Microcontroller Exercise

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Serial Communication

- Give an overview of the serial communication support of the Ardunio platform (e.g. uno). This includes
  - Pins, including internal logic and voltage level
  - Functions
  - Furthermore consider the specific protocols SPI, I2C with respect to Pins, functions / implementation support
- Given an overview of the Universal Asynchronous Serial Communication of the STM platform
  - Furthermore consider the specific protocols SPI, I2C with respect to Pins, functions / implementation support

Implementation

- Develop a system with two µC that communicate with each other
  - You can use tinkercad
- µC “A” sends a “Button pressed” message to µC “B” when a Button, that is connected to µC “A”, is pressed. µC “B” prints out the message and sends back a “thank you” message.
- Implement this scenario with the help of the UART, SPI, and I2C serial communication protocol
  - Explain, what are the pros and cons of the different communication protocols.