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Development of Sustainable Coin Based Drinking Water Vending Machine

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Abstract: *The rapid advancement of electronics has significantly transformed daily life, impacting industries such as medicine, telecommunication, and home automation. This research presents a fully automated, coin-based water dispenser system utilizing a microcontroller and sensors. The system efficiently dispenses water or cola, integrating IR sensors to detect the presence of a glass and prevent wastage. A coin detector ensures only valid coins trigger the dispensing process, with the motor operating only when a glass is present. If the glass is removed mid-process, the system halts water flow until it is replaced. This smart dispenser enhances automation and promotes water conservation.*

Keywords: Automated water dispenser, microcontroller, IR sensors, coin-based system, water conservation, smart dispenser, home automation

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