A PROJECT ON

"SMART IRRIGATION SYSTEM“

PRESENTED BY

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SUBMITTED TO

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❖ INDEX

❖ Abstract

- Watering the plants on highways is the most important and a very laborious task, especially in the summer season. Manual watering increases the difficulty and is time consuming.
- Thus, we need effective technologies to overcome these problems. Auto-watering systems can be efficiently used to water plants when needed, which controls when and how much watering needs to be done.
- This system can be effectively used from small gardens large highway plantation, thus also conserving water. An attempt has been made to develop Arduino based plant watering system, which can be utilized for such operations.

❖ INTRODUCTION

- In the world of advance electronics, life of human beings should be simpler hence to make life more simpler and convenient , we have made "AUTOMATIC PLANT IRRIGATION SYSTEM".
- A model of controlling irrigation facilities to help millions of people. This model uses sensor technology with Arduino to make a smart switching device.
- The model shows the basic switching mechanism of Water motor using sensors from any part of field by sensing the moisture present in the soil.

❖COMPONENTS

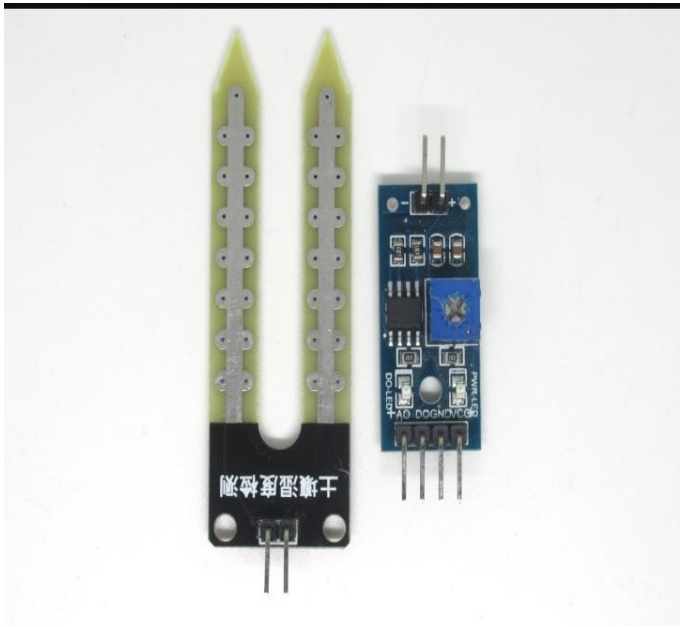
- Arduino.

- Arduino is used for controlling whole the process of this Automatic Plant Watering System.

- The output of soil sensor circuit is directly connected to digital pin D6 of Arduino .

- A LED is used at the sensor circuit, this LED's ON state indicates the presence of moisture in the soil and OFF state indicates the absence of moisture in the soil.

Soil Sensor



- This soil moisture sensor in our kit has two probes to pass current through the soil.
- More water makes the soil conduct electricity more easily (less resistance), while dry soil conducts electricity poorly (more resistance).
- This sensor will be helpful as a reminder to water your indoor plants or to monitor the soil moisture in your garden.

Relay Module

- A relay is basically an electrically actuated switch. A relay makes it possible for small currents to activate larger ones, and to safely do so.

- Three of the other connections control the circuit : NC - Stands for 'Normally closed'. it is connected to COM when there is a trigger in the relay.

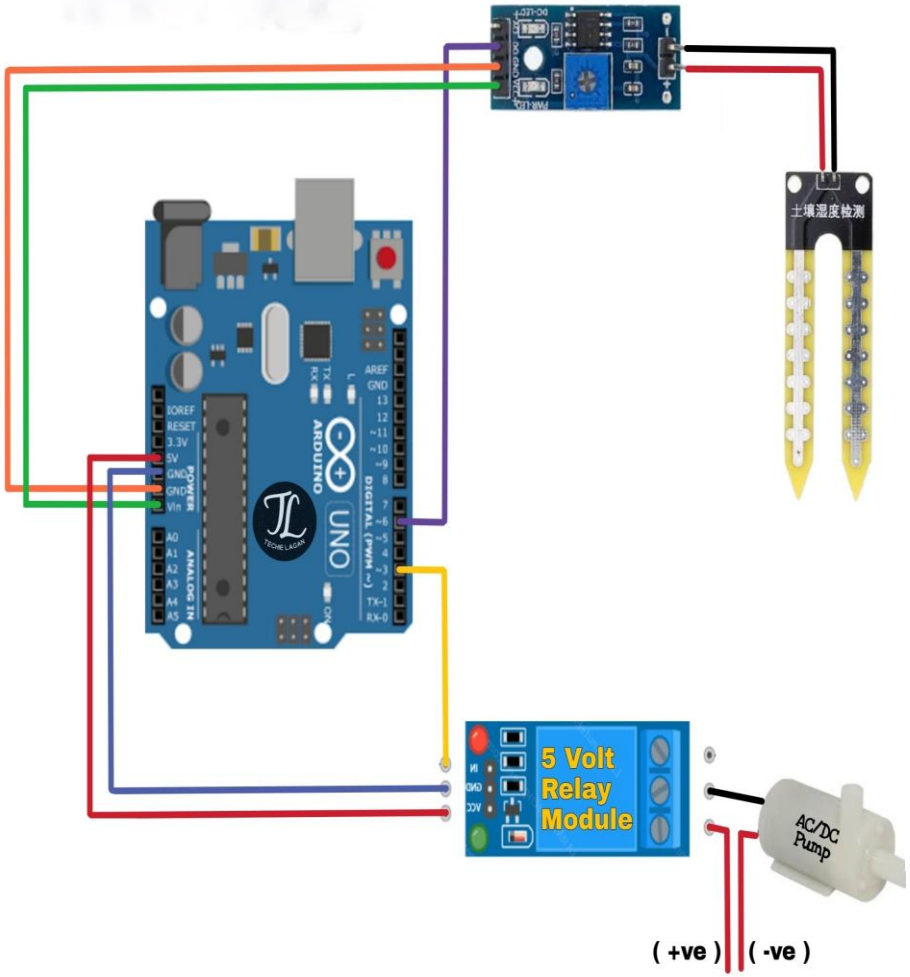
- NO - Stands for 'Normally open'. It is normally connected to COM when there is no trigger in the relay.

- COM - Stands for 'Common'. it is the part of the relay that moves. When a relay is off, COM is connected to NC. When the relay turns on, it moves from NC to NO

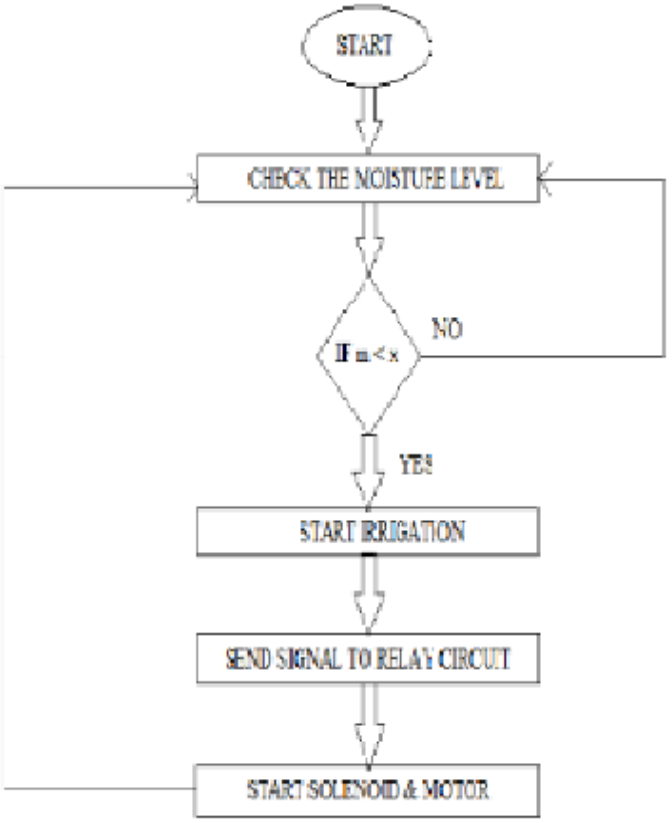
Battery

- The nine-volt battery, or 9-volt battery, is an electric battery that supplies a nominal voltage of 9 volts.
- Actual voltage measures 7.2 to 9.6 volts, depending on battery chemistry.
- Batteries of various sizes and capacities are manufactured; a very common size is known as PP3, introduced for early transistor radios.

❖ Circuit Diagram



Block Diagram



❖ Working Procedure

- Follow these steps to connect the automatic plant watering kit with an Arduino.
- First, connect 2x F-F jumper wires from the soil moisture sensor probe to its comparison module .Next , connect DO pin on the comparison module to IN pin on relay . Connect VCC pin on comparison module to Arduino .Use a M-F jumper wire.
- Both the pins of soil Moisture sensor with the main control board .
- VCC pin of control board connected to 3.5V of Arduino and the GND pin connected to GND pin of Arduino.DO(Digital output)pin connected to the pin no.6 of the Arduino.
- connect VCC pin of relay module connected to 5V of Arduino . GND pin on relay to the GND pin on Arduino. Relay's IN pin connected to pin no.3 of Arduino.
- One pin of battery supply connected to the COM pin of relay and other terminal of battery supply connected to the water pump.
- NO pin of relay module connected through the water pump.
- As this way we have connected our components and the Arduino program compiled to the Arduino through USB cable.
- Put the sensor in soil the it will start sensing and give command to the relay module.

❖ADVANTAGES

- Highly sensitive.
- Works according to the soil condition
- Fit and Forget system
- Low cost and reliable circuit
- Complete elimination of manpower
- Can handle heavy loads up to 7A
- System can be switched into manual mode whenever required

❖Future Scope

- The configuration with the literature has been discussed within the paper. For large scale implementation, solar panels can also be utilized to conserve energy
- It can help improving the irrigation system in places with water scarcity.
- Hence this results good production and great saving of time and money. It is linked to some GSM module which makes to be sustainable for long years.

❖CONCLUSION

- I conclude that this system is easy to implement.
- This project going save time, money, and manpower for irrigation fields
- IOT based smart irrigation system displays the output values of those sensors. These are connected to smart phone or computer's web page and farmer can operate them any time and any where
- Increase of productivity
- Water conservation taken place

❖REFERENCE

- https://littlebirdelectronics.com.au/guides/4/automatic-plant-watering-with-Arduino.
- You tube videos.
- Some research papers.
- https://www.researchgate.net/publication/364320811_Highways_Automatic_Plant_Watering_System.

Unlocking the Future of College Management with Our System

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❖ CONTENT:

- Introduction
- Requirement Specification
- Scope of the Project
- Implementation
- Module of the System
- CMS Screen
- Future Scope
- Conclusion

❖ INTRODUCTION:

- College Management System is a comprehensive solution for managing college operations.
- It enables efficient tracking of student records and other resources .
- The system is designed to streamline and automate processes, such as fee payments, and library management while providing administrators with real- time data and insights.
- The College Management System offers a wide range of benefits, including improved accuracy and efficiency, enhanced data security, and improved collaboration between administrators and students.
- Authorized Users :- Students
- Requirements for Authentication :- Register by using “LOGIN ID” & “Password”

❖ REQUIREMENT SPECIFICATION:

- Language Used :- Python
- Fronted Libraries ;-Tkinter, Random, OS
- Backened Libraries :- Squlite3
- Devpt. Env :- Python IDLE (Integrated Development and Learning Environment)
- Memory :- 179 KB RAM

❖ SCOPE OF THE PROJECT:

The requirement of the user is to-

- Access / Search information.
- Login to the system through the first page of the application.
- Reset the password after logging into the system.
- View / change his / her details.
- An admin login should be present who can read as well as remove any uploads.

❖ IMPLEMENTATION:

- The College Management System is designed to be easy to implement, with a range of tools and resources available to help administrators get up and running quickly.
- The system is also designed to be highly scalable, so administrators can easily add new features and capabilities as their needs evolve.

❖ MODULE OF THE SYSTEM

Campus Information

- Library

Administration

- Admission

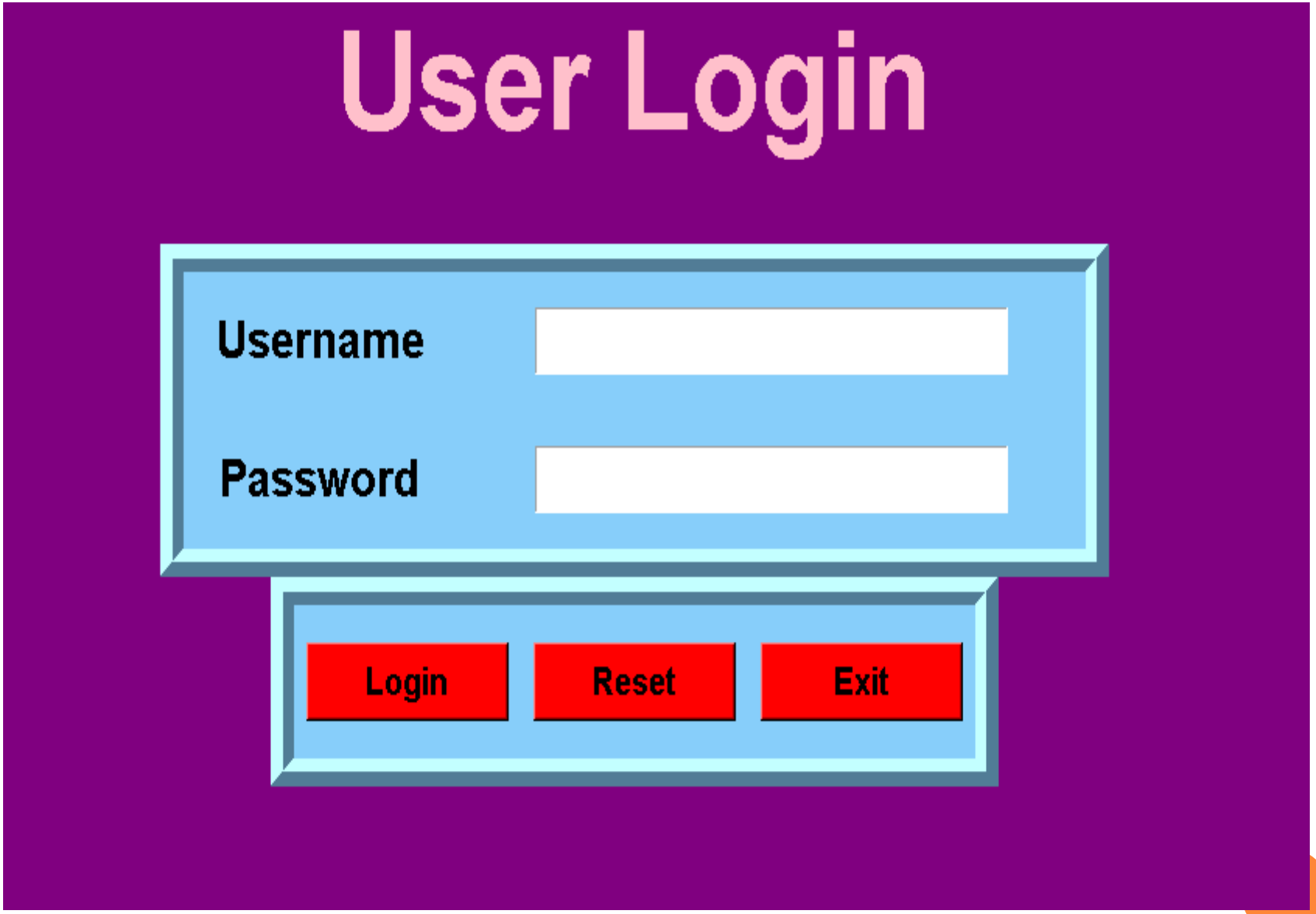
Student Information

- Profile
- View Student Details

Examination

- Results

Welcome
to
CMS screens


User Login
Username
Password
Login
Reset
Exit

❖ FUTURE SCOPE:

- Online examination module would be introduced to conduct online examination.
- Further, the faculty can upload the videos of their lectures on this site and students who had missed those classes can view those videos.

❖ CONCLUSION:

- The College Management System is a comprehensive solution for managing college operations. It enables efficient tracking of student records, faculty, staff, and other resources.
- The system is designed to streamline and automate processes, while providing administrators with real-time data and insights. It is also designed to be secure, compliant, and easy to implement.

A PROJECT ON

"ATM MACHINE APPLICATION"

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❖ Contents

- Introduction to ATMs
- ATM Security
- ATM Transactions
- ATM Fees
- ATM Benefits
- Future Scope
- Conclusion

❖ Introduction to ATMs

- Automated Teller Machines (ATMs) are an integral part of our lives today. They provide access to cash, deposit funds, and make payments with ease. ATMs are a convenient way to manage finances and are available in many locations around the world.

- ATMs are operated by banks or other financial institutions and are used to withdraw cash, transfer funds, and make payments. They are usually located in public places, such as banks, airports, supermarkets, and gas stations.

❖ ATM Security

- ATMs are designed with security features to protect users from fraud and theft. Most ATMs have a secure PIN number that must be entered before any transaction can take place. Additionally, some ATMs are equipped with security cameras to monitor activity.

- ATMs also feature anti-skimming technology to protect customers' credit and debit card information. This technology prevents criminals from stealing card information by using hidden cameras or card readers.

❖ ATM Transactions

- ATMs are used to perform a variety of transactions, including withdrawing cash, transferring funds, and making payments. To use an ATM, customers must insert their debit or credit card into the machine and enter their PIN number.

- Once the PIN is entered, customers can choose from a variety of options, such as withdrawing cash, transferring funds, or making payments. After the transaction is complete, customers can remove their card from the machine and take their cash or receipt.

❖ ATM Fees

- Most ATMs charge a fee for each transaction. These fees vary depending on the type of transaction and the bank or financial institution that owns the ATM. Some ATMs may also charge a fee for withdrawing cash.

- Once the PIN is entered, customers can choose from a variety of options, such as withdrawing cash, transferring funds, or making payments. After the transaction is complete, customers can remove their card from the machine and take their cash or receipt.

❖ ATM Benefits

- ATMs provide a convenient way to manage finances and access cash. They are available in many locations around the world and offer a secure way to withdraw cash, transfer funds, and make payments. Additionally, ATMs are usually open 24 hours a day, seven days a week.

- ATMs are also a cost-effective way to manage finances. Most ATMs charge a fee for each transaction, but some banks and financial institutions offer fee-free ATMs to their customers. This can save customers money in the long run.

❖ FUTURE SCOPE

- We can modify this application as a real time working.
- We can also increase security by applying sensor to ATM.
- For developing this system as real time ,I need to use Apache Netbeans application.

❖ Conclusion

- ATMs are a convenient and secure way to manage finances and access cash. They are available in many locations around the world and offer a variety of services, such as withdrawing cash, transferring funds, and making payments. Additionally, some banks and financial institutions offer fee-free ATMs to their customers.

- ATMs are an integral part of our lives today and are a cost-effective way to manage finances. It is important to check with the bank or financial institution before using an ATM to avoid unexpected fees.

❖4 Month Progress

- 12/01/2023

1. Decided overall agenda about mini project.
2. The agenda is about to make group project and in every group.
3. We have to make individual

portfolios and one hardware project and one software project.

- 13/01/2023

1.Had made groups for projects.

2.Had discussion on hardware and software project.

- 19/01/2023

1.Started making portfolios.

2.Along with this,we were discuss about our hardware and software project.

- 20/01/2023

1.We shown our progress in portfolios.

2.Decided topic for our hardware and software project.

- 02/02/2023

1.Completed half portfolios of everyone.

2.Started collecting components for our hardware project.

- 09/02/2023

1.Showed progress in software project.

2.We didn't get component in our labs ,so we ordered components.

3.Done all the changes in portfolios which were required.

- 16/02/2023

1.Progress in software project.
2.Completed portfolios.
3.Hardware simulation has done.
4.Software project were 80% ready.
5.Hardware component was available.

- 23/02/2023

1.Started working on hardware part.
2.Done with the software project.

- 15/03/2023

1.Hardware was ready.
2.Started working PPTs.

- 17/03/2023

1.Done with the mid term evaluation with both software project.
2.Working on hardware project.

- 23/03/2023

1.Done with the hardware project but some changes were required.

2.Progress were going on.

❖Portfolio links:

1.Vedika Dhage .

https://vedikaportfolio.vedika-shailesh.repl.co

2.Sakshi Nishane .

https://personalportfolio.sakshinishane.repl.co

3.Sanskruti Jadhav.

https://sanskrutiportfolio.sakshinishane.repl.co

4.Sanskruti Shewale.

https://sanskrutishewale.github.io/portfolio-site1/#contact

THANK YOU!