TEXT TO VOICE CONVERSION ON PC

DESCRIPTION:

The main objective of the project is to convert the text into voice using the front end application which is developed on C# .NET application.

Communication has good visibility and good interaction in front ends. The output of the project will be delivered through the front end application in the form of voice. The project will be designed in such a way that an AT keypad will be interfaced to the controller through which we can enter the required data. And the controller will also be interfaced to the PC on which the front end will be developed, through a line driver IC MAX 232 for serial communication. The front end will be designed in such a way that it will contain a text box which can display the text which is being entered by the user through the keypad and the application will play a voice of the corresponding text instantly just by hitting 'ENTER' key on the keyboard. And in the front end application two more buttons will be there with the labels "COM OPEN" and "COM CLOSE". By clicking on "COM OPEN" button the serial communication between the PC and the controller will be established, and they will get disconnected by clicking "COM CLOSE" button. So at first, the connection should be established between the PC and the controller to get the output.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

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TECHNICAL SPECIFICATIONS:

HARDWARE:

Micro controller   :   AT89S52

Crystal   :   11.0592 MHz

AT keypad

PC

Driver IC   :   MAX232

Power supply

Transformer   :   12V step down

Filter   :   1000uf/25V

Voltage Regulator   :   7805

SOFTWARE:
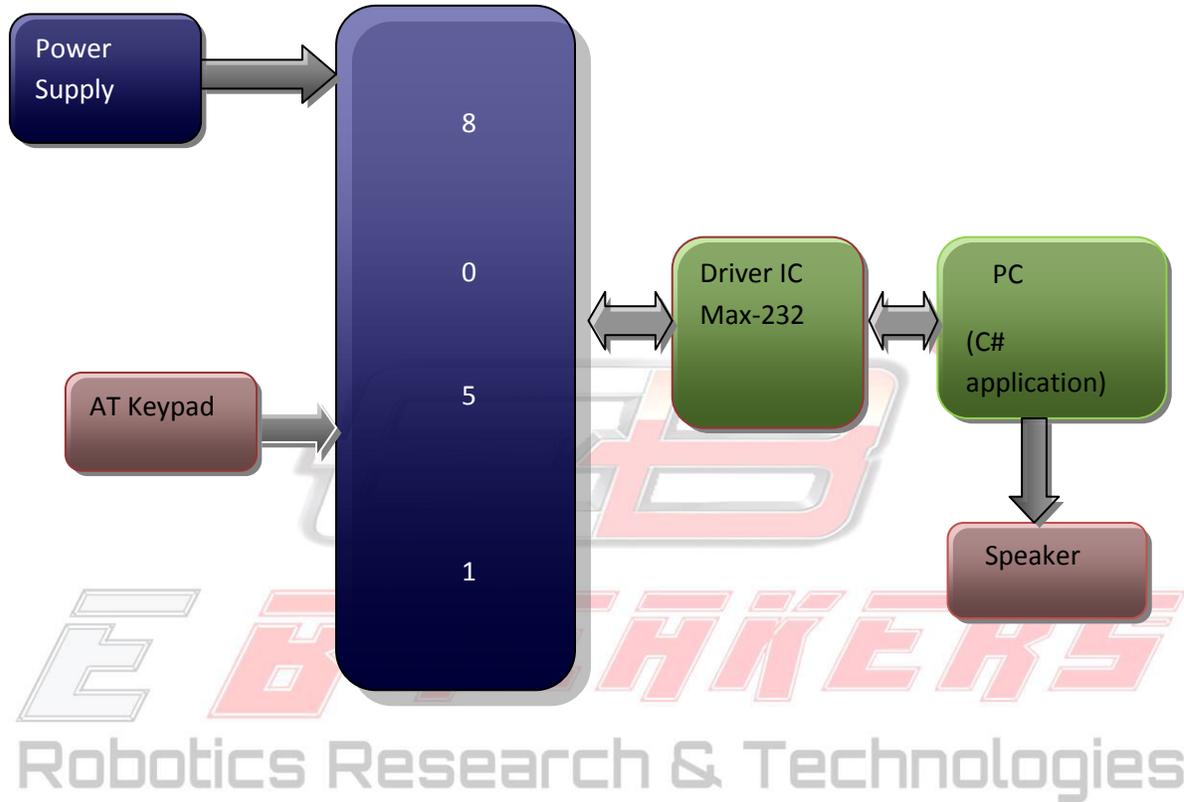
Keil micro vision

Proteus

UC flash

PC (C# .net application)

APPLICATIONS:

- ➤ Industrial applications
- ➤ Automatic control systems
- ➤ Industrial parameters announcement system

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BLOCK DIAGRAM:

```
Power                    ┌──────────┐        ┌──────────┐      ┌──────────┐
Supply   ────────►       │          │        │ Driver IC│ ◄──► │    PC    │
                         │    8     │  ◄──►   │ Max-232  │      │          │
                         │          │         └──────────┘      │   (C#    │
                         │    0     │                           │application)│
AT Keypad ────────►      │          │                           └────┬─────┘
                         │    5     │                                │
                         │          │                                ▼
                         │    1     │                          ┌──────────┐
                         │          │                          │ Speaker  │
                         └──────────┘                          └──────────┘
```

POWER SUPPLY BLOCK DIAGRAM:

```
┌────────────┐    ┌──────────┐    ┌────────┐    ┌──────────┐    ┌────────┐
│ Step down  │ ►  │ Bridge   │ ►  │ Filter │ ►  │ Regulator│ ►  │ Output │
│Transformer │    │ Rectifier│    │        │    │          │    │        │
└────────────┘    └──────────┘    └────────┘    └──────────┘    └────────┘
```