**Exercise Set 2**. EE5167, Aug-Dec 2023.

Date: 29/08/23. Submission date: 07/09/23.

The exercise will not be marked, but can be used in quizzes and the final exam.

1. Consider the following microcontrollers / series:

A. ESP32

B. EFM32 (e.g. Wonder Gecko)

C. TMS320

D. Tricore (Infineon)

E. SiFive P650

F. AVR32

Select one of the specific chips from the series and find out the following information about them.

1. The block diagram of the chip and what is the bus used to connect different blocks.

2. The instruction set architecture used by the CPU in them: number of registers, memory addressing modes, control and status register and any other detail.

3. The memory map. Which memory interfaces are available?

4. Supported peripherals. Is DMA available? Is a GPU available? What are high speed peripherals and what are low speed? What serial interfaces are there? How are interrupts allocated to peripherals and routed to the CPU?

5. What are different power modes available and what is the difference between them?

6. How are different clocks generated in the system? Their sources and default clocks that are available in the system.

7. What are the wired and wireless connectivity peripherals?

8. Any special properties which make this chip special from other series listed above.