Introduction to Digital Systems

Student Group

First Name	Surname	Matrikel Nr.

Table of Contents

Introduction to Digital Systems

No matter, whether you have to deal with a programmable logic controller (PLC) of a robot in the future, or if you just want to know how a mobile phone controls a display (or a microcontroller controls a light emitting diode) - the following chapters are indispensable. The knowledge gained can also be transferred to pure application programming in languages like Java or C.

Introduction
Or: How to deal with the course?

0. Tools

1. Boolean Algebra
   Or: 2B + /2B?
2. Number Systems
   Or: When is 1 + 1 = 1?
3. Combinatorial Logic
   Or: A different kind of logic puzzles
4. Realization of comb. Logic
   Or: The logic behind the mensa card
5. Storage Elements
   Or: The short-term memory of a controller
6. Sequential Logic
   Or: Inside a vending machine

Tips for the exam

1. Tips for the exam

continuing Links

1. Digital: this tool is used for simulating digital circuits. From Github only the zipfile: Digital.zip is needed.
2. From NAND to Tetris: A course starting at the same point like this course, but developing a full microcontroller, operating system an game onto it.
3. Digital technology on elektroniktutor.de and INF-Schule:
   Here you can find further explanations of our chapters on vocational school/gymnasium level in German.