

Why Students Choose us

- ✓ Partial Payment Accepted
- ✓ Personalized Team Support
- ✓ 100% Project Completion
- ✓ Fast & Quick Delivery



TOP 12 VLSI PROJECT IDEAS

Project Includes

- Project Source Code
- Report, PPT & Documents
- IEEE Paper
- Live Teaching
- Code Installation

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Project Buying Guide

01

Discuss Project Requirement

Connect with Yogesh Sir on Call or WhatsApp at **+91 9172422245** for a free consultation. Get complete details on project development and working.

02

Create a WhatsApp Group

Add your entire team to a WhatsApp group where you'll receive weekly updates, project source code, PPTs, reports, and more.

03

Advance Payment

Make 45% Advance payment and then the rest on completion. Payment Invoice Bill Shared too.

04

Project Demo & Teaching

Join a live demo with code explanation and recording. Project Changes included.

05

Installation & Support

After the demo, now our development team install & setup the project on students' laptops. We provide support for 1 month after project.



Yogesh Sharma

 **+91 9172422245**

Let's Build Your Project Together!

12 FINAL YEAR PROJECT IDEAS FOR VLSI

1. Low Power ALU Design Using VHDL or Verilog

Description:

Design and simulate an Arithmetic Logic Unit optimized for low power consumption using VHDL or Verilog. Focus on CMOS logic and power-saving techniques at gate level.

2. FPGA-Based Traffic Light Controller

Description:

Create a smart traffic light controller using Finite State Machines (FSM) implemented on an FPGA. Can be extended to include emergency vehicle detection or pedestrian signals.

3. UART (Universal Asynchronous Receiver Transmitter) Design in VHDL

Description:

Design and simulate a UART module on FPGA/ASIC to manage serial communication between digital systems, commonly used in embedded systems.

4. VLSI-Based Digital Thermometer Design

Description:

Interface a digital temperature sensor with an FPGA and display real-time temperature on a 7-segment display. All logic is built using VHDL/Verilog.

5. Design of 32-Bit RISC Processor Using Verilog

Description:

Model a basic RISC (Reduced Instruction Set Computer) processor architecture with ALU, register file, and control unit. Useful for embedded computing systems.

6. Image Edge Detection using FPGA

Description:

Implement edge detection (e.g., Sobel operator) using FPGA for real-time image processing applications like object detection or surveillance.



12 FINAL YEAR PROJECT

IDEAS FOR VLSI

7. VLSI Design of FIR Filter Using MAC Units

Description:

Design a Finite Impulse Response (FIR) filter using Multiply-Accumulate (MAC) units in VHDL or Verilog. Essential in DSP (Digital Signal Processing) applications.

8. Implementation of Digital Stopwatch on FPGA

Description:

Use VHDL to design a digital stopwatch with reset, pause, and count-up functionalities. Output shown on 7-segment displays or LCD.

9. VLSI Design of Memory Cell Array (SRAM or DRAM)

Description:

Design a basic SRAM/DRAM memory block with read/write capabilities. Focus is on architecture and minimizing access time.

10. I2C Protocol Implementation on FPGA

Description:

Implement I2C (Inter-Integrated Circuit) protocol for communication between a microcontroller and peripheral devices. Useful in sensor or display interfacing.

11. Power Efficient Multiplier Design

Description:

Design and simulate a low-power and high-speed multiplier using shift-and-add or Booth's algorithm. Multipliers are a core part of signal processors.

12. VLSI-Based Voice Activity Detector

Description:

Develop a VAD system that detects the presence of human voice in a noisy environment using a logic circuit implemented on FPGA for voice compression and speech recognition.

