UNIVERSAL DEBIT CARD

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ABSTRACT

Now days we have seen that there is a long queue for taking tickets for trains, buses, etc. Passenger has to wait for a long time in a queue. Due to this sometimes the passenger has to miss the train/busses or they travel without tickets. There is no system implemented for detecting the passenger travelling without tickets. Passenger travelling without tickets reduces the profit for government. As all the procedure is being done by humans thus requires more time in the procedure. So, passenger has to wait for a long time in a queue.

We are designing the system which will read the AADHAR CARD number which will act as a UNIVERSAL DEBIT CARD. Using this card automatically it will deduce the ticket charges from your account. So, the passenger doesn't have to wait for long time in a long queue and not a single passenger travels without tickets. This also helps our Indian government to receive maximum taxes.

Keywords*: *Graphics LCD, GSM Module, Touch Screen, WEBCAM.

I. INTRODUCTION

Here we are designing a universal debit card system which can be used in all the areas. In this project we are mainly working on an AADHAR CARD of the individual. We will use the web cam to capture the image of aadhar card. Using the character recognition we will get the aadhar card number. Using the aadhar card number we can access the account number of the particular individual. The entire database is stored in the computer. Ticket for the particular person travelling from a train is directly given by his universal debit card. We will use the touch screen and lcd for the input and output. So that he can just select on the required destination station. And cost of the ticket till the destination station will be automatically deducted from the account. After the cost deducted from the account the message will be send to the particular person using a GSM module.

1.1 Existing System

We have seen that there is a long queue for taking tickets for trains, buses, etc. Passenger has to wait for a long time in a queue. Due to this sometimes the passenger has to miss the train/busses or they travel without tickets.

1.2 Proposed System

We are designing the system which will read the AADHAR CARD number which will act as a UNIVERSAL DEBIT CARD. Using this card automatically it will deduce the ticket charges from your account.

II. HARDWARE REQUIREMENT

Our System Comprises of Following Component

1. Microcontroller ARM7 (LPC 2138)
2. WEBCAM
3. PC
4. GSM Modem
5. Touch Screen
6. Graphics LCD

III. BLOCK DIAGRAM

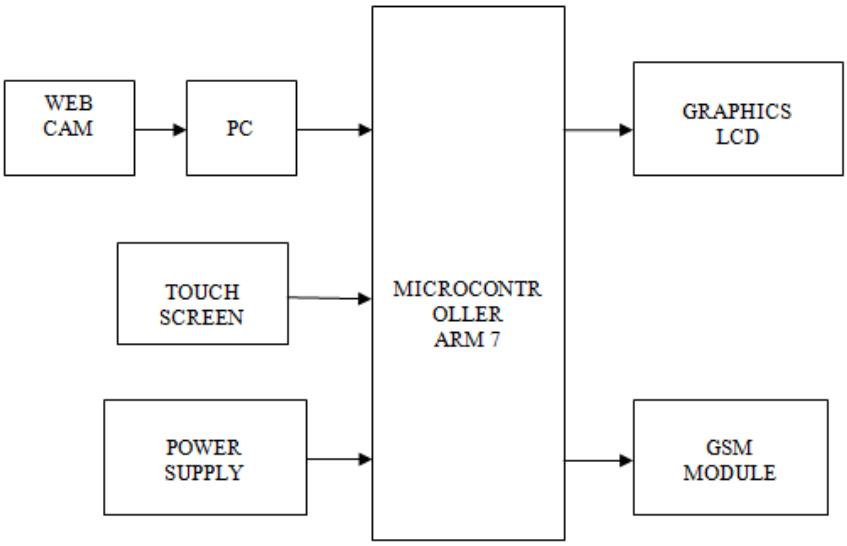

Fig.1

3.1 Microcontroller

This generation introduced the Thumb 16-bit instruction set providing improved code density compared to previous designs. The most widely used ARM7 designs implement the ARMv4T architecture, but some implement ARMv3 or ARMv5TEJ. All these designs use aVon Neumann architecture, thus the few versions comprising a cache do not separate data and instruction caches.Some ARM7 cores are obsolete. One historically significant model, the ARM7DI is notable for having introduced JTAGbased on-chip debugging; the preceding ARM6 cores did not support it. The "D" represented a JTAG TAP for debugging; the "I" denoted an ICEBreaker debug module supporting hardware breakpoints and watchpoints, and letting the system be stalled for debugging. Subsequent cores included and enhanced this support.

3.2 Webcam

The Rs232 standard is used to interface the computer with the microcontroller. The computer is connected by the web camera for recognition. The matlab software window is used.

3.3 PC

We already know about the facility of the mobile, so after receiving data from the webcam we can copy or use the same data in our PC. The PC and RF receiver can be interfaced with the help of the data cable DKU-50.We are using the MATLAB software in our PC for the user interface with the system. With the help of this MATLAB software any user can easily make the use of the system.This MATLAB software provides the notice

typing and editing facility. Also we can copy the same content as received through mobile in the editing window and call it as a notice.Hence the PC/MATLAB software provides the typing, editing and formatting options to the user.

3.4 GSM Modem

GSM (Global System for Mobile communication) is a digital mobile telephony system.With the help of GSM module interfaced; we can send short text messages to the required authorities as per the application. GSM module is provided by sim uses the mobile service provider and send sms to the respective authorities as per programmed. This technology enables the system a wireless system with no specified range limits.

GSM uses a variation of time division multiple access (TDMA) and is the most widely used of the three digital wireless telephony technologies (TDMA, GSM, and CDMA). GSM digitizes and compresses data, then sends it down a channel with two other streams of user data, each in its own time slot. It operates at either the 900 MHz or 1800 MHz frequency band.

3.5 Touch Screen

A touch screen is an electronic visual display that can detect the presence and location of a touch within the display area. The term generally refers to touching the display of the device with a finger or hand. Touch screens can also sense other passive objects, such as a stylus. Touch screens are common in devices such as game consoles, all-in-one computers, tablet computers, and smart phones.

The touch screen has two main attributes. First, it enables one to interact directly with what is displayed, rather than indirectly with a pointer controlled by a mouse or touchpad. Secondly, it lets one do so without requiring any intermediate device that would need to be held in the hand (other than astylus, which is optional for most modern touch screens). Such displays can be attached to computers, or to networks as terminals. They also play a prominent role in the design of digital appliances such as the personal digital assistant (PDA), satellite navigation devices, mobile phones, and video games.

3.6 Graphics Liquid Crystal Display

Graphics LCD is used in a project to visualize the output of the application. Graphics LCD can also used in a project to check the output of different modules interfaced with the microcontroller and also to see some form of waves. Thus Graphics lcd plays a vital role in a project to see the output and to debug the system module wise in case of system failure in order to rectify the problem.

IV. CONCLUSION

The Proposed System used in different fields where we can receive maximum government taxes. This proposed system is useful for security purpose in railway, buses or other applications.

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