WATER IRRIGATION SYSTEM USING SMS NOTIFICATION

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LIST OF ABBREVIATION / ACRONYM

ABBREVIATION	TITLE
SMS	Short Message Service
GSM	Global System for Mobile
UPS	Uninterruptible Power Supply

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ABSTRACT

This thesis is discussing the development of a Water Irrigation System using SMS Notification for an organization or user that organize their plant .Water Irrigation System is a system that use real device that will control to maintain water in the soil. The objective of the system was design a constant water irrigation monitoring system and develop SMS notification to user. The programmed plant watering system is made was to make the nursery worker or user works effectively. There were different sort of utilizing programmed watering systems like utilizing sprinkler systems, tube, nozzles and other. This anticipate utilizes Arduino board, which comprises of R3 Microcontroller. It is modified in a manner that it will sense the dampness level of the plants and supply the water if required. ADDIE model were the best methodology I used for this system. I have built up a prototype, which makes a plant more independent and watering itself from a medium water tank included the prototype reports status and flow conditions. Furthermore, it reminds the client to refill the water tank. The system computerization is intended to be assistive to the client. I trust that through this model, individuals will appreciate having plants without the difficulties identified with truant or distraction.

ABSTRAK

Tesis ini membincangkan tentang Water Irrigation System using SMS Notification untuk organisasi dan pengguna untuk menguruskan tanaman mereka. Sistem ini menggunakan peranti sebenar yang akan mengawal dan mengekalkan air dalam tanah. Objektif sistem ini adalah untuk memastikan supaya tumbuhan sentiasa dalam keadaan baik dan memberi mesej pesanan ringkan (SMS) kepada pengguna. Sistem ini diprogramkan untuk organisasi dan pengguna menguruskan tanaman mereka dengan lebih efektif. Sistem yang telah sedia ada berbeza menggunakan sistem air diprogramkan yang dengan menggunakan system Sprinkler, Tube, Nozzles dan lain-lain. Sistem ini menggunakan papan Arduino, yang terdiri daripada Arduino R3. Ia diubah suai dan berupaya mengesan tahap kelembapan tumbuh-tumbuhan dan membekalkan air jika diperlukan. Kaedah yang telah saya gunakan untuk menyiapkan system ini ialah ADDIE. Saya telah membina satu model, yang menjadikan tumbuhan yang lebih terjaga dan tumbuhan akan disiram melalui pam air. Status laporan prototaip keadaan surut dan aliran tambahan pula mengingatkan pengguna untuk mengisi semula tangki air. Saya percaya bahawa melalui model ini akan dapat memudahkan pengguna yang mempunyai tumbuh-tumbuhan.

CHPATER 1

INTRODUCTION

1.1 Project Background

Watering system is the counterfeit utilization of water to the area. It is used to assist in the growing of agricultural crops, maintenance of landscapes, and revegetation of disturbed soils in dry areas and during periods of inadequate rainfall. Furthermore, watering system additionally has a couple of different uses in harvest creation, which incorporate securing plants against ice, smothering weed development in grain fields and averting soil combination. Conversely, horticulture that depends just on direct precipitation is alluded to as downpour nourished or dry area cultivating. The idea or concept of an irrigation is to decrease the rate of spoilage of plants or samples that need to care always by consistent water irrigation.

Before the invention of the water irrigation system, humans only use energy and should always be careful to keep the plants. There are several plants that need proper water irrigation system. Nowadays there are many ways of treatment plants using water irrigation systems. Different sorts of watering system methods vary in how the water got from the source and disseminated inside the field. The objective is to supply the whole field consistently with water. Every plant has the measure of water it needs with

accurately. There are water irrigation systems that have nowadays like Drip Irrigator, Sprinkler System and In-ground irrigation.

1.2 Problem Statement

The old style of water irrigation is not efficient because cannot notified if any failure happens. Usually, water irrigation is used to store water that can keep the plants in perfectly live and have such a good health [1]. It will guarantee that the water irrigation is always in a good condition to keep the plants in a good care and give the benefits to user. These days, some water irrigation systems are equipped with an external Uninterruptible Power Supplies (UPS) unit that will work once the main power supply is disconnected. The UPS unit has the capacity supply power to the water irrigation system for up to three hours. UPS can give moment reinforcement power in the basic minute while power outage, brownout, or other force issues strike your equipment.

Problems emerge when the water irrigation is not in consistent mode and water irrigation not working without give notification to user. This will lead to the plants getting spoilt anytime which may further prompt the loss of cost.

1.3 Objective

The objective of this project are:

    i.   To design a constant water irrigation monitoring system for plants.

    ii.   To develop a sms notification whenever the water is out of range and send a text message.

1.4 Scope

    i.   **Target Organization**

The application was develop specially for organization or user that organize their plants. The purpose is to build a new system for monitoring and give a SMS notification if any failure happen to water irrigation system.

    ii.   **System User**

The system is for user that have mobile phone. The system must have electric power in order to operate. Users should be in communication network coverage.

    iii.   **Function**

The function of this system is to ease the work of managing the water irrigation system that can give a notification by sending the SMS to the in charge person.