



PUBLIC GARDEN AUTOMATION

Prof. S. G. Nagpure, Shalaka Shrikant Khalate, Poonam Santosh Shinde, Shweta Hanumant Malpote

Department of Electronics & Telecommunication, DY Patil School of Engineering Academy, Ambi Pune

ABSTRACT:

This project the idea of Public Garden Automation technology has been presented. Avoid wastage of water and electricity. This project is a fine combination of analog and digital electronics. As a part of our fourth year circular activity we are making the project whose title is “Public Garden Automation”. We have used Microcontroller as a main component of the project. Now a Microcontroller has become a main component of many of the electronic circuits. Also Liquid Crystal Display (LCD) is used on major basis for the display purpose. . We are using time for each and every parameter so that only at that instant it can resume again. For controlling this technique we are using a microcontroller which will be going to control all the parameters. For light we are using LDR sensor, for water level sensor and for particular control we are using various pumps and the motors.

Keywords— Microcontroller & LED, Keyboard, Relay.

[1] INTRODUCTION

The present life system of human beings is becoming fast and accurate. Society, now a days is moving at blazing speeds. To cope up with the twenty-first century i.e. with the speeds and accuracy, people seem to take the path of the electronic automation. From adding two numbers to solving complex calculations, from opening a door to launching a rocket, everywhere you find the dominance of electronic controllers. With the increase in the positivism the balance has to maintain. Natural as well as human abnormalities leading to a disaster can be stopped or at least taken care of before there is much damage. This project is aimed to fulfill, not fully though, the requirements of a user.

PUBLIC GARDEN AUTOMATION

This project is a fine combination of analog and digital electronics. As a part of our fourth year circular activity we are making the project whose title is “Public Garden Automation”. We have used Microcontroller as a main component of the project. Now a Microcontroller has become a main component of many of the electronic circuits. Also Liquid Crystal Display (LCD) is used on major basis for the display purpose.

[2] OBJECTIVE

- 1) Avoid misuse of electricity and its wastage.
- 2) Reduce Water wastage.
- 3) Automate all the tasks in a Garden and perform them with respect to time.
- 4) To make it more accurate and less man power dependent
- 5) To provide easy access to garden facilities with clean and neat environment

[3] LITERATURE SURVEY

There is an enormous amount of work is going in this field to make the garden atomization. People works for different application such as a gate control for garden, light control using microcontroller. Some the important research working in these fields is: • Public Garden Automation using Microcontroller which contains the microcontroller which will be going to control the various applications of garden automation. This technique involves the controlling of the gate of the garden at the particular time, the flow of the water and the controlling of the lights at the night. For connecting with the microcontroller the different sensors are used such as LDR, humidity etc. The designed program loaded into atmega32 microcontrollers and executed. Initially when the signal coming to the microcontroller in (port d) the microcontroller understands this signal and translates it to move the motors to open the doors.

- The public garden automation system contains the same applications but based on the PIC18F. It will not only control the light but also monitors the moisture present in the soil. It will continuously monitor the moisture content of the soil and the requirement of light at night. This system doesn't have any extra power supply it works only on the primary power supply. If the electricity will be cutoff their will not be any extra supply present there.

- This project will ripen and contrivance an automatic garden monitoring system that can be utilized to improve the condition of household gardens and can also be expanded to greenhouses. This will make the planned use of water so that we can fight with the problem of water. Real time data will be collected by employing several analog and digital sensors, such as light, temperature, soil moisture sensors. This system is accessed by GSM. This system will perform the following tasks:

- Supply water to plants according to their need.

- Automatically turns ON/OFF the shelter to avoid the burning of plants by excessive atmosphere temperature.
- Transmit the data and various SMS to the user.

[4] BLOCK DIAGRAM

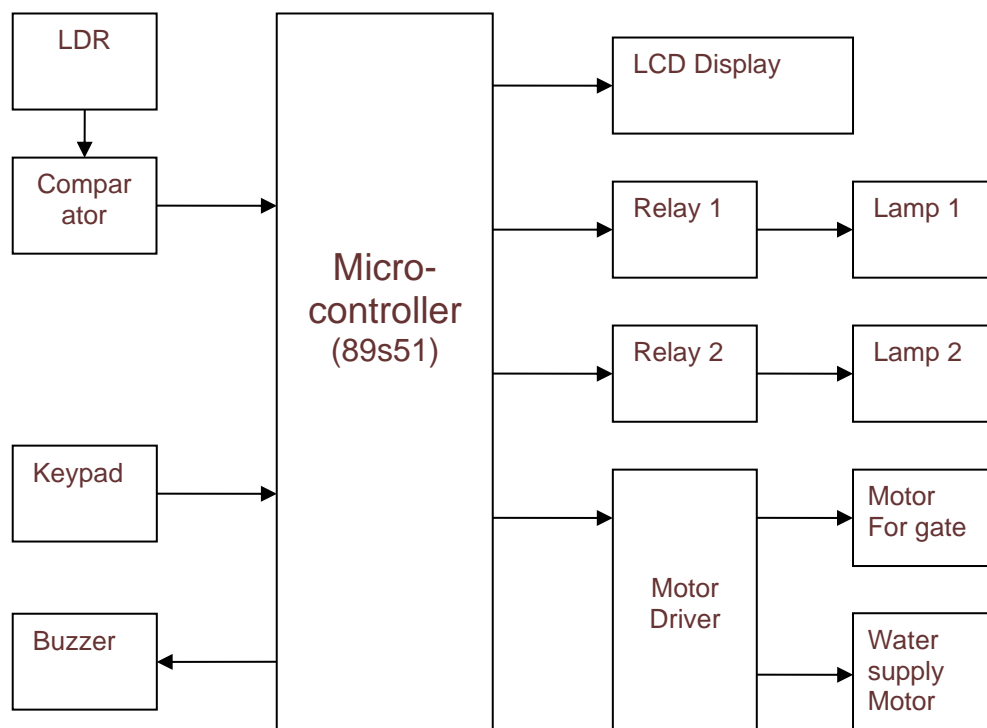
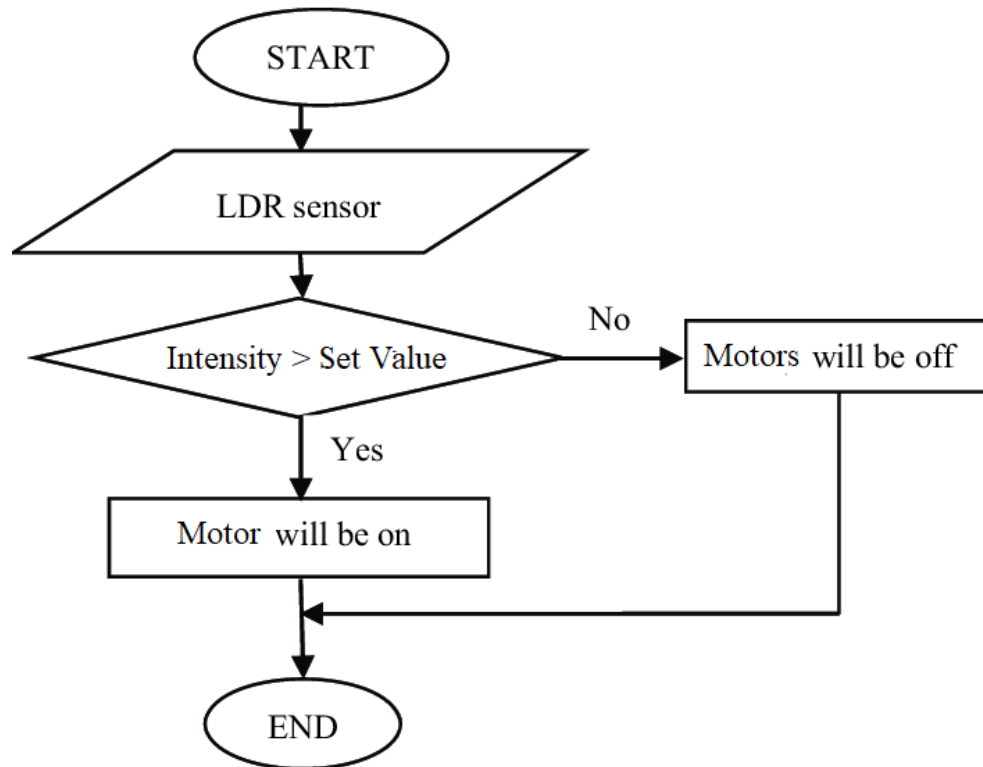


Fig 1. Block Diagram

Components:

1. AT89S52 microcontroller
2. LCD 16x2
3. Relay
4. Motor Driver L293D
5. DC Motor
6. Comparator
7. LDR
8. Keypad
9. Power supply
10. Connecting wires and switches

[5] FLOW CHART



[6] RESULT

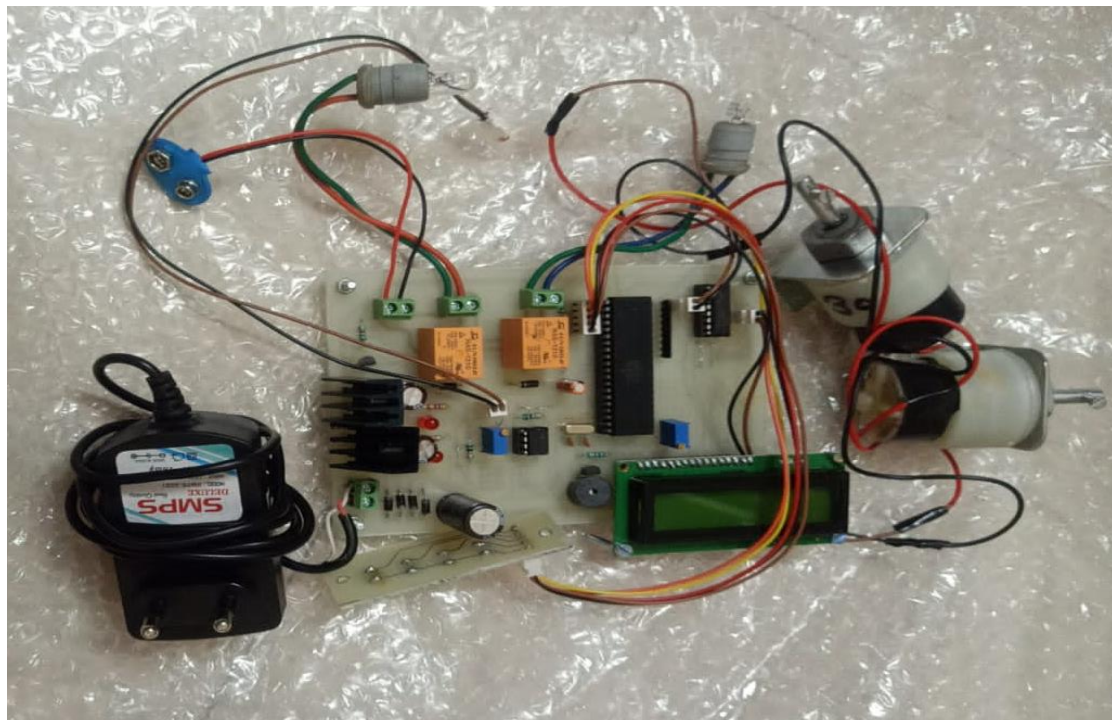


Fig 3. Images of project implementation

[6] CONCLUSION

In this paper the public garden automation with the help of 89s51 is shown. The public garden automation with the help of microcontroller and Assembly coding will make the paper easy to implement the system. The various sensors used in the paper will take the input of various parameters and with the help of 89s51 it will transmits the output to drive the different outputs. Depending on the time the public garden automation works. The opening of gate, the lightning system inside the garden, the dustbin status and the water supply to the plants, all works with the help of 89s51. Since 89s51 is a controller which performs all these tasks. It is also called as the main part of the system.

[7] ACKNOWLEDGEMENT

We would like to thank H.O.D of Electronics and Telecommunication Department and our project guide **Prof. S. G. Nagpure** for providing us an opportunity and his valuable support & his keen interest and boundless encouragement in preparing this work.

[8] REFERENCES

- [1]. Mustafa Hamza Abd-Elhamed Khalid And Dr. Eltaher Mohamed Hussein, "Public Garden Automation", "International Journal Of Engineering, Applied And Management Sciences Paradigms", Vol. 44, Issue 01.
- [2]. Pawar P. M., Pawar S. D., Vare J. A., "Public Garden Automation System", "Journal Of Information, Knowledge and Research In Electronics And Communication Engineering", Volume – 04, Issue – 02.
- [3]. Ankit Vashista, Harsh Rathore , Gaurav Jain, "Automatic Gardening System Using 89s51", "SSRG International Journal Of Electronics And Communication Engineering (SSRG-IJECE) – Volume 3 Issue 8 – August 2016"
- [4]. Nagarajapandian M, Ram Prasanth U, Selva Kumar G, Tamil Selvan S., "Automatic Irrigation System On Sensing Soil Moisture Content", "INTERNATIONAL Journal Of Innovative Research In Electrical, Electronics, Instrumentation And Control Engineering, Vol. 3, Issue 1, January 2015.
- [5]. Mr. Mahadev Vilas, Mr. Mahanavar Sagar, Mr. Ingale Gaurav, Prof. Gawali D.S., "PUBLIC GARDEN AUTOMATION USING GSM TECHNOLOGY", "International Journal For Research Trends And Innovation", Volume 2, Issue 3 ISSN: 2456-3315.
- [6] Sambath M, Prasant M, Bhargavraghava N and Jagadeesh S, "IoT based Garden Monitoring System," International Conference on Physics and Photonics Processes in Nano Sciences, IOP Publishing LTD.press, 2019 ,doi:10.1088/1742-6596/1362/1/012069.
- [7] Irrigation System on sensing Soil Moisture Content," International Journal Of Innovative Research In Electrical, Electronics, Instrumentation And Control Engineering, Vol. 3, pp.96- 98, January 2015.
- [8] Vashista A, Rathore H, Jain G, "Automatic Gardening System using 89s51," SSRG International Journal Of Electronics And Communication Engineering (SSRG-IJECE) , Vol. 3, pp.119-120, August 2016.

- [9] Binti Arbain N and Dan Darrawi bin Sadli M, "An IoT based Smart Garden with Weather Station system," 9th Symp. on computer Application & Industrial Electronics (ISCAIE), IEEE Press, 2019, pp.38-43. doi: 10.1109/ISCAIE.2019.8743837.
- [10]. Alex M. Goh and Xiaoyu L. Yann, (2021), "A Novel Sentiments Analysis Model Using Perceptron Classifier" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 4, pp. 01-10, DOI 10.30696/IJEEA.IX.IV.2021.01-10
- [11]. Dolly Daga, Haribrat Saikia, Sandipan Bhattacharjee and Bhaskar Saha, (2021), "A Conceptual Design Approach For Women Safety Through Better Communication Design" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 3, pp. 01-11, DOI 10.30696/IJEEA.IX.III.2021.01-11
- [12]. Alex M. Goh and Xiaoyu L. Yann, (2021), "Food-image Classification Using Neural Network Model" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 3, pp. 12-22, DOI 10.30696/IJEEA.IX.III.2021.12-22
- [13]. Jeevan Kumar, Rajesh Kumar Tiwari and Vijay Pandey, (2021), "Blood Sugar Detection Using Different Machine Learning Techniques" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 3, pp. 23-33, DOI 10.30696/IJEEA.IX.III.2021.23-33
- [14]. Nisarg Gupta, Prachi Deshpande, Jefferson Diaz, Siddharth Jangam, and Archana Shirke, (2021), "F-alert: Early Fire Detection Using Machine Learning Techniques" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 3, pp. 34-43, DOI 10.30696/IJEEA.IX.III.2021.34-43
- [15]. Reeta Kumari, Dr. Ashish Kumar Sinha and Dr. Mahua Banerjee, (2021), "A Comparative Study Of Software Product Lines And Dynamic Software Product Lines" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 2, pp. 01-10, DOI 10.30696/IJEEA.IX.I.2021.01-10
- [16]. MING AI and HAIQING LIU, (2021), "Privacy-preserving Of Electricity Data Based On Group Signature And Homomorphic Encryption" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 2, pp. 11-20, DOI 10.30696/IJEEA.IX.I.2021.11-20
- [17]. Osman Goni, (2021), "Implementation of Local Area Network (lan) And Build A Secure Lan System For Atomic Energy Research Establishment (AERE)" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 2, pp. 21-33, DOI 10.30696/IJEEA.IX.I.2021.21-33.
- [18]. XIAOYU YANG, (2021), "Power Grid Fault Prediction Method Based On Feature Selection And Classification Algorithm" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 2, pp. 34-44, DOI 10.30696/IJEEA.IX.I.2021.34-44.
- [19]. Xiong LIU and Haiqing LIU, (2021), "Data Publication Based On Differential Privacy In V2G Network" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 2, pp. 34-44, DOI 10.30696/IJEEA.IX.I.2021.45-53.
- [20]. Mandava Siva Sai Vighnesh, MD Shakir Alam and Vinitha.S, (2021), "Leaf Diseases Detection and Medication" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 1, pp. 01-07, doi 10.30696/IJEEA.IX.I.2021.01-07
- [21]. Pradeep M, Ragul K and Varalakshmi K, (2021), "Voice and Gesture Based Home Automation System" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 1, pp. 08-18, doi 10.30696/IJEEA.IX.I.2021.08-18
- [22]. Jagan K, Parthiban E Manikandan B, (2021), "Engrossment of Streaming Data with Agglomeration of Data in Ant Colony" Int. J. of Electronics Engineering and Applications, Vol. 9, No. 1, pp. 19-27, doi 10.30696/IJEEA.IX.I.2021.19-27

[23]. M. Khadar, V. Ranjith, K Varalakshmi (2021), “Tot Integrated Forest Fire Detection and Prediction using NodeMCU” Int. J. of Electronics Engineering and Applications, Vol. 9, No. 1, pp. 28—35, doi 10.30696/IJEEA.IX.I.2021.28-35

15. Gayathri. M, Poorviga. A and Mr. Vasantha Raja S.S, (2021), “Prediction Of Breast Cancer Stages Using Machine Learning” Int. J. of Electronics Engineering and Applications, Vol. 7, No. 1, pp. 36-42, doi 10.30696/IJEEA.IX.I.2021.36-42