# **Template for blog entry on 3D +Robotics MUM8TA004**

Please use this structure to write a blog entry. I will manage the transfer to the Web, so you can attach the pictures directly into this template.

# Introduction

Our group members are Jonas Lemström and Aku Liski. Aku has some experience with blender and 3d printing, and both of us like gaming.

# Ideas

We had couple of ideas but quite quickly we fixed on kind of tabletop game, little like xx, that would have some electronics and 3d printing, and we could code and get the features we’d want.

# What did you need to learn

Describe the initial scope of the project and list the learning objectives.

First we learned some innovation methods to flesh out ideas and collect them. From the ideas we landed on the one we liked and continued to

We’d need to think first what parts we need and then we could start to learn them. So first we ended up with ESP32 because it is a little bit simpler than Rasbery pi, and no need to learn a new OS just for this project.

We needed to learn about esp32 and all of its components and their code.

# The building phases

Tell us about the actual building of the device and you're learning by doing

Add any pictures you deem worthy

First we tried to flesh out our idea. We also identified what components we could need (esp32, rfid reader/writer, nfc tags, display, leds and buttons

Starting the project we got the NFC reader to work and after that

Kuva, joka sisältää kohteen teksti, kuvakaappaus, numero, ohjelmisto

Kuvaus luotu automaattisesti

(First values read with NFC reader)

Kuva, joka sisältää kohteen elektroniikka, kaapeli, tietokone, Johdotus

Kuvaus luotu automaattisesti

(First printing to the e-paper)

Kuva, joka sisältää kohteen teksti, kuvakaappaus, ohjelmisto, tietokone

Kuvaus luotu automaattisesti

(with Wokwi.com we could try the code even at home without hardware)

Kuva, joka sisältää kohteen elektroniikka, kaapeli, Johdotus, Sähkötekniikka

Kuvaus luotu automaattisesti

(Kaikki kytkettynä)



(Lopullinen tuote pahvilaatikossa)

Link to the source code:

https://github.com/Akkel-i/Data\_Duelists/tree/main/Data\_Duelist\_Game

# The outcome

What did you learn?

Did this course make you more interested in tinkering, or was this a one-off thing for you?

What further ideas did you get for making in the future?