

WIRELESS VOICE OPERATED SMART ELEVATOR CONTROL SYSTEM

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ABSTRACT - Today, we see many big buildings, malls, and the hospital present of lift Control system. So to move person from one floor to other floor are generally used the push button to open the door and also the select the floor, but basically those who are handicapped and blind person are not able to touch the push button switch so , in that case near people are help to push the button switch. According to these existing problems we find solution on these problems. This project allows people with disabilities and paralysis to moving from one floor to the next. The system's main objective is to create a voicecontrolled, simulated lift system for those with specific needs, such as the blind or paraplegics. The primary goal of this system's design was to enable voice instructions from the user to control the lift. It tries to assist those who are physically disabled, short in stature, and paralysed.

Key words- Wireless Communication, Automatic Speech Recognition, Micro controller, Ultrasonic Sensor, AMR Voice Application.

I. INTRODUCTION

In our civilization, lifts are considered to be an essential component. As a mechanism for human-machine communication, a voice activated elevator control system operates. Between the user and the micro-controller based lift control system, the automatic voice recognition system offers the communication mechanism. To move the lift or lift in this project, a DC motor is used in conjunction with an AMR speech application to recognize voice commands and move the lift or lift in response to the user's voice commands. With the aid of embedded C instructions, micro-controllers are programmed. Communication with all input and output modules is possible using the microcontroller. The user provides vocal commands through the voice recognition. The user's vocal orders are entered into the voice recognition system, which is the microcontroller's input module, and in response to the directions, the lift is subsequently raised vertically.

The DC motor enhances the vertical movement of the lift. This system suggests a controlled lift system that makes it as simple as possible for users to enter commands to activate the lift system's movement.

1.1. Proposed system:

In these existing problems, we're developing a voice command based operated lift. so, its really beneficial for handicapped and blind person to operate the lift according to the own requirement. The handicapped person by simply voice command it will be perform the action. AMR voice apps are used for users to gives the command. The ultrasonic sensor are used to open the door of lift. The people are come in-front of lift door so it will automatically open. The basically ultrasonic sensor are fixed to door, if people are came in front of doors it will automatically opened, also the by using voice command it will ON/OFF the bulbs and fans easily. The ZigBee protocols are used to allow smart device such as light, bulbs, smart locks, motion sensor and door sensor to communicate with the help of PAN(Personal Area Network). Elevator has to be moved vertically by recognize our voice commands. By giving different commands lift can be moved from one floor to another automatically.

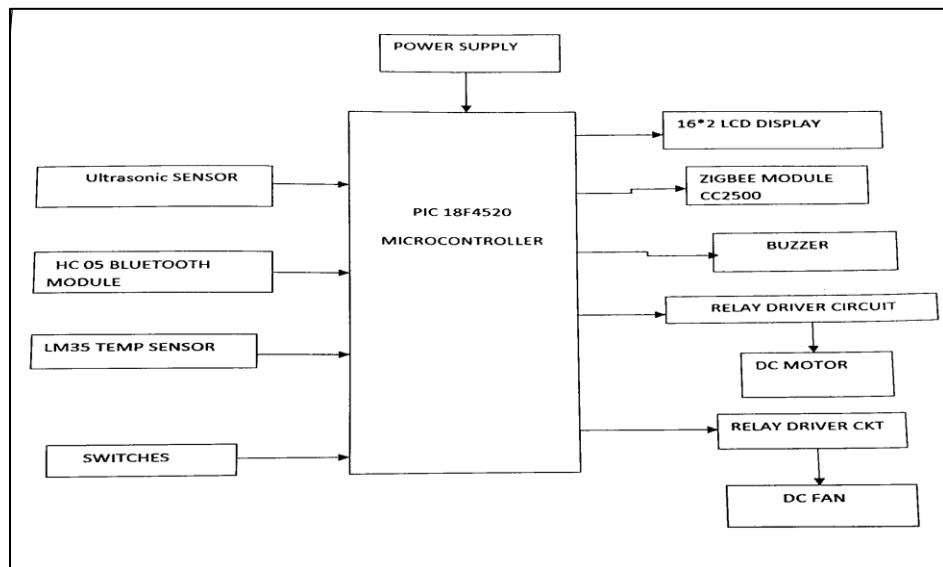


Fig.1.Block Diagram Of Proposed System

1.2. Flowchart :

In this paper, a DC motor is used to move the lift or lift in response to voice or speech orders from the user. The vocal commands are recognized using a speech recognition system. C instructions that are embedded in the microcontroller are used to code it. The microcontroller receives its input from the voice recognition system. The lift is controlled by the switching mechanism in accordance with the user's voice and the instructions provided by the user. The controller determines whether the instructions are to lift up or down based on the direction of the user's voice. The lift's fan may be turned on and off using similar voice instructions. To get visual information about operations being carried out, an LCD monitor is accessible.

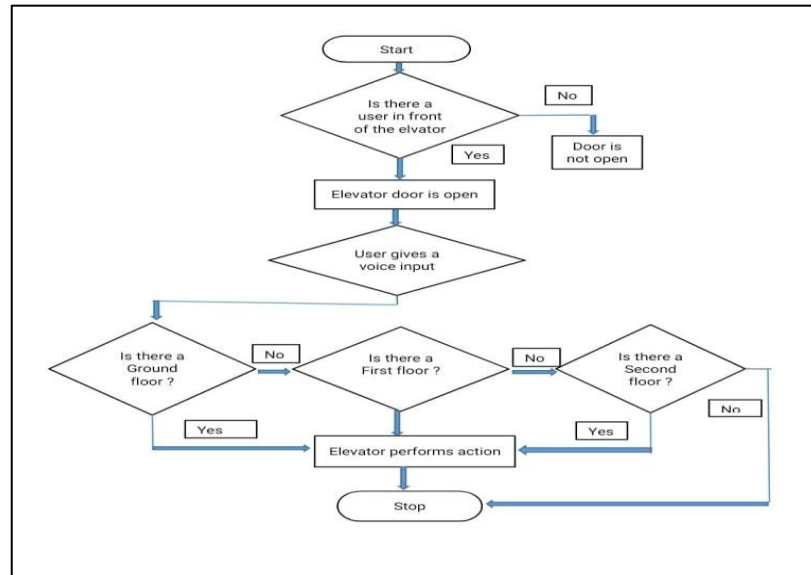


Fig .2 - Flowchart

1.3.1 PIC18F4520 Micro-controller :

It's a RISC-based, 8-bit improved flash PIC microcontroller that also features nano Watt technology. This controller is used in a variety of electronic goods, including security systems, consumer electronics, home appliances, and industrial automation. When creating their projects, university students increasingly turn to this microcontroller, which has established a solid reputation in the industry.



Fig.3. Pic18f4520 micro controller

1.3.2 16*2 LCD Display :

Having a 16x2 LCD indicates that there are 2 lines with a maximum of 16 characters each. The LCD's command instructions are kept in the LCD's command register. The character's ACSII value that will be shown on the LCD is contained in the data. In our project, we are utilising a 16x2 LCD that is linked to port 0 of an arm microcontroller to show all of the power meter's information.

Actual Model Setup:

Fig.4 - Actual model

II. RESULT

The PCB simulation and design of the circuit were successful. The usage of these circuits in lift lifts is extremely helpful for those with physical limitations and the blind. The voice input is provided by an AMR voice application. The lift lift may be operated with just a voice command. Due to use of voice command operated lift elevator time complexity is get reduced.



III. CONCLUSION

The voice-activated lift is really practical. It is more beneficial and effective for people with physical limitations. This solution incorporates every component necessary to ensure that the services it provides render the system independent. Physically challenged individuals would also gain a lot from it, since it would eliminate their dependence on others to use the lift and make it simpler for the user to use the service. This eliminates the need to continuously press switches to travel up and down, which can be difficult during periods of heavy traffic. In addition to other problems, the antiquated elevators featured a longer key press time and key press issue. Voice lifts also help you save time.

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