

Electrical Engineering

4-Bit Calculator

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Introduction



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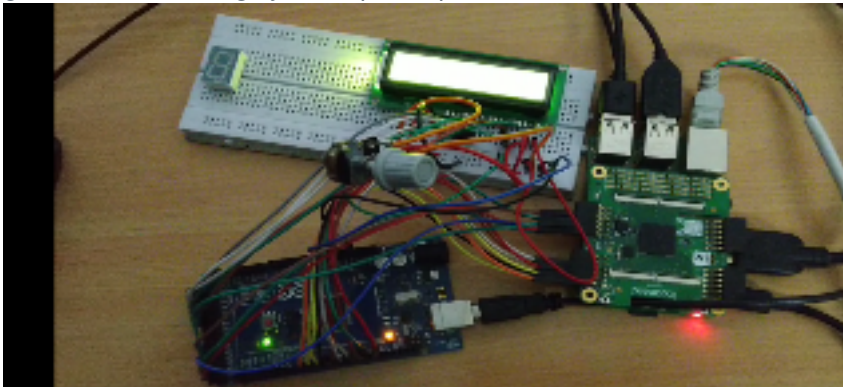


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- ▶ Components:Icoboard,Raspberry Pi,arduino,LCD display, Breadboard.

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- ▶ Components: Icoboard, Raspberry Pi, arduino, LCD display, Breadboard.
- ▶ The icoboard contains a Lattice FPGA with 8k LUT, 100MHz max clock, up to 8 MBit of SRAM and is programmable in Verilog by a complete open source FPGA toolchain.





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- ▶ We use arachne,yosys tools for generating the bit file and uploaded that bit stream into the fpga using icoprogram tool.



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- ▶ We wrote verilog code for the calculator and the pcf file is written for configuring the output and input pins of the icoboard.
- ▶ We use arachne,yosys tools for generating the bit file and uploaded that bit stream into the fpga using icoprogram tool.
- ▶ And then inputs are given to the icoboard pins from the arduino in the binary format.



- ▶ These inputs are processed in the icoboard fpga and the output is collected from the respective pins as configured in the pcf file.



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- ▶ The output file is received in binary format. So in order to convert it into decimal format we used the arduino.
- ▶ The decimal number is then displayed on the LCD display.