

# Designing an innovative door access using a numeric keypad

[Design](#)



There is no place like home", that is one of our favorite quotations right now. From the very start, home is really our comfort zone, a place where we can be worry free, a place where we can relax and a place that is far from harm. A house plays a big role in our lives, but what will happen if criminal such as burglar tries to take advantage while we are far away from our home? They might steal very important and valuable things that we have and things that we've produced from our hard work.

To prevent those things from occurring, we are introducing this project, "Door Access using Numeric Keypad". This project is proposed for the homeowners not to be worried whenever they are not in their homes. Most of the time whenever we go to some places and no one is left in our house, we are very worried if what will happen in it, and will come to a point that we will not enjoy some moments with our family outside our house because of thinking too much. That's why we decided to pursue this project. Burglars are everywhere, but with the help of "Door Access using Numeric Keypad" burglars have less chance in intruding houses.

If you are thinking of replacing your old traditional door locks and keys, a keypad door lock is probably the best choice for you. Numeric Keypad door locks have been around for years but they were mostly available for use only by commercial establishments. Now these door locks have found their way into residential homes and many people are now loving all the benefits they provide. Unlike the traditional door lock system, keypad door locks do not have any use for keys. They are basically keyless; that is, anyone can lock or unlock them even without keys.

Technically, they work like the Atoms. People only had to punch In their secret combination numbers In order to lock or unlock their doors. With this kind of entry system, people no longer have to worry about lost or stolen keys and they never have to bring keys with them everywhere they go or hide them In secret places to keep them away from the hands of unauthorized individuals. This door lock system uses a technology which makes it difficult for intruders to enter a house. Thus, people can stop worrying about illegal entries while they are away from their homes.

Professionals like Engineers and other persons having knowledge about Door Access using Numeric Keypad will take a big role in this project because they are the ones that the manufacturers will need. Companies can install the device in the rooms in their structure so that authorize personnel's are the only ones allowed to enter the room. Car owners can also benefit in this project. This device can be installed in cars and the pass code that they will input on the numeric keypad will serve as the key for the car to open and also for the engine to start.

### 1. SCOPE AND LIMITATIONS

The design presented is different from other existing door access but still contains functions and delimitation's.

#### 1. 5. 1 SCOPE

The Door Access using Numeric Keypad is a design that uses AC power; it has a numeric keypad that serves as the key for the door. Numeric keypad will accept 6 numeric combinations, and if the input pass code match, the door will automatically unlock and every wrong pin combination the buzzer will alarm. The only code to unlock the door was the user's input. In this section we will discuss about the boundaries and the limitation of this project.

It cannot trace the identity of the user. It cannot record the user's log in time. There is no programmed default pass code. The saved pass code can only be changed by the company's personnel/technician. The system design is powered by electricity and may not function properly in case of power failure.

1. 6 DEFINITION OF TERMS

1. 6. 1 Conceptual Terms

Accuracy - in the fields of science, engineering, industry and statistics, the accuracy of a measurement system is the degree of closeness of measurements of a quantity to that quantity's actual (true) value.

Design - is the creation of a plan or convention for the construction of an object or a system (as in architectural blueprints, engineering drawing, business process, circuit diagrams and sewing patterns). In some cases the erect construction of an object (as in pottery, engineering, management, cowboy coding, and graphic design) is also considered to be design. Burglar - in act of breaking and entering and sometimes housebreaking. A crime, the essence of which is illegal entry into a building for the purposes of committing an offence.

Usually that offence will be theft, but most Jurisdictions specify others which fall within the ambit of burglary. To engage in the act of burglary is to burgle.

Home - is a place of residence or refuge. When it refers to a building, it is usually a place in which an individual or a family can live and store personal property. It is generally a place to provide safety and is used as a center from which people base their daily activities.

House - is a home, building or structure the primary function of which is to be occupied for habitation by humans or other creatures.

Intrude - to put or force in inappropriately, especially without invitation, fitness, or permission. To come in rudely or inappropriately. Project - in business and science is typically defined as a collaborative enterprise, frequently involving research or design that is carefully planned to achieve a particular aim. Projects can be further defined as temporary rather than permanent social systems that are constituted by teams within or across organizations to accomplish particular tasks under time constraints.

System - is a set of interacting or interdependent components forming an integrated whole or a set of elements (often called 'components') and relationship which are different from relationships of the set or its elements to other elements or sets. Security - Being protected against danger. 1. 6. 2 Operational Terms Input - is the term denoting either an entrance or changes which are inserted into a yester and which activate/modify a process. It is an abstract concept, used in the modeling, system(s) design and system(s) exploitation.

Process - unifying principles which operate in many different systemic contexts. A series of actions, changes, or functions bringing about a result.

Output - the term denoting either an exit or changes which exit a system and which activate/modify a process. It is an abstract concept, used in the modeling, system(s) design and system(s) exploitation. Numeric Keypad - a section of a computer keyboard with number keys like a calculator; it is also called numeric pad.

Ordains- is a single-board microelectronic designed to make hardware consists of a simple open source hardware design for the Ordains board with

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an Oatmeal AVR processor and on-board input/output support. The software consists of a standard programming language compiler and the boot loader that runs on the board. Liquid crystal display (LCD) - is a flat panel display, electronic visual display, or video display that uses the light modulating properties of liquid crystals. Liquid crystals do not emit light directly. Transistor - is a semiconductor device used to amplify and switch electronic signals and electrical power.