



Computer Architecture I - WS 03/04
(due: 21.01.2004)

Exercise 1: (Next PC computation) (10 points)

Specify and analyze a layout for the next PC computation circuit (see lecture). Necessary blocks for the construction (adder, incrementer) you will find in our internet page in the section "*Layouts*".

Exercise 2: (ALU) (7 + 10 points)

You should specify and analyze a layout for ALU. For the circuit see MP[00] Fig. 3.9.

- At first, specify and analyze a layout for AU (see Fig. 2.20).
- Specify and analyze a layout for the whole ALU.

Necessary blocks for the construction (adder, LU, comparator) you will find in our internet page in the section "*Layouts*".

Exercise 3: (*Caddr* computation) (3 + 5 points)

- Construct a circuit for *Caddr* computation.
- Specify and analyze a layout for this circuit.