### Bar-Code and GSM based [Access Control Systems](http://www.honeywellaccess.com/products/access-control-systems/)

### Abstract:

### The purpose of this project is to make use of barcode scanner for access control and monitoring purpose. Bar code cards are simple to create and easy to use. They provide the lowest-cost cards of any access control technology. Most card manufacturers can provide bar coded cards. A variety of PC based bar code printing products also is available, to enable you to print bar codes and apply them to badges and ID cards. And bar code masking products are available to prevent counterfeit duplication and provide a high level of security. The EZ Barcode reader decodes all common and many uncommon bar code symbologies. It is auto discriminating, and reads in both directions. It reads well with a wide range of bar code densities and scanning speeds. And standard infrared optics make it compatible with most masking film and bar code security coverings. EZBarcode reads all standard bar code types — and it works with security overlaminates. The EZ Barcode reader outputs in Wiegand, magstripe or ASCII formats. It connects to most access control systems with an industry standard five-wire interface. You can add bar code reading to an existing system with ease.

**The main features of this project are:**

### Barcode decals are non-transferable because of the material decals are made of, they are very difficult to remove from a car window in one piece. In other words, unless the vehicle itself is stolen, a person cannot just peel off the decal and place it on their car.

### Barcode readers will not read photocopies but Still, the main reason why many facilities choose to use barcode automation over other access control systems is the lower cost per vehicle.

### Barcode automation makes it easier to keep track of who is allowed in. For instance, if an employee no longer works at a hospital, rather than uninstalling equipment or trying to recover an RF-ID tag, the barcode decal can simply be deactivated from the system.

### The need for a low-maintenance, reliable access control solution that is easy on the budgets of both health care and educational facility managers or property owners has never been more prevalent, especially in these turbulent times.

**The device provides learning’s on the following advancements:**

1. bar-code reader interfacing to microcontroller.

2. Uart Module.

3. LCD interfacing.

4. GSM module interfacing.

5. Embedded C programming

6. PCB design

**The major building blocks of this project are:**

1. Microcontroller board with regulated power supply.

2. Crystal Oscillator and reset

3. bar\_code reader modem.

4. GSM modem

5. LCD Display to display the Weighing Scale reading.

**Software’s used:**

1. PIC-C compiler for Embedded C programming.

2. PIC kit 2 programmer for dumping code into Micro controller.

3. Express SCH for Circuit design.

4. Proteus for hardware simulation.

**Regulated Power Supply:**

Regulator

Filters

Rectifier

Step down

transformer

### Bar-Code [Access Control Systems](http://www.honeywellaccess.com/products/access-control-systems/)

Power supply

Crystal

Micro-controller

Mobile

Bar\_code reder

GSM

Lcd

Reset