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DIPARTIMENTO DI INFORMATICA

Sequential nets: Exercises

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Exercise 1: Sequential adder

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Design a sequential adder for natural numbers. Use the kind of FF that makes the resulting circuit as simple as possible.

Exercise 2: sequence acceptor

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Design a net that receives in input a bit sequence and returns in output 1 every time it receives the sequences "101" or "110", even with superpositions. Use FFs of kind D.

Exercise 3: sequence replacement

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Design a circuit that reads strings on the alphabeth $\{a,b,c\}$ and that replaces every occurrence of the substring "*ab*" with "*ac*". Use FF of kind T.