Telugu Tutor with dynamic text and Images identification for elementary school kids

The project aims in designing a Telugu tutor with a dynamic text and images identification system using Touch screen, GLCD and voice module. This system is more helpful to elementary school children to have sound grip on the basics. This system makes use of voice module which announces the name of the image/text when the children touch the screen. This system can be used with any language.

Touch screens provide fast access to any and all types of digital media, with no text-bound interface getting in the way. Faster input can mean better service. Using a touch interface can effectively increase operator accuracy, reduce training time, and improve overall operational efficiencies, thus keeping costs down, a properly designed touch interface can improve each operator's accuracy. Touch screens are practical in automation, which has become even simpler with touch screen technology. Children's are familiar with the icon system appreciate touch screens that make automation systems user friendly.

The micro controller present here acts as the heart of the project. The controller unit is interfaced with a graphical LCD, which is popularly known as GLCD, it is also interfaced with voice module for the pronunciation of names of the images and also text. The entire input and output modules are connected to the micro controller and any operation that may take place occurs via the Micro controller. When a kid make a gentle touch on the image of touch screen interfaced GLCD, Micro controller takes the responsibility to announce the name of the images and text correctly to the kid. Here, Telugu language is used while designing the system. The Microcontroller used in the project is programmed using Embedded C language.

The practical implementation of this project brings revolutionary changes in the utilization of technology and the education system. It also provides children an early exposure towards technology which going to be a very good signs for any countries development.

Features:

1. Touch screen based user-friendly interfacing.
2. Low power consumption.
3. Reliable formatting options.
4. Audible announcement of the images or text using voice circuit.
5. Long life.
6. Highly sensitive.

This project provides exposure to the fallowing technologies:

1. Touch screen sensor.
2. Interfacing Touch screen to Microcontroller.
3. Embedded C programming.
4. Design of PCB.
5. Graphical LCD interfacing to Microcontroller.
6. Voice module.
7. Interfacing voice module to Microcontroller.

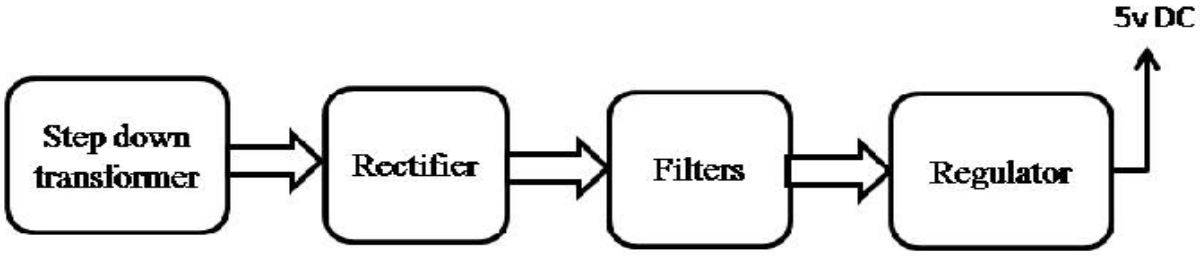
The major building blocks of this project are:

1. Regulated Power Supply.
2. Microcontroller.
3. Touch screen with driver.
4. GLCD with driver.
5. Voice module.
6. Crystal oscillator.
7. Reset.
8. LED indicators.

Software's used:

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.
4. Proteus for hardware simulation.

Regulated Power Supply:



Block diagram:

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