

Image Based Password Authentication for Illiterates with Touchscreen

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ABSTRACT: Image based password authentication for illiterates with touch screen interfacing provides an image based security system, which can be installed in poultry forms, houses and all kinds of domestic and industrial applications. The main aim of this paper is to provide a security system for illiterates. This system provides user-friendly environment for the users with a kind of image interaction. Here the password need not be a string of characters it can use few images; this may be easy for the illiterates to remember. This device makes use of a touch screen sensor based graphical LCD which makes the things still easier. This paper gives us the exposure about how to efficiently make use of the touch screen technology to interface with the appliances in our practical life. It can also be operated very easily with the hand so can be used even by very old people and also by the illiterates. Touch screens provide fast access to any and all types of digital media, with no text-bound interface getting in the way. Faster input can mean better service. Using a touch interface can effectively increase operator accuracy, reduce training time, and improve overall operational efficiencies, thus keeping costs down, a properly designed touch interface can improve each operator's accuracy. Touch screens are practical in automation, which has become even simpler with touch screen technology. Owners familiar with the icon system appreciate touch screens that make automation systems user friendly. In this paper we make use of an on board computer which has many input and output ports. This On board computer is also termed as micro controller. All the input and the output modules are interfaced with this control unit. The image input from the graphical LCD is processed by the controller and provides access to the user if the password received is correct. Embedded c program is used or supporting software.

KEYWORDS: LCD, MICROCONTROLLER, SECURITY, IMAGE, PASSWORD, ALRAM

I. INTRODUCTION

The paper aims in developing a system which is very helpful for illiterates in secure accessing, who are not able to remember passwords. Image based password authentication for illiterates with touch screen interfacing provides an image based security system, which can be installed in poultry forms, houses and all kinds of domestic and industrial applications. The main aim of this paper is to provide a security system for illiterates. This system provides user-friendly environment for the users with a kind of image interaction. Here the password need not be a string of characters it can use few images this may be easy for the illiterates to remember. This device makes use of a touch screen sensor which makes the things still easier. This paper gives us the exposure about how to efficiently make use of the touch screen technology to interface with the appliances in our practical life. It can also be operated very easily with the hand so can be used even by very old people and also by the illiterates.

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In this paper we make use of an on board computer which has many input and output ports. This on board computer is also termed as micro controller. All the input and the output modules are interfaced with this control unit. The image input from the touch screen is processed by the controller and provides access to the user if the password received is correct.

II. RELATED WORK

The System for secure access illiterate; who are not able to remember passwords is to develop very useful. Password using the touchscreen interface image for illiterates based authentication is a security system based on the images, where the poultry houses are illiterate forms and on all types on domestic and industrial applications can be installed. This system is a way for users for interact with the image to facilitate access provides a user-friendly environment. The devices is based on a system that makes things even easier, the sensor uses the touchscreen graphic LCD. How effectively the project for use to interact with the devices in their practical lives using touchscreen technology. It can be operated by hand very easily so it can also be used by the elders and the illiterate.

III. EXISTING METHOD

Although traditional alphanumeric passwords are used widely, they have problems such as being hard to remember, vulnerable to guessing, dictionary attack, key-logger, shoulder-surfing and social engineering. In addition to these types of attacks, a using may tend to choose a weak password or record his password. This may further weaken the authentication schemes. Has an alternative to the traditional password-based scheme, the biometric system was introduced . This relies upon unique features unchanged during the life time of a human, such as finger prints, iris etc... The major problem of biometric as an authentication scheme is the high cost of additional devices needed for identification process. The false-positive and false-negative rate may also be high if the devices are not robust. Biometric systems are vulnerable to replay attack (by the use of sticky residue left by finger on the devices), which reduces the security and usability levels. Thus, resend development has attempted to overcome biometric shortcomings by introducing token-based authentication schemes.

Token-based systems rely on the use of physical devices such as smartcards or electronic key for authentication purpose. This may also be used in conjunction with the traditional passwords-based system. Token-based systems vulnerable to man-in-the middle attacks were an intruder intercepts the users session and records the credentials by acting as a proxy between the user and the authentication device without the knowledge of the user. Thus an alternative, image based passwords are introduced to resolve security systems.

IV. PROPOSED METHOD

An integrated system is dedicated to the task is a combination of software and hardware. Some of the main tools used in the integrated process are microprocessor and microcontroller.

Typically microprocessors, known as general purpose processors since inputs, the process can accept and output. In contrast, not only as a microcontroller accepts data information, but also multiple data devices, the control interface with data handling and therefore the results.

Microcontroller PIC 16F77 “image based password authentication for illiterates using touchscreen”. A unique project that has a touchscreen using sensor to control devices in the apartment is used.

BLOCK DIAGRAM

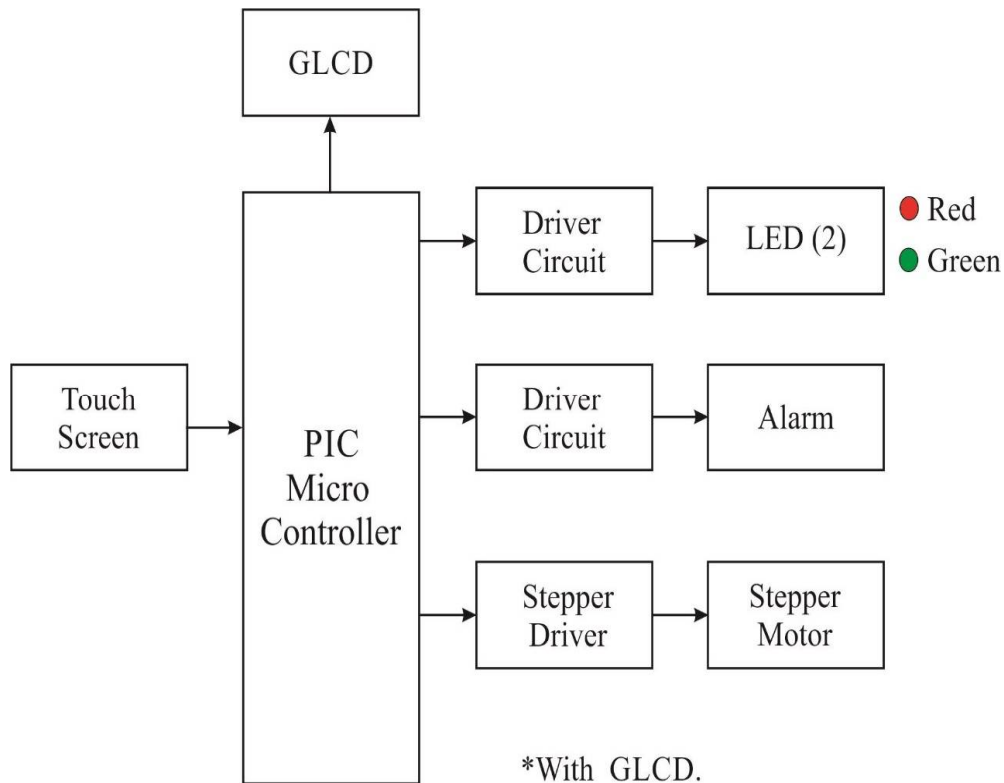


FIG 1:BLOCK DIAGRAM

The main blocks of the project are:

1. Microcontroller(16F77)
2. Crystal Oscillator
3. Regulated power supply
4. Touchscreen
5. LED indicator

The project has each individual password image. The touchscreen is interfaced with PIC . When user touch the image password through touchscreen and send it to the PIC. Already we had to store each person password into the PIC. If the password matches, the PIC receives information from touchscreen corresponding places, the PIC check the person is authorised or unauthorised.

PIN DESCRIPTION

It has total of 28 pins PIC16F77. DIP28 most often in the case of type, but it is also can be found in SMD in smaller than in case of DIP. Is an abbreviation for the package in a double DIP. SMD suggesting that when pin hole mounted components are not necessary for this type of welding is an abbreviation for surface mount device.

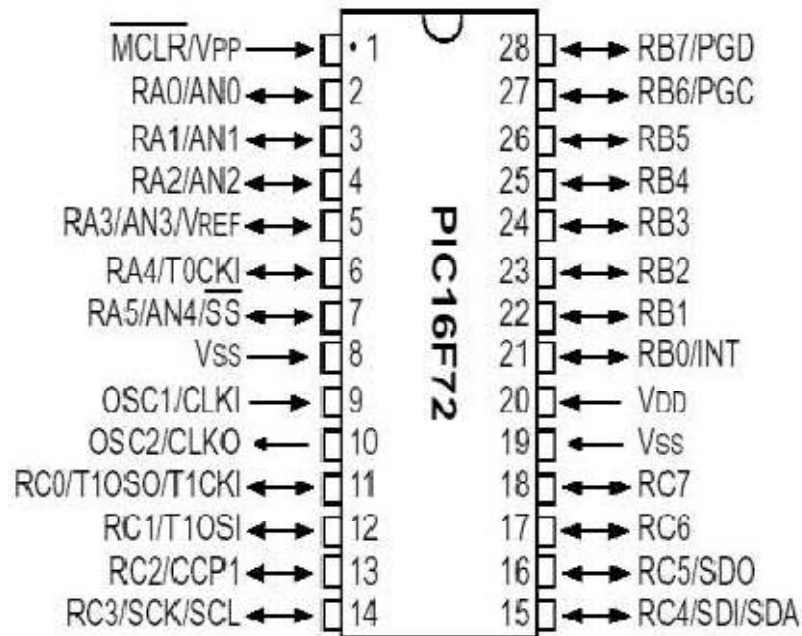


FIG 2:PIN DIAGRAM

TOUCHSCREEN TECHNOLOGY

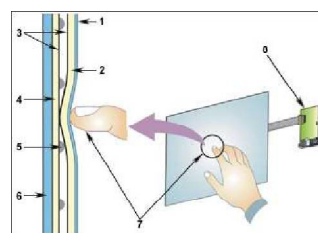


Fig 3: Image Touchscreen Operation Diagram

1. Polyester film
2. The top layer circuit resistance
3. The conductive ITO
4. Low- layer resistive circuit
5. Insulating points
6. Support glass
7. Upper circuit resistant surface coating layer contact by touching the active area of the lower of the resistive circuit creation circuit breaker.
8. The touchscreen controller between two layers of circuit voltage turn and converts them into digital X,Y coordinates of the selected areas.

V. ADVANTAGES AND DISADVANTAGES

ADVANTAGES

1. User friendly interface with touchscreen.
2. Low power consumption.
3. Quick response.
4. Easy to use and easy to install.
5. Deaf people can communicate with others.

DISADVANTAGES

1. Interfacing microcontroller with touchscreen is highly sensitive.

VI. CONCLUSION

The paper "Image based password authentication for illiterates with touchscreen" was designed such to provide a security system based on image and touchscreen module. This system provides user friendly environment for the users with a kind of image interaction this may be easy for the illiterates to remember.

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