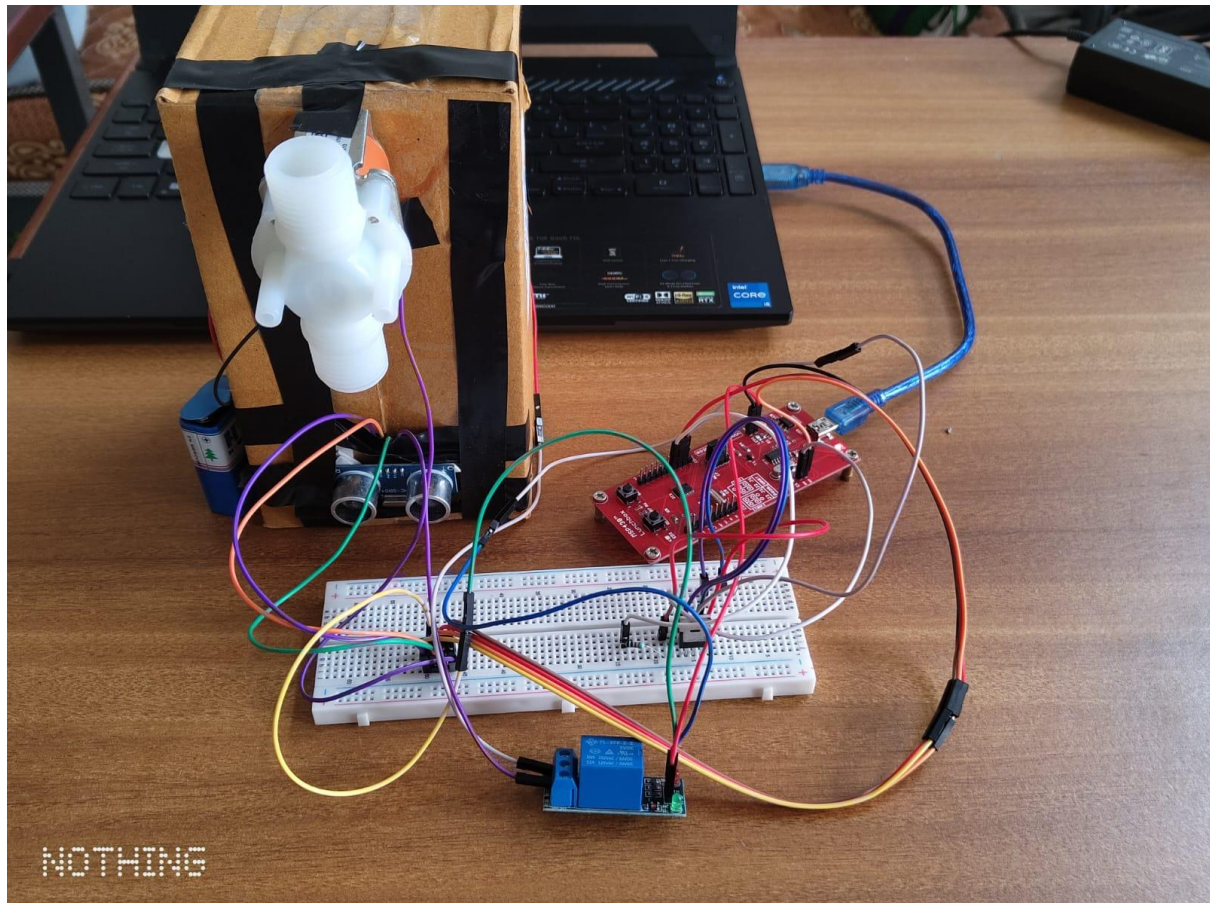


REPORT ON MPMC COURSE PROJECT.

TOPIC – AUTOMATIC WATER DISPENSER.

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This project gave us the insights about various microcontrollers and microprocessors and how to choose the best among them for our required purpose and engineering.

Not only we learned about the things that are discussed in lab but we also did research and studied about various components and sensors that are available in the market today.

Working Principle:

The ultrasonic sensor sends out pulses. The MSP430G2553 calculates the distance based on the time it takes for the echo to return. If an object is detected within a certain range, the MSP430 activates the solenoid valve using the MOSFET.

Challenges and Considerations: Ensuring accurate distance measurements from the ultrasonic sensor. Power requirements for the solenoid valve and potential use of a relay module for higher power handling.

Future Enhancements: Integration of feedback mechanisms for improved control.

Implementation of a user interface for real-time monitoring and adjustments.

References:

Datasheets and documentation for MSP430G2553, HC-SR04, IRF540N, and other components used in the project.

Conclusion: The project successfully demonstrates a system where a solenoid valve is controlled based on distance measurements from an ultrasonic sensor. The MSP430G2553, with its efficient power consumption and versatile features, serves as an effective microcontroller for this application. Also, due to increase in sanitation and hygiene around the world (post pandemic) it is a good idea to refrain from touching public products or those things which others use. So automatic water dispenser is a good way to overcome this.