

Six Sense Based Hand Gesture Operated Presentation Room

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Abstract

Sixth Sense Technology is a mini projector coupled with camera which acts as the computer. Sixth Sense can also obey hand gestures. The camera recognizes objects around a person right away, with the micro projector overlaying the information on any surface, including the object itself or hand. Also can access the information using fingers. Highlighting what want to frame, and the system will make the photo which can later organize with the others using owned hands over the air. The drawing application lets user draw on any surface by observing the movement of index finger. The camera also helps user to take pictures of the scene is viewing and later can arrange them on any surface.

Keywords: Arduino, Camera, Image processing, Power Supply, Laptop

I. INTRODUCTION

We have evolved over millions of year to sense the world around us. When we encounter something, someone or some place, we use our five natural senses which including eye, ear, nose, tongue mind and body to perceive information about it that information helps us make decision and choose the right actions to take. But arguably the most useful information that can help us build the right decision is not naturally perceivable with our five senses, namely the data, advised and knowledge that mankind has accumulated about everything and which is increasingly all available online.

Although the smallness of computing devices allows us to carry computers in our pockets, keeping us constantly connected to the digital world there is no connection between our digital devices and our interactions with the physical world. Information is confine traditionally on paper otherwise digitally on a screen. Sixth Sense bridge this gap, bringing intangible, digital information out into the real world, and allowing us to interact with this information by natural hand gestures. Sixth Sense frees information from its limits by seamlessly integrating it with reality, and thus making the entire world your computer.

This technology has emerged, which has its relation to the power of these six senses. Our ordinary computers will soon be able to sense the different feelings accumulate in the surroundings and it is all a gift of the Sixth Sense Technology recently introduced. sixth sense is a gesture based device that augments the physical world with digital information and let's public use natural hand gestures to interact with that information.

Sixth Sense in scientific (or nonscientific) conditions is defined as Extra Sensory Perception. It involves the reception of information not gained through any of the five senses. It is taken from any experiences from the past or known. By making available information need for decision making further than what we have access to with our five senses, it effectively gives users a sixth sense.

II. BLOCK DIAGRAM

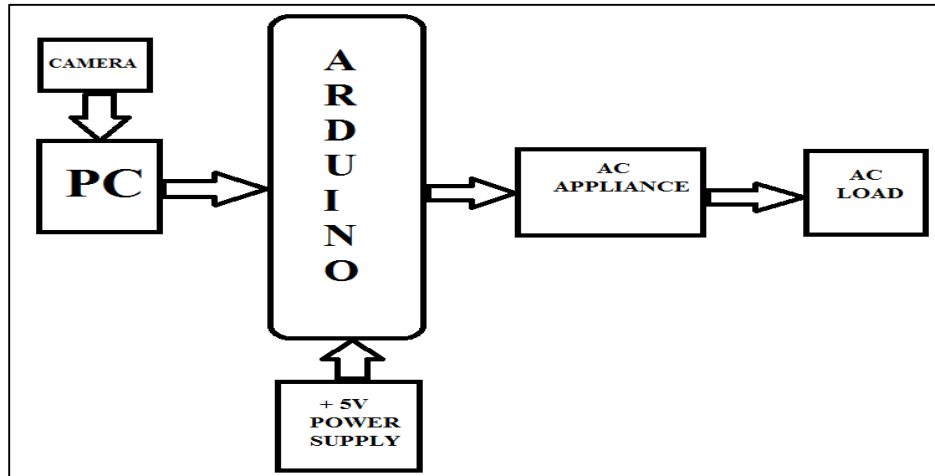


Fig. 1: Block Diagram

III. FLOWCHART

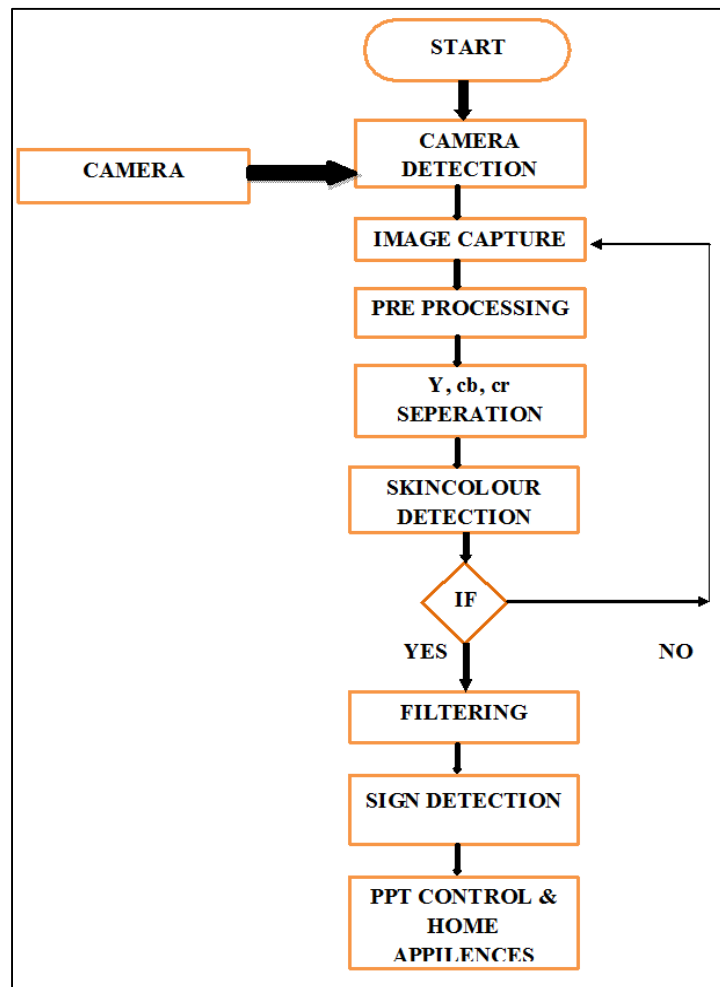


Fig. 2: Flowchart

IV. CIRCUIT DIAGRAM

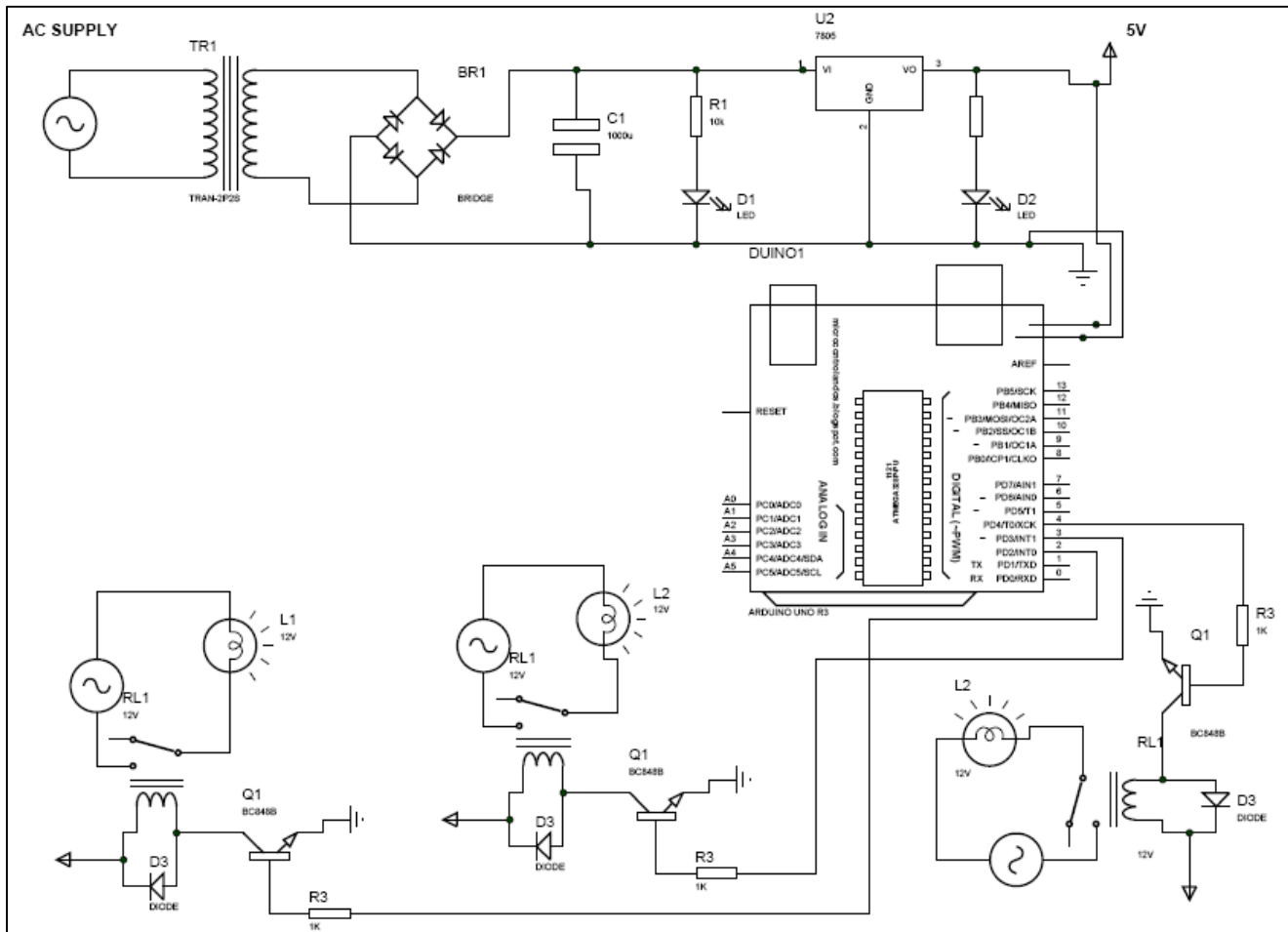


Fig. 3: Circuit Diagram

V. SOFTWARE IMPLEMENTATION

A. MATLAB:

MATLAB is a high-performance language for technological computing. It integrates calculation, visualization & programming in an accessible environment where problems and solution are express in familiar mathematical notation.

Typical uses include:

- Maths and computation
- Algorithm development
- Modeling, simulation, and prototyping
- Data analysis, examination, and visualization
- Scientific and engineering graphics
- Application development include graphical user interface building

MATLAB is an interactive system whose basic data element is an array that does not need dimensioning. This allows you to solve many technological computing problems, especially those with matrix and vector formulations, in a part of the time it would take to write a program in a scalar non interactive language such as C.

B. C Compiler:

A compiler is a unique program that processes statements written in a exacting programming language and turn them into machine speech or "code" that a computer's processor uses. Typically, a programmer writes language statement in a language such as C one line at a time using an editor. The file that is created contains what are called the source statement. The programmer then runs the appropriate language compiler, specify the name of the file that contains the source statements.

C. Arduino ide 1.0.5:

The open-source Arduino Software (IDE) make it easy to write code and upload it to the board. It run on Windows, Mac OS X, and Linux. The environment is written in Java and based on Process and other open source software. This software can be used with any Arduino board. Pass on to the Getting Started page for Installation instructions.

A program or code written for Arduino is known as "sketch".

Arduino programs are written in C or C++.

VI. APPLICATIONS

- Taking snapshot using hand gesture.
- Power point presentation control using hand gesture.
- Zooming features.
- Drawing application.
- Take pictures.

VII. FUTURE SCOPE

- To incorporate camera and projector within mobile computing device.
- Applying this technology in different interest like gaming, education systems etc.
- To have 3D gesture tracking.
- To get rid of colour markers.

VIII. CONCLUSION

By this project we have done without using the switches, we can operate the all home automation and ppt in our hand gesture. With the help of gesture we will able to monitoring whole presentation room, using six sense hand gesture & Image processing and we will also monitoring home appliances with the help of hand motion.

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