

Laboratorul nr 6

Studiul circuitelor logice folosind limbajul Verilog:

Verilog - HDL (Hardware Descriptor Language).

Teorii IC:

1. Full-custom - optimizare la nivel de tranzistor.
→ high-performance

2. Semi-custom - blocuri logice + fire (designerul alege cum se așază firele)

→ 3. PLD - designerul alege în blocurile logice și legăturile dintre ele
PLA, FPGA
↳ Field-programmable gate array

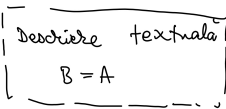
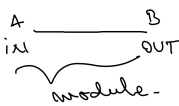
HDL → descriere textuală a circuitului

VHDL Very high-speed HDL | Verilog HDL

Temus Verilog

- porți
- MUX
- CBB
- numeratoare.

① Hello world Hardware (circuit)



modul → bloc logic

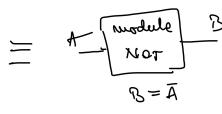
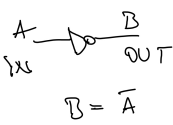
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module hello (B, A);
  input A;
  output B;
endmodule

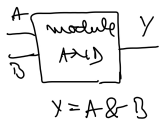
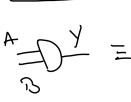
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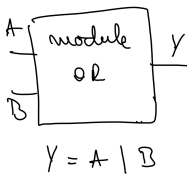
Porțta "NOT"



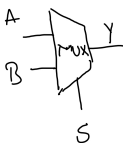
Porțta "AND"



Porțta "OR"



Multiplexor 2x1



$$Y = \bar{S}A + SB$$

Implementare Verilog:

- pe baza schemei cu porți
- pe baza funcției
- pe baza comportamentului