**Project sketch**

Author

*Nikolaj Veljkovic*

Provisional title

*Building an analogue synthesizer from scratch*

**My (provisional) thesis:**

*Modern analogue synthesizers are rare. It is much easier to simulate the same effects digitally, than it is to build and assemble the hardware. Such a process is tightly intertwined with electronics and a lot of testing. In this Matura paper I analyse the steps needed to build an analogue synthesizer. I expand and build on my knowledge of Electronics. Using these resources I try to build a synthesizer myself.*

This is how I will organise my **research**:

*I will use the internet as my main source of knowledge, reading articles and blogs, watching YouTube videos and completing courses. I have already started building a list with resources.*

*Furthermore, I will read books such as the FOR DUMMIES series on electronics, “Building A Better Music Synthesizer” by Thomas Henry and “Electronic Music Circuits” by Barry Klein.*

*All the information I’ve found up until now, I wrote down in a note taking software called Obsidian. Unless we decide differently I will continue to do so.*

This is how I want to build my **product**:

*My goal is to have at least a source module producing sound (this is of course negotiable). The sound should be changeable, either by keys, a knob or impulses. Starting out from breadboard prototypes, I will approach my way to a working product. If the product goes past the breadboard stage, designing a circuit board would be the next step. Depending on time, I would also design a simple 3D-printable case, attach buttons and so forth. Nevertheless, let’s not get ahead of ourselves.*

*I have a soldering iron at home. Every other tool I would either have to borrow or use in school.*

My **motivation** for this work:

*I love producing music, thus synthesizers have always fascinated me. Touching buttons, plugging in cables, turning knobs. It just makes me happy, creating sounds that sometimes make my mother shout at me. Additionally, I also like machines and electronics. In learning about how a synthesizer works, I will not only get an insight into the synthesizer but also electronics in general. This will aide me in my future, as I might want to study machine engineering or robotics.*

I am fully aware that this is a broad topic. After speaking with Mr di Piazza I will decide what kind of synthesizer specifically I want to build.