WATER MONITORING SYSTEM FOR AGRICULTURE SECTOR

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by

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APPROVAL AND DECLARATION SHEET

This project report titled Water Monitoring System for Agriculture Sector was prepared and submitted by Intan Shafinaz binti Mohammad (Matrix Number: 031020133) and has been found satisfactory in terms of scope, quality and presentation as partial fulfillment of the requirement for the Bachelor of Engineering (Hons)(Computer Engineering) in Universiti Malaysia Perlis (UniMap).

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SISTEM KAWALAN AIR UNTUK SEKTOR PERTANIAN

ABSTRAK

Hampir kesemua pekerjaan dalam kehidupan manusia seharian masakini telah dipermudahkan oleh penggunaan robot dan sistem automatik. Ia meliputi kerja harian biasa sehinggalah kepada penghasilan produk yang banyak dan berkualiti.

Memandangkan sektor pertanian adalah amat penting untuk menjana ekonomi negara melalui produk yang lebih optimum dan berkualiti tinggi, maka satu sistem pengairan pertanian yang moden adalah perlu.

Berdasarkan keperluan ini, projek sistem kawalan air dibangunkan. Projek ini mengawal takat air di dalam tangki simpanan secara automatik menggunakan pam. Ia juga dipantau oleh sistem kawalan melalui paparan pada komputer. Perisian Visual Basic digunakan bagi membina pengantaramuka grafik pengguna.

Pengesan jarak mengesan takat air dan menghantar isyarat data yang diterima kepada mikropengawal. Mikropengawal akan memproses data tersebut dan mengawal sistem pengepam air bagi membolehkan sejumlah air masuk di dalam tangki simpanan. Data yang diproses dari mikropengawal dihantar ke komputer dan dipaparkan.

ABSTRACT

Nowadays robotic and automation system has been introduced to facilitate humankind from doing everyday chores to the high scale manufacturing.

The agriculture sector is very important for country to generate economy throughput optimization and better product quality. Therefore, it needs the modern irrigation system.

Based on that requirement, the water monitoring system has been developed. The water levels in tank automatically control the pump. It also can monitor with the interfacing system. Visual Basic software is used as software tool to produce a graphic user interface (GUI).

The distance sensor was detecting the water level and give data to the microcontroller. The microcontroller will process the data and control the pumping system to allow the amount of water that will be flow into the tank. The processed data from microcontroller will be sent to the computer and display the water level in the tank.