

Project title: Smart coffee machine

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Department Name: Computer Engineering

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Project type: Hardware

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Project Abstract:

We are undertaking a project to develop a smart coffee machine using coffee capsules designed to provide coffee enthusiasts with a seamless coffee experience, regardless of their familiarity with the intricacies of coffee preparation. This innovative machine empowers users to effortlessly customize their coffee choices, including the coffee type, desired quantity, and additional preferences. Notably, it boasts the convenience of remote ordering through a dedicated mobile application or direct input via the machine's interface.

This project encompasses pivotal components, including mobile application and remote ordering capabilities, as well as card payment functionality. It integrates specialized input units within the device. Furthermore, it automates the coffee-making process, eliminating the need for extensive user involvement. Additionally, it meticulously regulates water temperature to guarantee the consistent delivery of high-quality coffee. Ultimately, this project aspires to provide coffee enthusiasts with a seamless and user-friendly coffee experience.

In brief, the device operates as follows: Initially, it features an input unit that prompts users to input information regarding their coffee preferences. This includes selecting from various coffee capsules with different flavors, specifying the desired quantity, and indicating any additional preferences. Subsequently, the device automatically manages the coffee preparation process. It begins by selecting the appropriate coffee capsule and placing it in the designated slot. The device then heats the water to a precise temperature and manages the flow of hot water through the capsules to extract the coffee drink. Once the coffee preparation is complete, it is dispensed through an output unit for serving.

What sets our project apart from numerous coffee-making machines on the market is its emphasis on user-friendliness, convenience, and automation. Furthermore, it leverages coffee capsules, reducing the need for users to grind coffee beans and ensuring consistently high-quality coffee due to the preservation method of the capsules. Additionally, our system offers a different flavor through a diverse range of coffee capsules.