RECYCLE POINT REWARD SYSTEM

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DESCRIPTION

A Recycle Reward System is a simple method designed to encourage people to recycle waste by giving them rewards. Many people throw plastic bottles, cans, paper, and other recyclable items without proper disposal, which increases pollution. This system motivates people to recycle by offering points, coupons, or small gifts for each item they deposit into a smart recycling bin. It makes recycling easy, useful, and interesting for everyone.

The main idea is very straightforward:

Recycle items → Earn points → Get rewards.

Users drop recyclable materials into a smart bin. The machine checks the material, accepts it, and gives reward points to the user. These points can later be exchanged for discounts or other benefits.

How the System Works:

a. User Login

b. Item Detection

c. Automatic Segregation

d. Reward Points

e. Reward Redemption

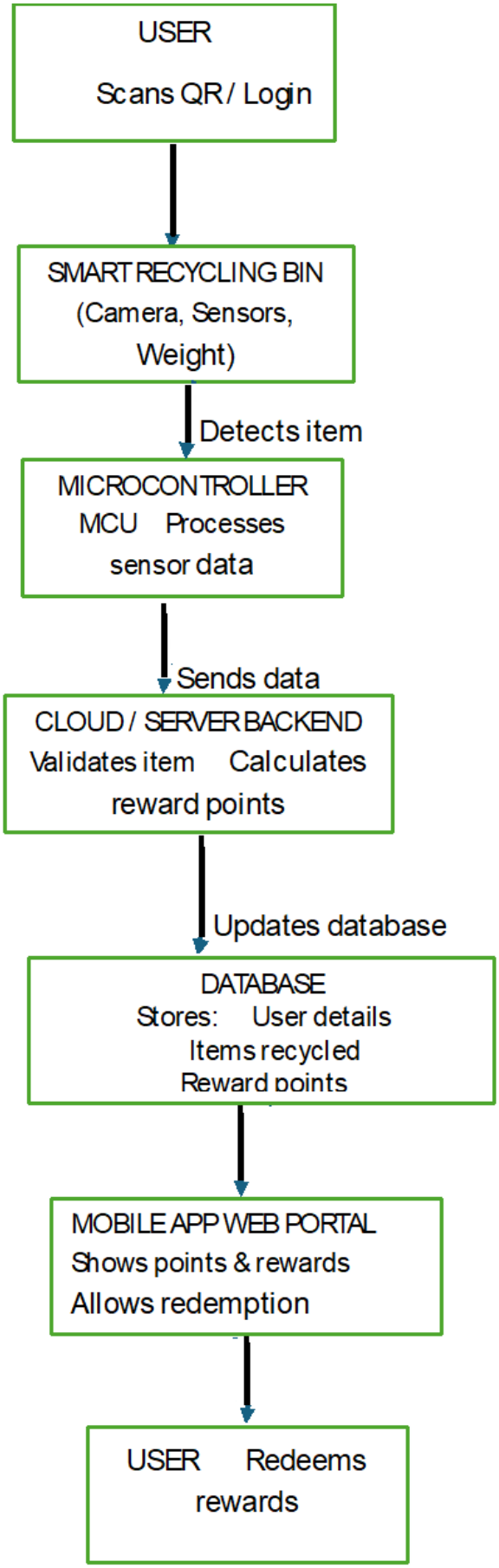
Applications:

The system can be installed in schools, colleges, malls, airports, parks, apartments, and smart city areas.

Conclusion:

The Recycle Reward System is an effective way to reduce pollution and promote recycling habits.

SYSTEM ARCHITECTURE



Explanation:

The system architecture of the Recycle Reward System explains how all parts of the project work together to complete the recycling and reward process. The user begins the interaction by scanning a QR code or using the mobile app to identify themselves. Once the user drops a recyclable item into the smart bin, the sensors such as a camera, weight sensor, or infrared detector identify the item and confirm whether it is recyclable. This information is then sent to the microcontroller inside the bin, which processes the sensor readings and prepares the data for the server. The processed item data, including type, weight, and time, is sent to the backend server through an internet connection. The server analyzes the item, classifies the material, and calculates the reward points the user should receive. These points are then added to the user's account. All the information, including user details, recycled items, and reward history, is stored in the database for future reference. Finally, the updated points are displayed in the mobile app, allowing the user to check their balance and redeem rewards. This architecture ensures smooth communication between the user, smart bin, server, and database, making the system efficient and reliable.

OPERATIONAL FLOWCHART