8051-Based Temperature Meter Using LM35 Sensor: A Step into Embedded Systems

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Bridging the gap between microprocessor-based computing and real-world sensing, I successfully designed and implemented an 8085-based Temperature Meter using the LM35 Sensor as part of my semester mini-project. This project provided hands-on experience in sensor interfacing, analog-to-digital conversion, and microprocessor programming.

Project Insights & Technical Outcomes:

Sensor Integration: Used the LM35 temperature sensor to measure ambient temperature with high accuracy and linear output.

8085 Microprocessor Programming: Developed an 8085-assembly language program to process the sensor's analog output and display temperature readings.

Analog-to-Digital Conversion: Implemented an ADC (Analog-to-Digital Converter) to interface the sensor's analog data with the microprocessor.

Real-World Applications: Explored applications in weather monitoring, industrial temperature control, and medical diagnostics.

This project enhanced my skills in microprocessor programming, embedded system development, and real-time data processing. It was an exciting opportunity to apply fundamental electronics and computing principles to a practical and impactful solution!