

VOICE BASED STUDENT AND COLLEGE INFORMATION THROUGH IVRS

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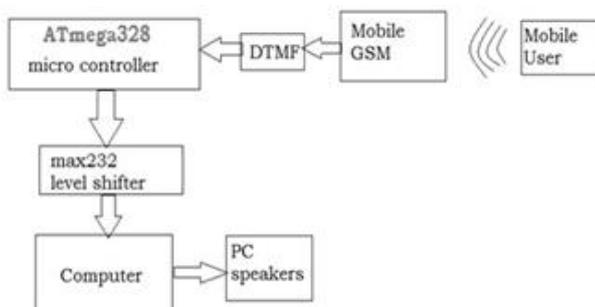
Abstract - In this project, we will develop IVRS based information system. It uses IVRS algorithm for giving various information about particular student and institute. Here we emphasize on IVRS algorithm for getting information of particular institute and student. The user can call up the institute and obtain any information by simply pressing certain buttons on its phone as per the guidance of voice fed into the chip. When user call he/she will get the option of either student or institute information that is it works like a call center. According to user demand they will be asked to press the button and will get the response from the IVRS.

Key Words: IVRS

1. INTRODUCTION

Now a day's every institution needs automation. As a part of college automation, we have decided to do a project. Interactive Voice Response System for College Automation. Our project allows the user to know the student's attendance and marks quickly. An IVRS is an exemplary innovation in the area of voice assisted browsing and data retrieval, data that contains information of interest and has straight relevance to the user. This application software allows full resource sharing and integration with the database of system, the Software solution for the complete computerization of Educational Institutions. The software first converts the data into a voice format and provides output. The voice response by the system is then heard by the user i.e. attendance and marks.

2 BLOCK DIAGRAM



Figs -1 BLOCK DIAGRAM

3 Mobile GSM or GSM module

GSM module is used to receive the incoming call in auto answering mode at the system. One of the GSM output is

given to the DTMF decoder for further processing. GSM is a mobile communication modem; it stands for global system for mobile communication (GSM). The idea of GSM was developed at Bell Laboratories in 1970. It is widely used mobile communication system in the world. GSM is an open and digital cellular technology used for transmitting mobile voice and data .

4. DTMF MODULE

DTMF is a 4X4 matrix with each row representing a low frequency, and each column representing a high frequency. DTMF generates a sinusoidal tone for each of the two frequencies. E.g. single key (such as '9') will send a sinusoidal tone for each of the two frequencies (852 and 1477 hertz (Hz)). According to the generated frequencies from DTMF keypad, call is directed to the destined user. User will go through the menu selection procedure for getting information. The student has to enter the college's given number and after entering his PRN number he will be able to get his academic details whatever he want. The different amenities are given to the pertinent users. The information is retrieved from database according to the user selection and retrieved information is converted in voice using free TTS algorithm.



Fig -2: DTMF MODULE

5. MAX232

MAX232IC is used for serial communication between processing device and GSM module. It uses RS232 protocol for transmission and reception of data serially. We can control module through controller via this serial interface.



Fig -3: MAX 232

6. ATMEGA328 Microcontroller

The high-performance Microchip Pico Power 8-bit AVR RISC-based **microcontroller** combines 32KB ISP flash memory with read-while-write capabilities, 1024B EEPROM, 2KB SRAM, 23 general purpose I/O lines, 32 general purpose working registers, three flexible timer/counters with compare modes, internal and external.

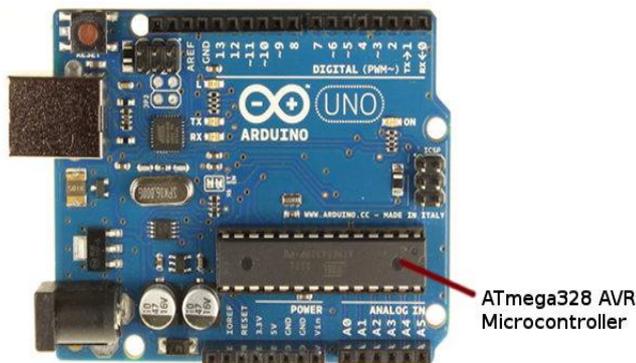


Fig -4: : ATMEGA328 Microcontroller

7. The concept of computer programming

Programming means designing a set of instructions to instruct the computer to carry out certain jobs that are very much faster than human beings can do. The earliest programming language is called machine language which uses the binary code (comprises 0 and 1) to communicate with the computer. However, the machine language is extremely difficult to learn. Fortunately, scientists have invented some high-level programming languages that are much easier to master. Among the high-level programming languages are Java, JavaScript, C, C++, c# and Visual Basic. In this project we use Visual Basic.

7.1. What is Visual Basic?

Visual Basic is a third-generation event-driven programming language first released by Microsoft in 1991. It evolved from the earlier DOS version called BASIC. BASIC means Beginners' All-purpose Symbolic Instruction Code. Since then Microsoft has released many versions of Visual Basic, from Visual Basic 1.0 to the final version Visual Basic 6.0. Visual Basic is a user-friendly programming language designed for beginners, and it enables anyone to develop GUI window applications easily.

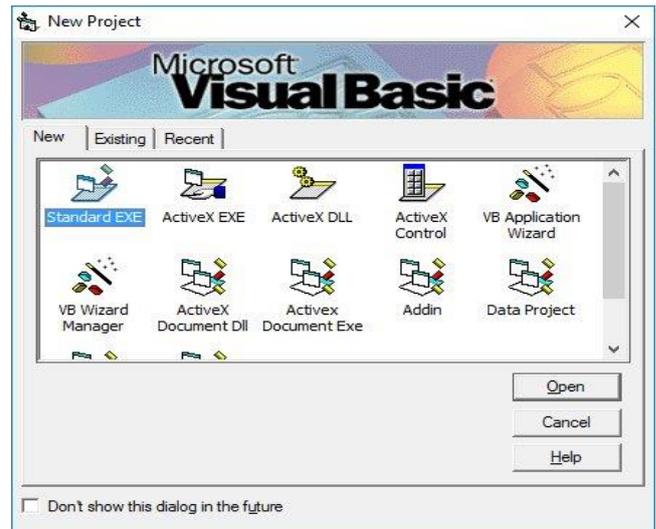
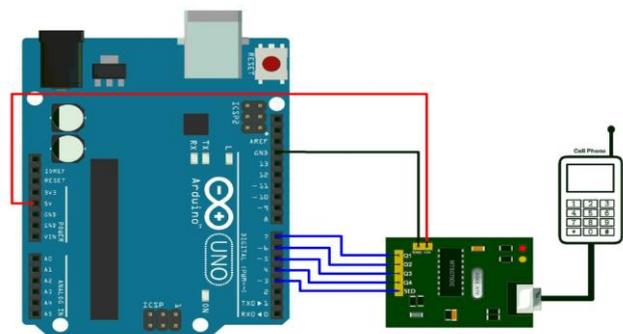
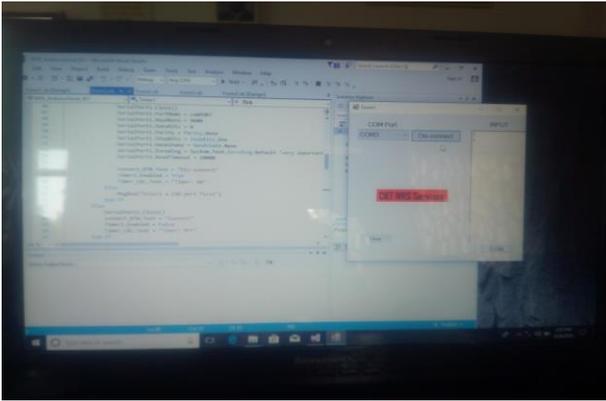


Fig -5: : Opening Visual Basic6.0

8. RESULTS





- [9] Yavuz EROL, Hasan H. BALIK, Serkan INAL, Duygu KARABULUT, "Safe and Secure PIC Based Remote Control Application for Intelligent Home", IJCSNS International Journal of Computer Science and Network Security, VOL.7 No.5, May 2007.

9. CONCLUSION

The IVRS based information system has been designed in such a way that it reduces the manpower requirement, makes the interaction as easy and fast as possible. It has countless real world applications can be used in various environments.

REFERENCES

- [1] http://en.wikipedia.org/wiki/Interactive_voice_response.
- [2] Ms seema P Mishra, Ms Apexa S Chavan, Swapnil S Gourkar, " INTERACTIVE VOICE RESPONSE SYSTEM FOR EDUCATIONAL INSTITUTION", International journal of Advanced Engineering Technology, E-ISSN 0976-3945, No. 4, 2012.
- [3] Somnath koley. Ravi Mishra, "Voice operated outdoor navigation system for visually impaired person"
- [4] International journal of Engineering trends and technology -volume3 issue 2-2012, No. 4, 2012.
- [5] YunChan Cho and Jae WookJeon "Remote Robot control System based on DTMF of Mobile Phone", IEEE International Conference INDIN 2008, July 2008.
- [6] Coskun and H. Ardam, "A Remote Controller for Home and Office Appliances by Telephone", IEEE Trans .Consumer Electron. , vol. 44, no. 4, pp. 1291-1297, November 1998.
- [7] C. K. Das, M. Sanallah, H. M. G. Sarower, M. M Hassan, "Development of a cell phone based remote control system: an effective switching system for controlling home and office appliances" - International Journal of Electrical & Computer Sciences IJECS Vol: 9 No: 10
- [8] R. Sharma, K. Kumar, and S. Viq, "DTMF Based Remote Control System," IEEE International Conference ICIT 2006, pp. 2380-2383, December 2006.