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Abstract

Overflowing garbage cans in public restrooms have decreased public sanitation. It is constantly found that garbage cans in restrooms are often full and janitors have trouble keeping up with the high traffic of the disposal systems. A SMART trash receptacle has been built with the capability to solve this problem by alerting custodians with their status. The SMART trash receptacle was designed and programmed using PBASIC to sense when the rubbish is full by determining the height and weight of the garbage. The SMART trash receptacle was tested and proved to be effective in the detection of waste. An ultrasonic sensor and emitter and a Flexiforce sensor were wired and programmed with PBASIC to accomplish this task. By creating a threshold value for both sensors, testing was completed by deliberately filling up the SMART trash receptacle which caused a control panel to alert the custodian using both an audible and visible alert. This solves the modern inconvenience of excess garbage in public facilities. The SMART trash receptacle has the potential to increase cleanliness and the health of people all over the world.