" Quiz Buzzer Module By Using AVR Microcontroller For 4 Players"

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ABSTRACT

Here we propose a design of Quiz Buzzer Module by using AVR microcontroller for 4 players. Earlier when the question is thrown upon the players two or more players hit the buzzer at the same time and it is so difficult to identify which team has pressed the buzzer first . This can be identified manually or we have seen in television shows it displays slow motion to identify which player buzzed first .This increases manual work and require lots of time. So to overcome such problems we have proposed a design of quiz buzzer module using AVR microcontroller which will display the name of the team who has pressed the buzzer first and it will also display the time[1] .

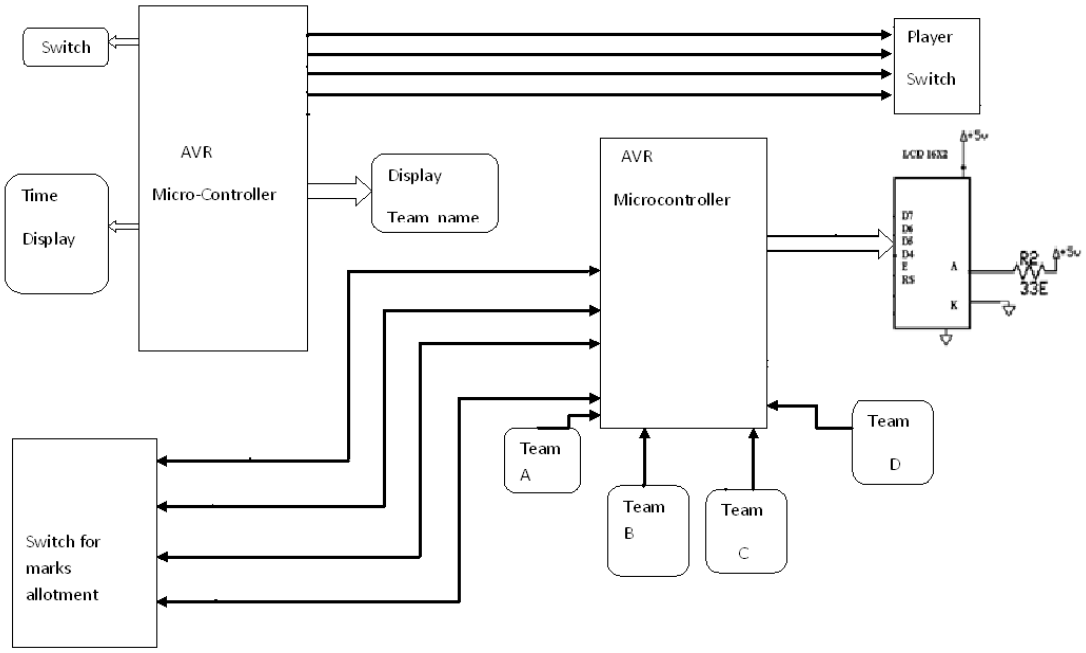
KEYWORD:-*Buzzer, LCD, AVR, Swiches and IC.*

1.INTRODUCTION

This work is to design quiz buzzer module using AVR microcontroller .the circuit is simple embedded system with set of 4 push buttons being input devices and microcontroller as the controller and output devices being a buzzer and a display. It is a simple circuit with minimum number of components. The microcontroller takes into account the time delay between two buttons and the accurate number is displayed[2]. Even though system is only for 4 teams, more teams can be added by using another set of pushbuttons.

In our project there are two modes on which the project will operate. The first mode is fastest finger first mode. In this mode when question is being asked to player, any player who knows the exact answer so he/she will press the switch[3]. The player who presses the switch his/her identity will be displayed on 7 segment display and LCD simultaneously. The second mode is rapid fire mode in which the player is allotted with a particular timer.In this project the output is carried out by microcontroller through program written in C language and dumped inside microcontroller[4]. When one of the buttons is pressed, the buzzer starts ringing and corresponding number is displayed on 7 segment display and LCD.

2.BLOCK DIAGRAM



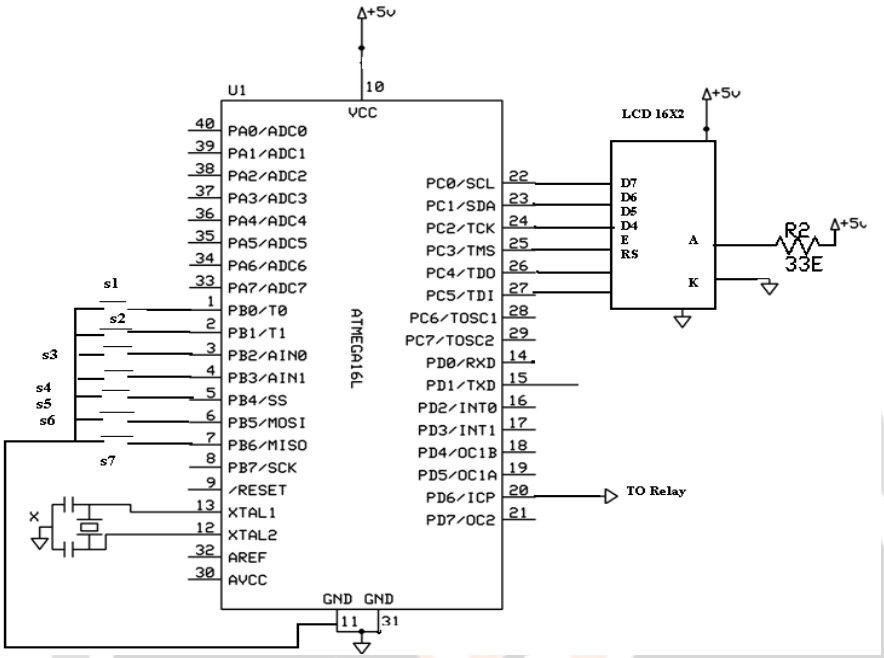
3.WORKING

In our project we use two ATMEGA16 microcontrollers IC for driving seven segment displays. One IC is associated with quiz master side and other IC is for player's side. We use start button for time start, this switch pin of first microcontroller. Microcontroller program will start time display in seven segment display which is connected to the first microcontroller situated at quiz master side. Then player's switch which is connected to the first microcontroller is pressed by one of the player so corresponding port pin reset. Microcontroller first one is display name of team at seven segment displays which is totally depending on switch which is pressed by player. At same time first microcontroller stop time display.

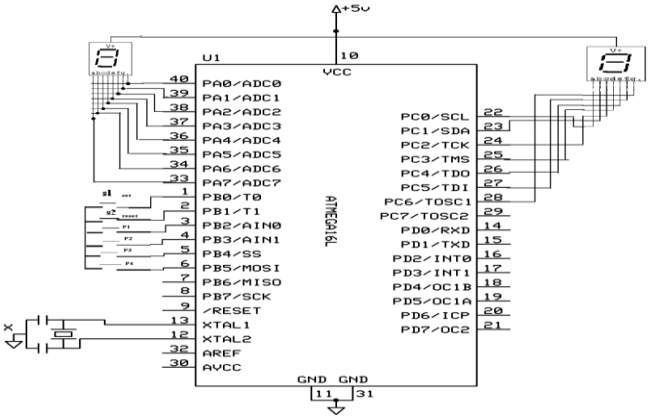
Now second microcontroller is in picture. This microcontroller is associated with player's side. Quiz master pressed the one of switch for displaying marks for that question. This reset the port pin of second microcontroller pin. After pressing switch pin of microcontroller reset. Microcontroller display marks 1 for corresponding players display. Microcontroller program is incremented number by again pressing of same switch.Team name display is directly connected to the power supply of 5v.

4.CIRCUIT DIAGRAM

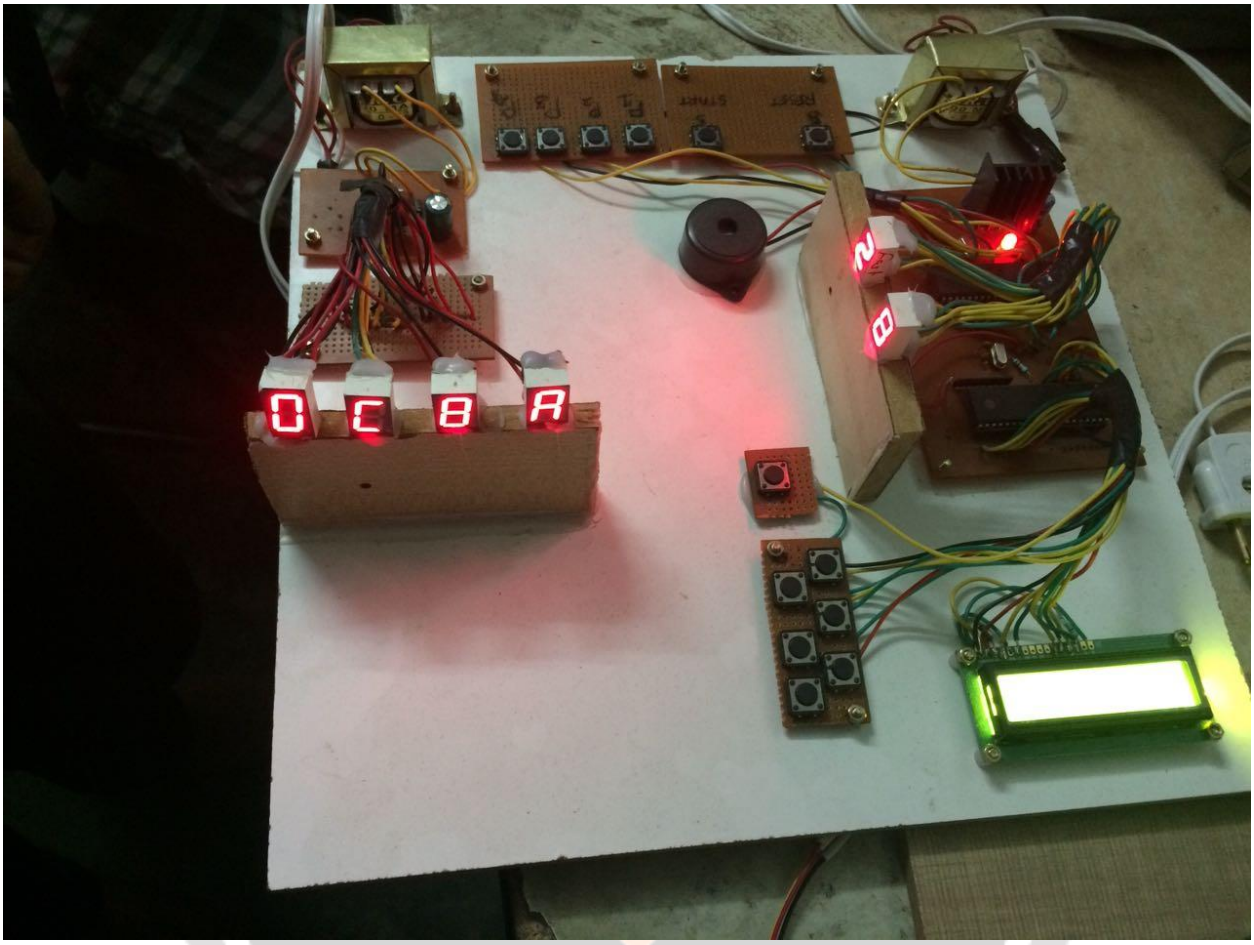
LCD interfacing with microcontroller



Interfacing of seven segment display to microcontroller



5.HARDWARE IMPLEMENTATION



6. APPLICATIONS

1. This circuit can be used at quiz competitions organized at schools, colleges and other institutions.
2. It can be also used for other games.
3. It can be used as at public places like banks, restaurants as a digital token display system.

7. CONCLUSION

As per the whole survey we have proposed a Quiz Buzzer Module for 4 players using 8051 Microcontroller. It has maximum application in institutional and commercial level so we have designed this project as product based with the help of AT89C51[10]. This project reduces the complexity of the circuit and it also reduces the manual work and time and it helps the judges for proper judgement of the players.

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