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RFID Based Recommendation System of Food Ingredients for Patients with Specific Diseases

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Abstract: Each year, more than 300,000 people are hospitalized and 5,000 die after consuming contaminated foods and beverages. Smart cards are used in information technologies as portable integrated devices with data storage and data processing capabilities. As in other fields, smart card use in food ingredients and consumption. Smart cards are used as an Electronic Food ingredients Record (EFIR). Their efficient use with easy and fast data access facilities leads to identify what food should be consumed and what food shouldn't been consumed depending on the patient disease. In existing system or in our extensive literature survey smart card based supply chain only been researched and briefed. No existing platforms deal with food ingredients and patient disease.

I. INTRODUCTION

we have implemented a smart card system in which food ingredients are been embedded. Smart cards are used as an Electronic Food ingredients Record (EFIR). The food ingredients are been read and transmitted to Arduino controller. From Arduino controller the real time data are transmitted to system using cable and obtained using Java platform. The real time data are collected using SQL database. Finally we have used data mining techniques like collaborative filtering algorithm to identify the food to be avoided for a particular disease patients. Our proposed system would be the 1st platform to showcase the food habits along with the food to be avoided for a particular disease patients during purchase. This would save many human lives.

II. LITERATURE REVIEW

In [1], The authors "GalandeJayshree, RutujaGholap, PreetiYada" proposed RFID based automatic billing trolley, with this model the system consists RFID reader and the products in the malls equipped with RFID tags. When a person puts any product in the trolley its code will be detected by RFID reader and the price of the product will be stored in the memory. At the billing counter the total bill data will be transferred to the pc by wireless RF modules.

In[2], The authors "S.Sainath, K.Surender, V.VikramArvind" proposed a model Automated Shopping Trolley for supermarket Billing system in which the automated shopping trolley is a smart trolley which integrates a raspberry pie embedded chip with two barcode scanners and a battery kit to allow users to self check out at supermarket.

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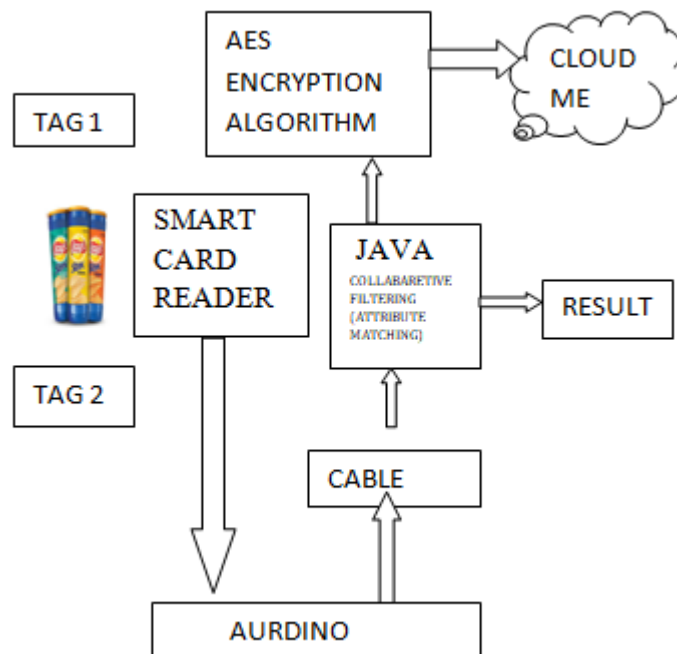
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In[3], The authors “KalyaniDawkar, ShraddhaDhomaee, SamruddhiMahabaleshwarkar” proposed a model of electronic shopping cart for effective shopping based on RFID in which a system consist of smart trolley will have RFID reader, lcd display. When the person puts a product in trolley it will scan and the cost, name and expiry date of the product will be displayed.

In [4], the authors “YnajunZuo” describe the importance of RFID for automatic item identification and data capture. He developed a secured tag reader authentication protocol to ensure the authenticity of RFID readers.

III.HARDWARE CONFIGURATION

we have implemented a smart card system in which food ingredients are been embedded. Smart cards are used as an Electronic Food ingredients Record (EFIR). The food ingredients are been read and transmitted to Arduino controller. From Arduino controller the real time data are transmitted to system using cable and obtained using Java platform. The real time data are collected using SQL database. Finally we have used data mining techniques like collaborative filtering algorithm to identify the food to be avoided for a particular disease patients. Our proposed system would be the 1st platform to showcase the food habits along with the food to be avoided for a particular disease patients during purchase. This would save many human lives.



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1. RFID READER:

GENERAL DESCRIPTION

A Radio Frequency Identification Reader (RFID reader) is a device used to gather information from an RFID tag, which is used to track individual objects. Radio Frequency waves are used to transfer data from the tag to a reader. The RFID tag it must be within the range of an RFID reader, in order to be read. RFID technology allows several items to be quickly scanned and enables fast identification of a particular product, even when it is surrounded by several other items.

2. DATA COLLECTION USING JAVA:

API by Java developers, it still provides all the necessary functionality for proper serial communications. In order to make the API portable across platforms, the API defines an abstract SerialPort class. This class is then subclassed and platform specific functionality is implemented in the subclassed object. This concrete class then interacts with a Dynamic Link Library (DLL) file through the Java Native Interface (JNI). Once a SerialPort object has been created, communications through the physical port are conducted through standard InputStream and OutputStream objects. These streams send and receive information as bytes, integers or arrays of bytes

IV. PROPOSED SYSTEM

In our proposed system, we have implemented a smart card system in which food ingredients are been embedded. Smart cards are used as an Electronic Food ingredients Record (EFIR). The food ingredients are been read and transmitted to Arduino controller. From Arduino controller the real time data are transmitted to system using cable and obtained using Java platform. The real time data are collected using SQL database. Finally we have used data mining techniques like collaborative filtering algorithm to identify the food to be avoided for a particular disease patients. Our proposed system would be the 1st platform to showcase the food habits along with the food to be avoided for a particular disease patients during purchase. This would save many human lives.

V. CONCLUSION

An RFID sensor was proposed to be used in packaged food industry. The sensor is made of an RFID tag and a carbon based conductive polymer. By the scenario presented in this paper, by increasing the read range of the RFID tag of the sensor system, the power sent by the reader is enough to wake up the IC. Then, the IC sends a code to the reader informing that that specific product of sample is spoiled. The proposed sensor can be used in many applications related to food products and safety issues

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