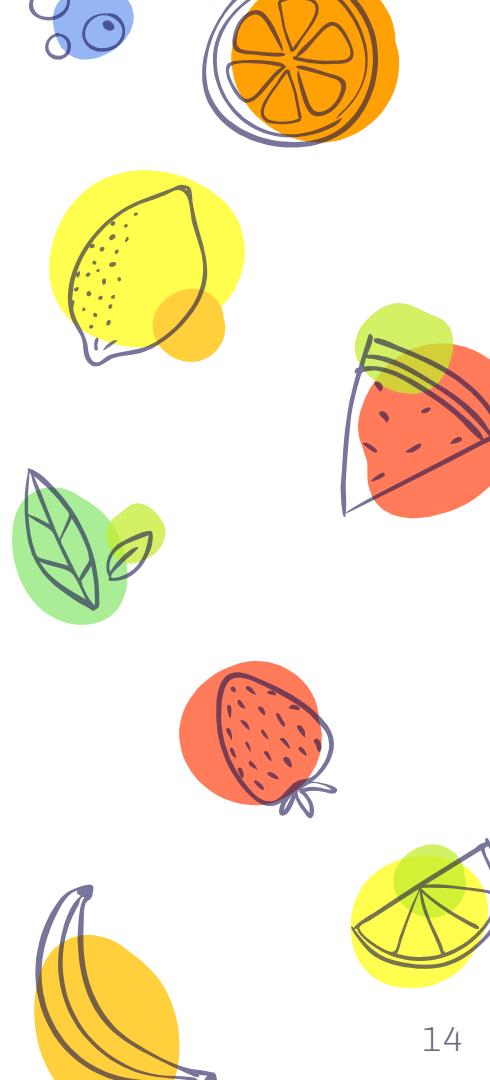
Kicad is powerful

- ✖ It's also somewhat complex
- ✖ After all it's a capable software
- ✖ IMHO easier than its competitors, like eagle, orcad or altium



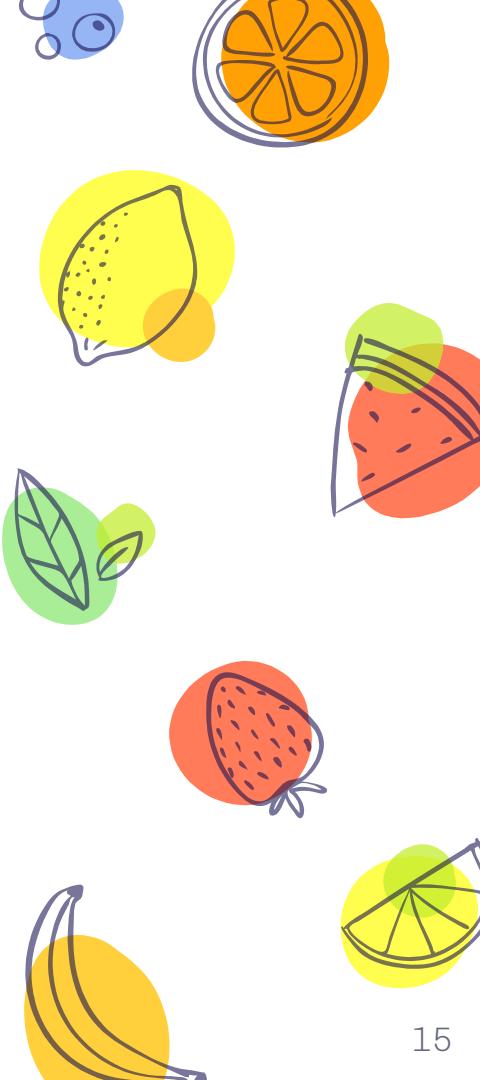
Some learning resources

- ✖ Contextual Electronics YT channel
- ✖ Sparkfun Guide
- ✖ Kicad own guide



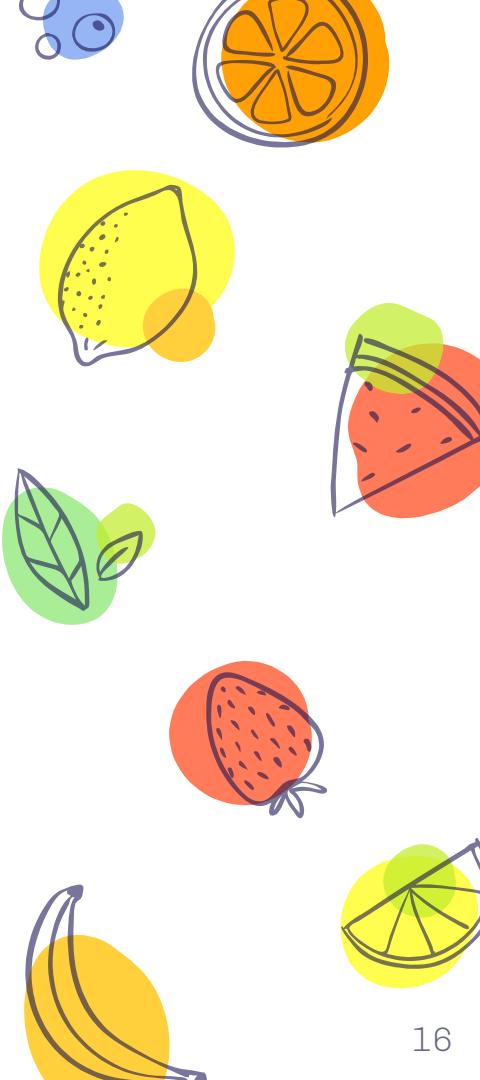
Basic workflow

- ✖ Kicad doesn't invent anything new
- ✖ Draw schematic
- ✖ Layout traces
- ✖ Export for production



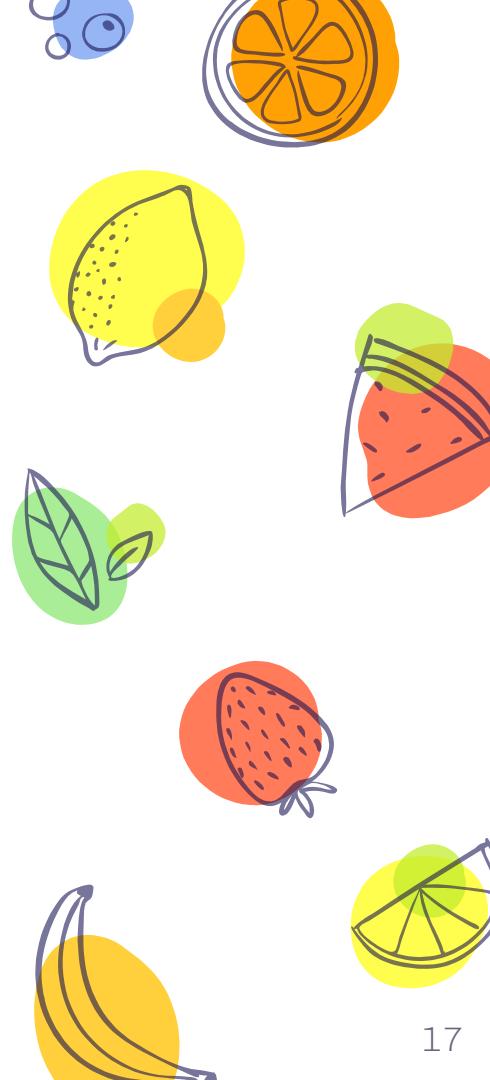
Basic workflow

- ✖ Kicad loves git
- ✖ No binary objects
- ✖ Simple diffs

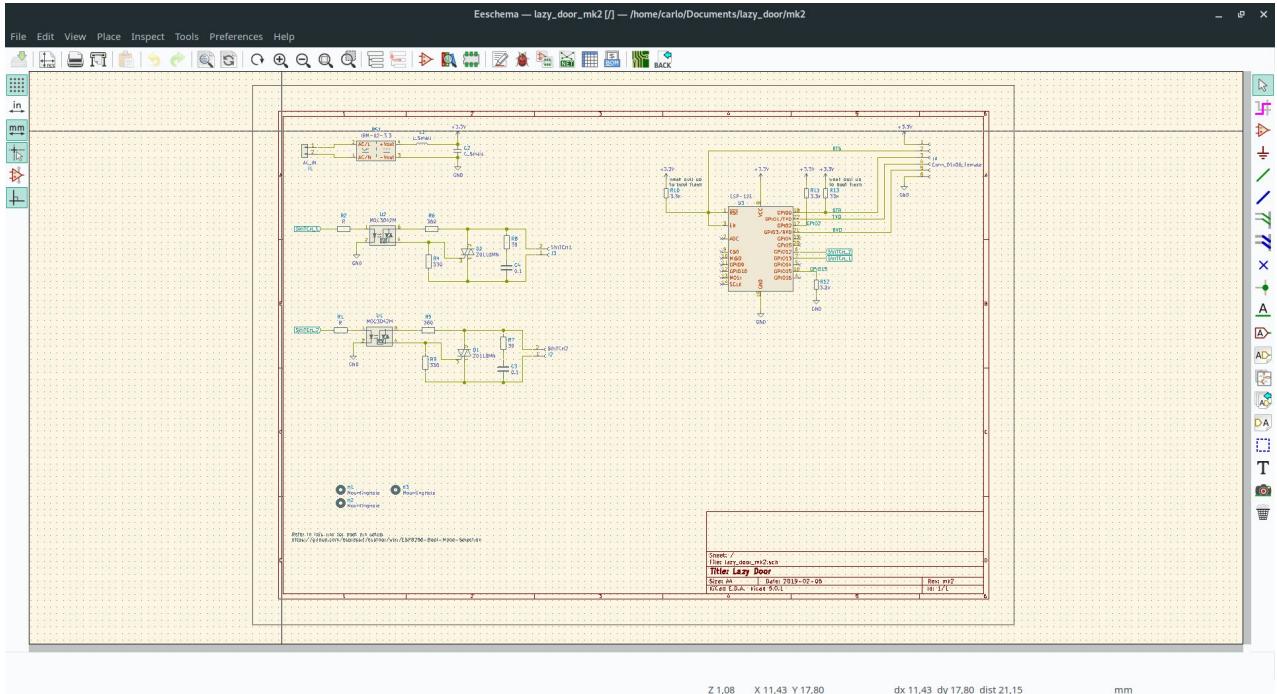


Basic workflow

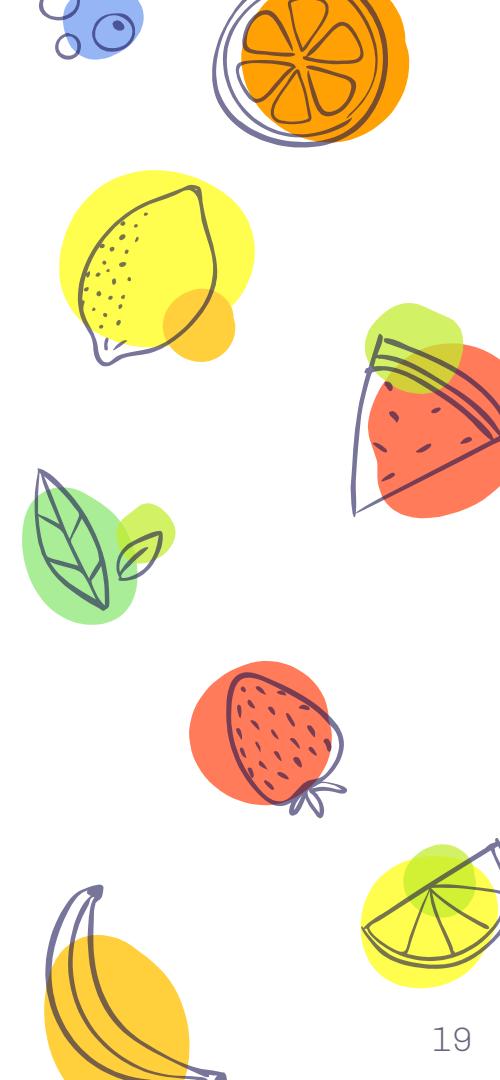
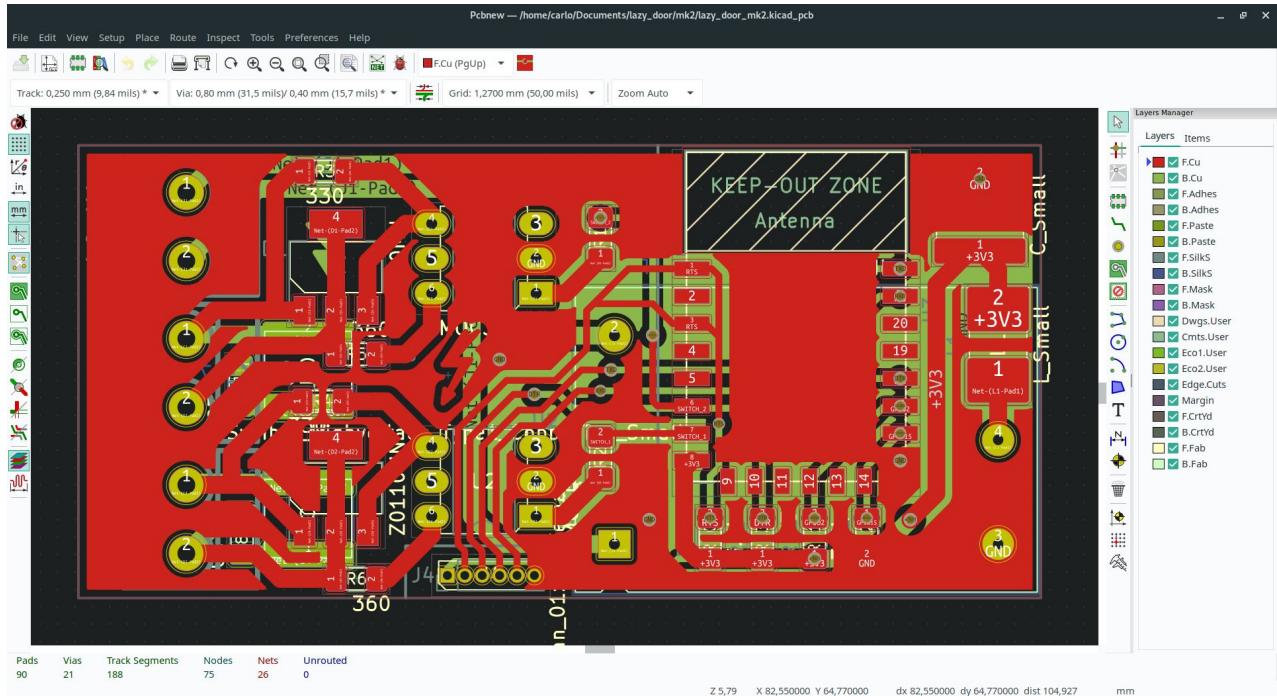
- Superb components libraries
- Community maintained
- Hosted on Github, easily forkable
- Smisioto libraries, very good 3d models



Schematic editor



Board editor



Kicad is community

Everything you need it's probably already
there

3.

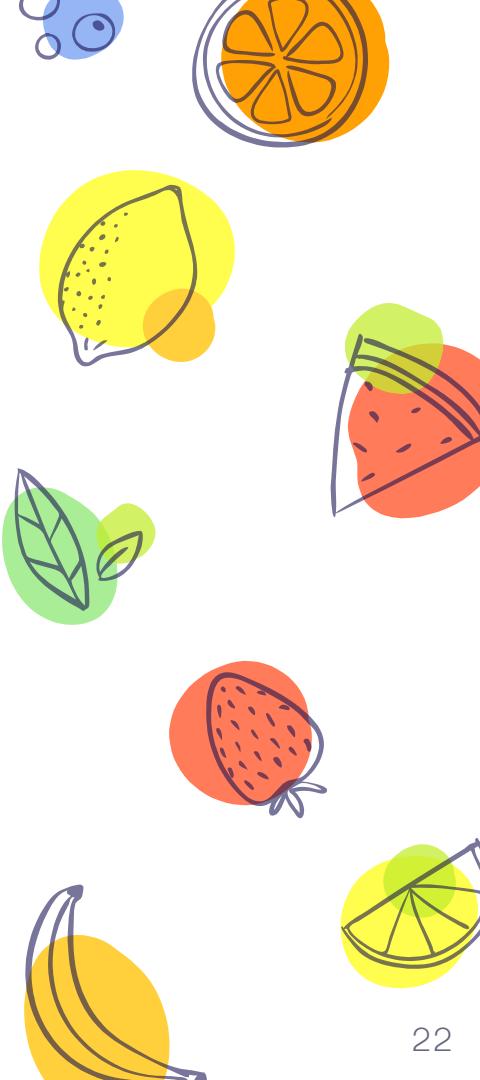
Kicad bowl

Why kicad is super cool



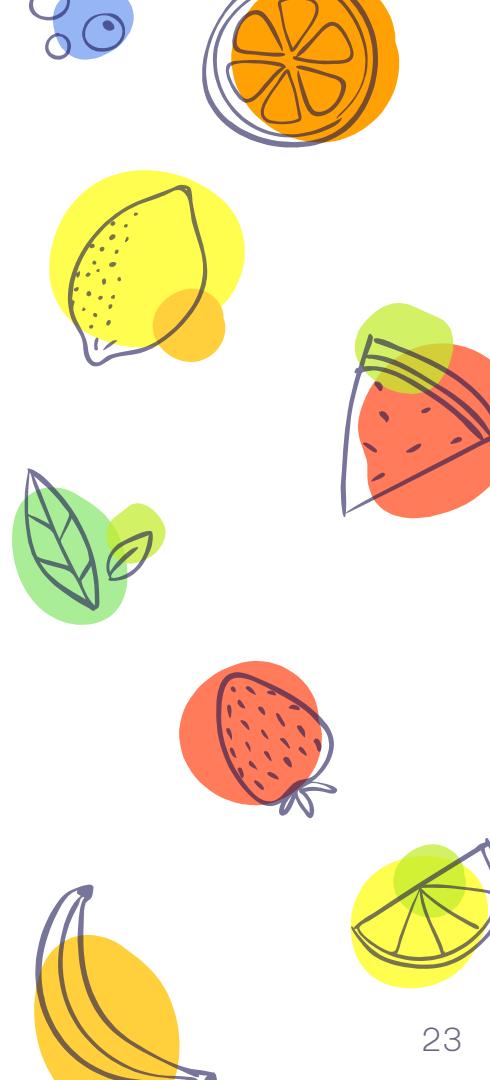
You can modify the thing

- ✖ Don't like the colors ?
- ✖ Don't like how the render renders things?



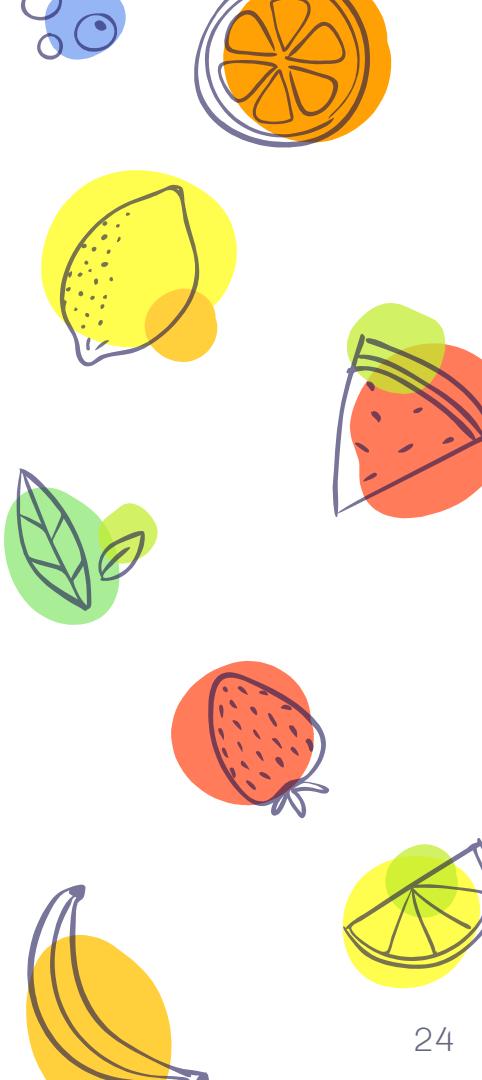
You can script the thing

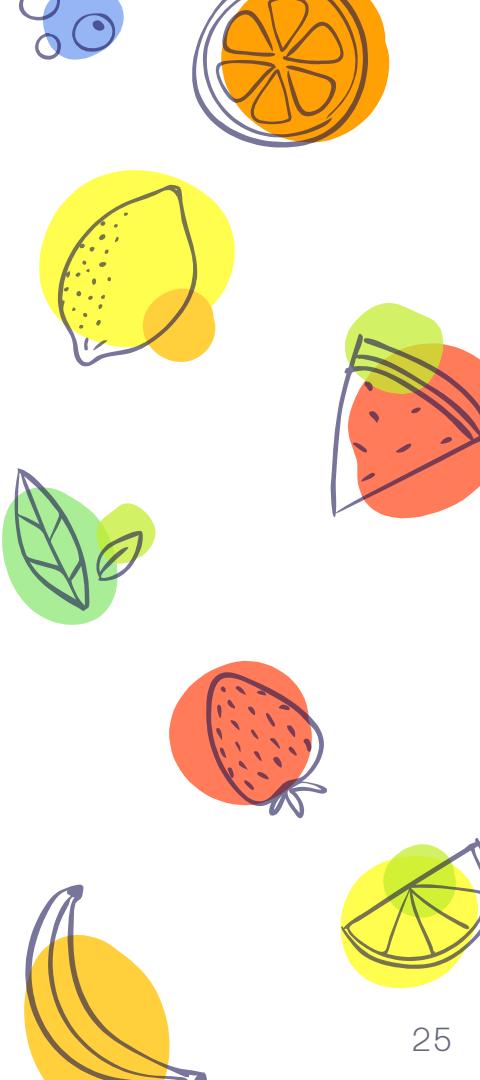
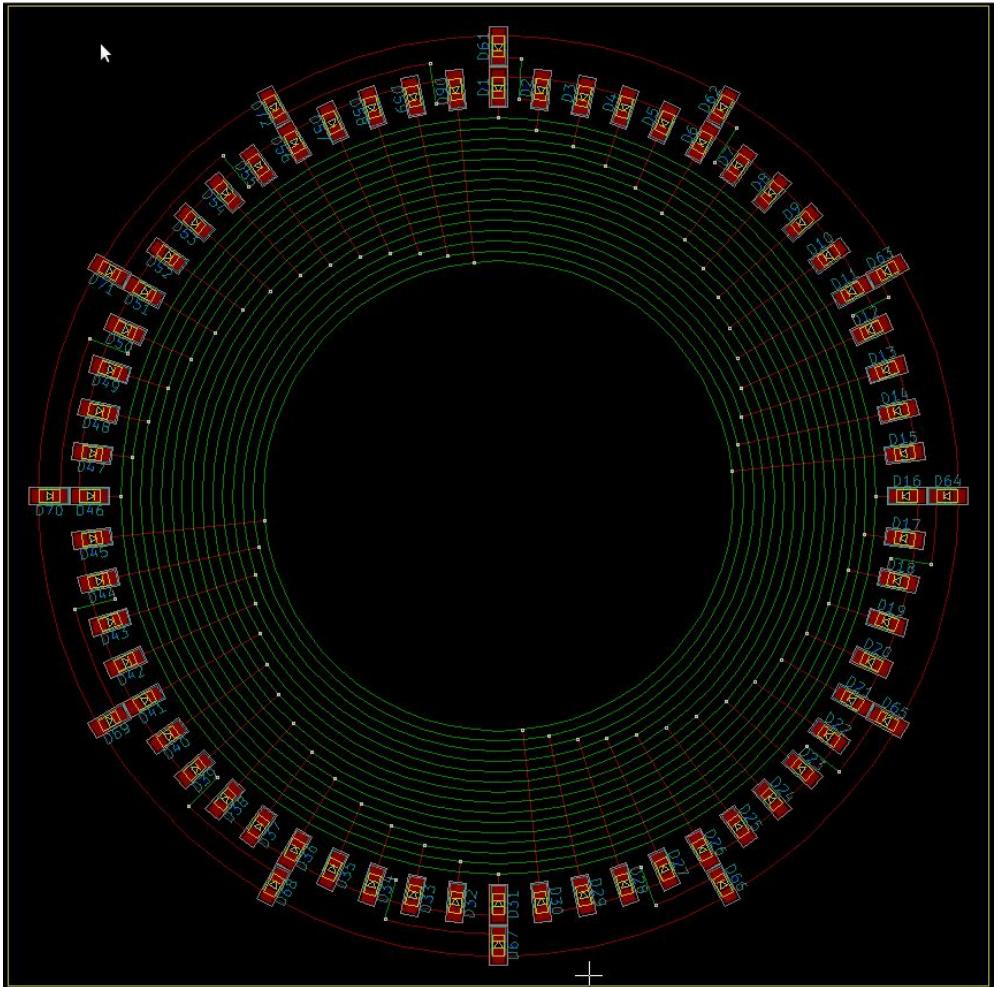
- ✖ Extensive python API
- ✖ Every exported C++ function can be accessed via Python



Most boring task can be automated

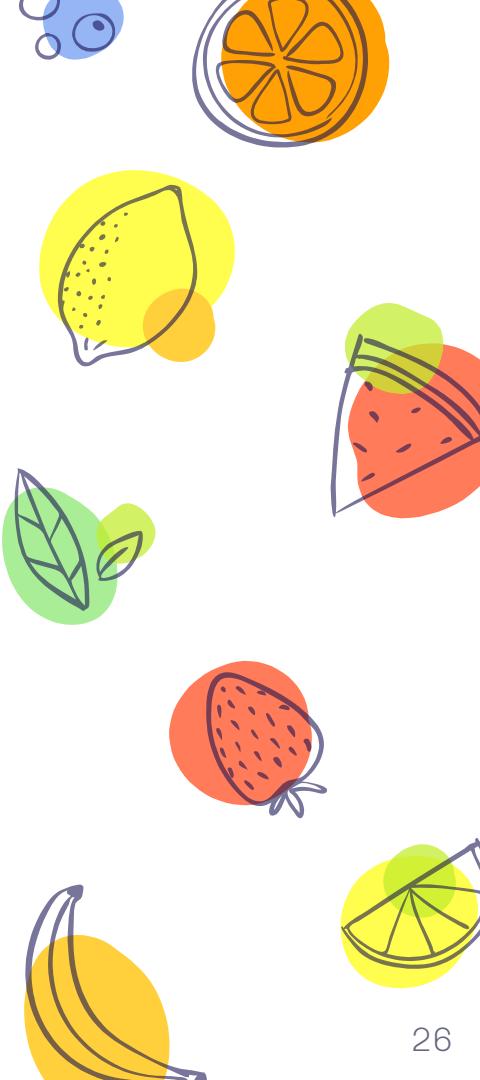
- ✖ Placing leds
- ✖ Routing boring traces

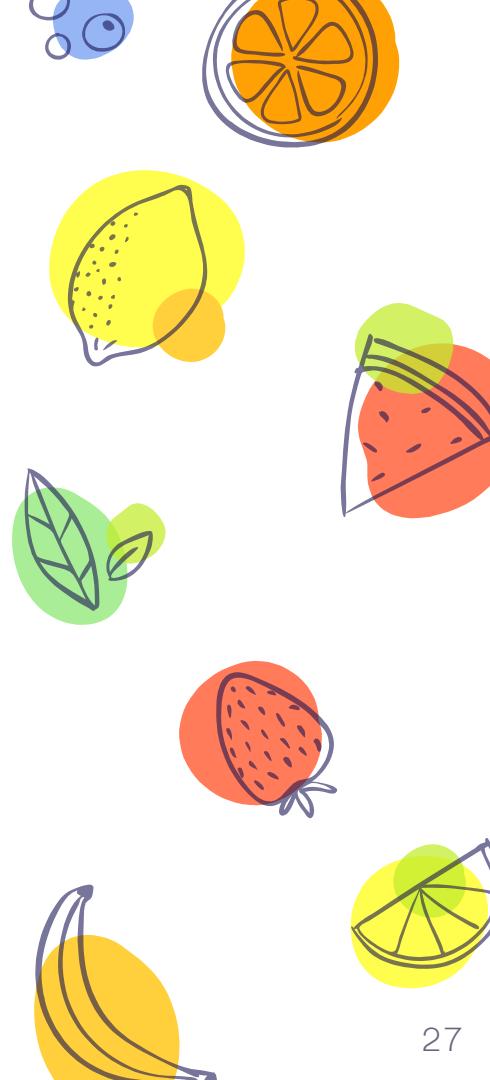
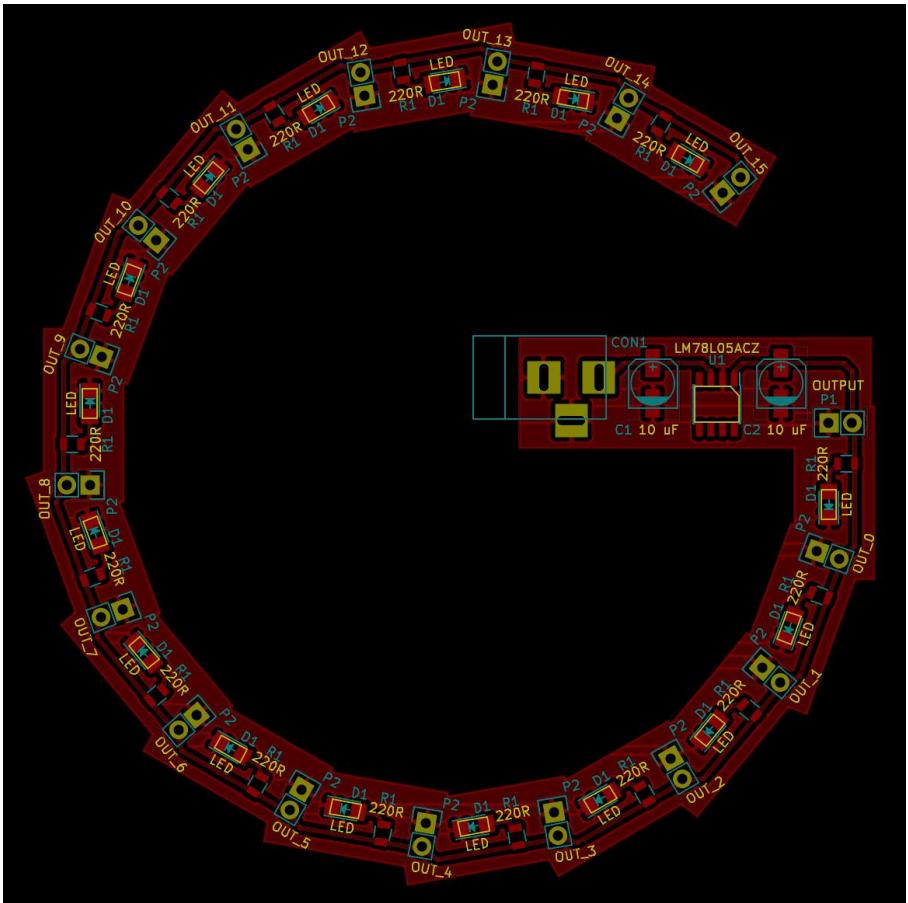




Things can be hacked

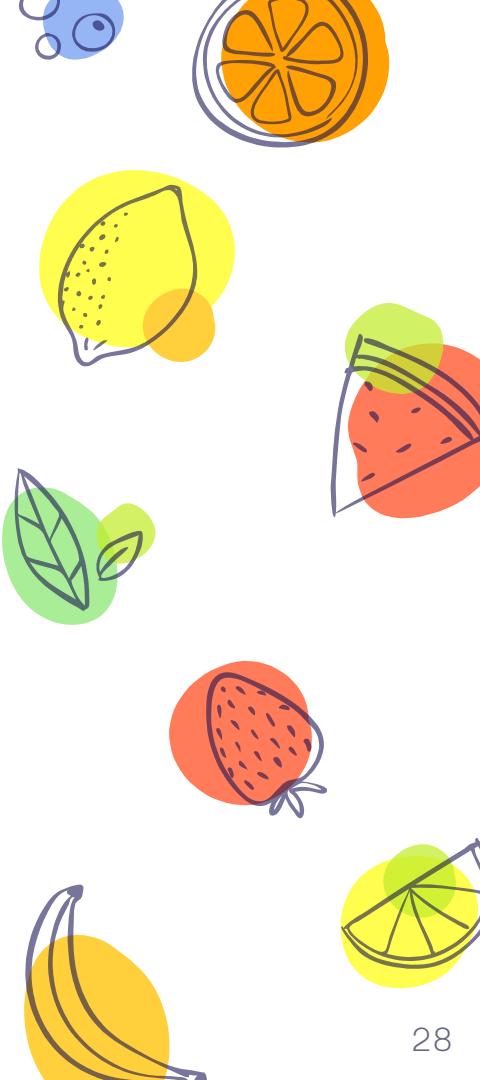
- ✖ Merging boards
- ✖ Automatic component order, from kicad to popular stores





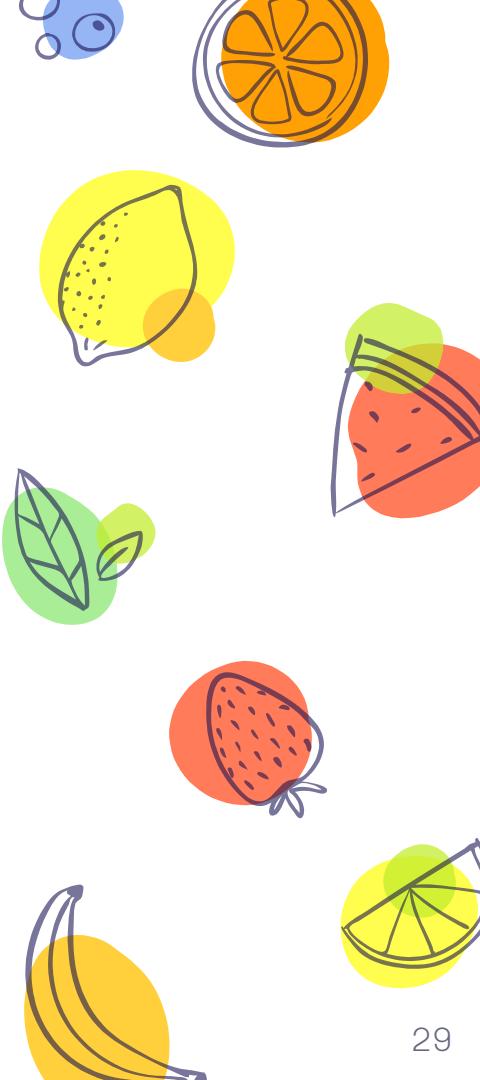
Go check out the forum

Many interesting projects pop up



Join the kicad mailing list

Don't be afraid of being a lurker



Kicad is nice

Just try!