Voltage regulator LM7805

* Connection with the power supply, capacitors -> datasheet

AVR ATmega 162

* Its power pins to the output of the regulator
* Decoupling capacitors
* Atmel’s Application Note AVR042
* ATmega162 datasheet

Crystal oscillator

* Close XTAL pins

JTAG interface

* Atmel ICE and ATmega162 manuals

MAX233

* MAX233 datasheet

Assignments 1

Initial assembly of microcontroller and RS232

* Four things are needed to setup the microcontroller unit
  + MCU -> atmega162
  + A stable voltage supply
  + A clock signal
  + A reset circuit
* We will also make arrangements for
  + connecting the MCU to the PC
  + Using JTAG for debugging
  + Programming
* RS 232 I a serial protocol that makes it possible for microcontroller to send and receive data to and from the PC terminal
  + By linking the printf function to your serial driver, you can conveniently let the MCU display text and other information on the PC terminal using the standard C print functions

Creating a new project in Atmel Studio

* After opening Atmel Studio, a welcome dialogue will appear.
  + Click new project, choose GCC C Executable project,
  + Fill out the project name and chose a location
  + Microcontroller device you are going to write software for (ATmega162).

RS-232

* RS232 is a serial communication interface that is widely used in embedded systems.
* In this project we will just use three pins, RX, TX and Signal GND