**SOIL MOISTURE MONITORING WITH AUTOMATED WATER SPRINKLER**

**A Capstone Project Presented to the Faculty of the**

**College of Computing Studies, Information**

**and Communication Technology**

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**Cauayan Campus**

**In Partial Fulfillment of the Requirements for**

**the Degree Bachelor of Science in**

**Information Technology**

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**APPROVAL SHEET**

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**The Researchers**

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**ABSTRACT**

*The project entitled “Soil Moisture Monitoring with Automated Water Sprinkler” was developed for farmers/horticulturist in the Department of Agriculture greenhouse located at Cabaruan, Cauayan City, Isabela. The said system will automatically sense the moisture level of soil, distribute the right amount of water to the plants and send data directly to the user’s phone for viewing the previous and current data. This project is useful in propagation of plants and in controlled weather condition such as greenhouse.*

*The implementation aims to reduce the improper use of water, automated monitoring moisture content of soil and irrigation can lessen the man power, workload, time and effort. This system is powered by battery, controlled by a Microcontroller. Microcontroller is connected to GSM, which allows the system to communicate with the farmer using a mobile phone.*

*The researcher used Agile Software Development Life Cycle. With this method, the researchers conducted data gathering through observation, interview, questionnaire, library-based research and surfing the internet for the needed information in developing the system.*

*The project was evaluated by ten registered employees who found out that the device would benefit their production in performance that identifies the accurate soil moisture content, sending and storing information, automatic sprinkler irrigation, right time to irrigate to avoid drowning the plant, lessens the workload and conservation of water.*

*The proponents concluded the following based on the gathered data from the respondents: The overall respondents’ perception on the project entitled: “Soil Moisture Monitoring with Automated Water Sprinkler” the respondents determined the benefits of the project based on the post-evaluation, and shows that the respondents strongly agreed in terms of: performance, information and data, efficiency, control and security, economics and services.*

*The researchers recommended the implementation of the proposed Soil Moisture Monitoring with Automated Water Sprinkler for Department of Agriculture Greenhouse, Cabaruan, Cauayan City, Isabela.*

**TABLE OF CONTENTS**

Title Page i

Approval Sheet ii

Acknowledgement iii

Dedication iv

Abstract vii

Table of Contents viii

List of Tables x

List of Figures xii

**Chapter I - Introduction** 1

Project Context 1

Purpose and Description of the Project 2

Objectives of the Project 2

Scope and Limitation 4

**Chapter II – Review of Related Literature and Studies** 5

Related Literature 5

Related Studies 11

**Chapter III – Technical Background** 15

Technicality of the Project 15

Details of the Technologies Used 15

How the Project will Work 17

**Chapter IV – Methodology** 18

Environment 18

Locale 18

Population of the Study 19

Organizational Chart/ Profile 20

Software Development Methodology 20

**Chapter V – Discussion of Results** 47

**Chapter VI – Conclusions and Recommendations** 63

Summary of Findings 63

Conclusions 65

Recommendations 65

**Bibliography** 67

**Appendices** 70

A RELEVANT SOURCE CODE 71

B EVALUATION TOOL 103

C USERS GUIDE 107

D WORKING TITLE FORM 111

E GRAMMARIAN’S CERTIFICATION 118

F CURRICULUM VITAE 119

**Glossary** 125

**LIST OF TABLES**

**Table 1.** Hardware and software that are used during the development ………… 15

**Table 2.** Hardware and software that are used during the implementation ……… 16

**Table 3.** Population of the study ………………………………………………… 19

**Table 4.** Likert scale shows the weighted mean range of the pre-survey and its

descriptive interpretation as evaluated by respondents ………………… 24

**Table 5.** Likert scale shows the weighted mean range of the post-survey

and its descriptive interpretation as evaluated by respondents ………… 24

**Table 6.** Compatibility Checking of Hardware …………………………………. 26

**Table 7.** Compatibility Checking of Software …………………………………... 27

**Table 8.** Relevance of the technologies …………………………………………. 28

**Table 9.** List of materials of the proposed system ………………………………. 30

**Table 10.** Risk Assessment/Analysis ……………………………………………... 36

**Table 11.** Table Record …………………………………………………………… 40

**Table 12.** Software Specification …………………………………………………. 42

**Table 13.** Hardware Specification ………………………………………………… 42

**Table 14.** Problems Encountered of the Manual Soil Moisture Monitoring and Manual Sprinkler Irrigation in Terms of Performance ………………… 47

**Table 15.** Problems Encountered of the Manual Soil Moisture Monitoring and Manual Sprinkler Irrigation in Terms of information and data ………... 48

**Table 16.** Problems Encountered of the Manual Soil Moisture Monitoring and Manual Sprinkler Irrigation in Terms of efficiency ….………………... 49

**Table 17.** Problems Encountered of the Manual Soil Moisture Monitoring and Manual Sprinkler Irrigation in Terms of control and security ………… 50

**Table 18**. Problems Encountered of the Manual Soil Moisture Monitoring and Manual Sprinkler Irrigation in Terms of economics …………………... 51

**Table 19.** Problems Encountered of the Manual Soil Moisture Monitoring and Manual Sprinkler Irrigation in Terms of services ……………………... 52

**Table 20.** Summary of the Category Mean and Descriptive Interpretation of the Respondents on the Problems Encountered of the Manual Soil

Moisture Monitoring and Manual Sprinkler Irrigation ………………… 53

**Table 21.** Evaluation of the Soil Moisture Monitoring with

Automated Water Sprinkler in Terms of Performance ………………… 55

**Table 22.** Evaluation of the Soil Moisture Monitoring with

Automated Water Sprinkler in Terms of information and data ………... 56

**Table 23.** Evaluation of the Soil Moisture Monitoring with

Automated Water Sprinkler in Terms of efficiency …………………… 57

**Table 24.** Evaluation of the Soil Moisture Monitoring with

Automated Water Sprinkler in Terms of control and security ………… 58

**Table 25.** Evaluation of the Soil Moisture Monitoring with

Automated Water Sprinkler in Terms of economics …………………... 59

**Table 26.** Evaluation of the Soil Moisture Monitoring with

Automated Water Sprinkler in Terms of services ……………………... 60

**Table 27.** Summary of the Category Mean and Descriptive Interpretation of the Respondents on the Evaluation of the Soil Moisture Monitoring with Automated Water Sprinkler …................................................................ 61

**LIST OF FIGURES**

**Figure 1.** Location of the respondents ……………………………………………. 18

**Figure 2.** Organizational chart ……………………………………………………. 20

**Figure 3.** Agile Software Development Life Cycle Diagram ……………………...20

**Figure 4.** Fishbone diagram ………………………………………………………. 25

**Figure 5.** Functional decomposition diagram ……………………………………...26

**Figure 6.** Gantt chart …………………………………………………………........ 29

**Figure 7.** Input, process and output model ………………………………………...31

**Figure 8.** Context diagram …………………………………………………………32

**Figure 9.** Data flow diagram …………………………………………………....... 32

**Figure 10.** Device flowchart ………………………………………………………...33

**Figure 11.** Android mobile application flowchart ………………………………......34

**Figure 12.** Program flowchart …………………………………………………....... 35

**Figure 13.** Home ………………………………………………………………....... 37

**Figure 14.** Device SMS ……………………………………………………………. 38

**Figure 15.** Records ……………………………………………………………........ 39

**Figure 16.** Visualizer ………………………………………………………………. 40

**Figure 17.** Network model …………………………………………………………. 41

**Figure 18.** Network topology …………………………………………………........ 41