



IEEE Reference:

Barcode - Based Intelligent Books Shelving System

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Bar Code Based Library Automation System

Title of the project	:	Barcode based Library Automation System
Domain	:	Advanced Embedded Systems Design
Software	:	Embedded C, Keil, Proload
Microcontroller	:	AT89S52
Power Supply	:	+5V, 750mA Regulated Power Supply
Display	:	LED 5mm, 16 X 2 LCD
Crystal	:	11.0592MHz
Data Communication	:	Through Serial Communication
Applications	:	Colleges, Companies, Banks, Industries
Developed By	:	M/S Wine Yard Technologies
Phone	:	040-6464 6363
Website	:	www.WineYardProjects.com

Barcode Based Library Automation System

ABSTRACT

Barcode based Library automation is a very innovative and interesting project that can play a vital role in library automation. In this project, each student and each book are assigned with an barcode. If a student wants to draw a book from the library, he has to expose his barcode based identity card to the scanner and then Book Id card. The system records the book transaction into the specified student account. Whenever he wants to return the book, he has to follow the same procedure. If the student reaches the maximum number of draws of the books, the system alerts with a message on the LCD.

A barcode reader (or barcode scanner) is an electronic device for reading printed barcodes. Like a flatbed scanner, it consists of a light source, a lens and a light sensor translating optical impulses into electrical ones. Additionally, nearly all barcode readers contain *decoder* circuitry analyzing the barcode's image data provided by the sensor and sending the barcode's content to the scanner's output port

The hand-held laser scanner does not have to be close to the bar code in order to do its job. It uses a system of mirrors and lenses to allow the scanner to read the bar code regardless of orientation, and can easily read a bar code up to 24 inches away. To reduce the possibility of errors, a laser scanning may perform up to 500 scans per second. Specialized long-range laser scanners are capable of reading a bar code up to 30 feet away.

This project uses regulated 5v, 500mA power supply. 7805, a three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12v step down transformer. The RFID module requires a separate +5v power supply.

