

# Problem Sheet: Implementing Binary Arithmetic

AIN-1

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## Mini-project

Use Digital to implement and test the arithmetic unit designed in the lecture.

A possible plan is:

- half-adder using and and xor
- full-adder using half-adder
- 4-bit ripple-carry adder
- 4-bit inverter
- 2-way mux
- 4-bit 2-way mux
- 4-bit adder with subtraction
- 4-way mux
- 4-bit shift mux
- add-sub-shift