Data System Management in Mahogany Tree Seedlings (*Swietenia mahagoni*) Based on Website

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ABSTRACT

Mahogany tree nurseries or similar tree nurseries require a long process to develop in the furniture industry. The management system used so far is still done manually, namely using some bookkeeping and even imagining the process of growing the tree. Farmers who breed selectively felled trees such as mahogany trees really need an information system that supports systematic and easy data processing. For this reason, the author is trying to make a Final Project using a web-based system regarding processing nursery data, which until now has not been computerized. This web-based system was written to simplify the process of managing nursery data so that the plant process is transferred to make it more effective and efficient in supporting activities. The author designed a web-based sales application information system using the PHP, HTML and JavaScript programming languages. The method used in designing software for sales applications is the waterfall method, data collection techniques, observations and interviews. This information system design is the best solution to solve the problems that exist in this company. A computerized system is better than a conventional system, because a computerized system can run more safely than the system used previously.

Keywords: PHP programming, seeding information systems, computerized systems.

INTRODUCTION

Information Technology (IT) is a job that has many benefits and career opportunities in this industrial era 4.0. Many companies have developed with the creation of modern technology that has been created by experts in the field of information technology. However, there are still many Human Resources (HR) who are not yet aware of technology. One of the problems is limited tools due to the economic sector, apart from that there is limited time to study developments in Information Technology (IT). (Yuwono, *et al*, 2020)

In connection with this, the author is trying to create a website that can be used as a medium for information on the management of mahogany tree seeds (*Swietenia mahagoni*). The website-based data processing system in the observation system helps farmers obtain information on monitoring results more easily (Purba, 2020). This information is in the form of data on the growth of plant seeds that are monitored and the results of analysis of the monitoring data. In this research, monitoring data will be sent to a website page and stored in a database, then the data will be processed and analyzed using the PHP programming language connected to the MySQL database. Once successfully processed, the results will be displayed on a web application so that they can be read clearly or are user friendly for farmers who read them (Budiyanto, 2013). Apart from being easy to read, farmers can also predict seed growth and obstacles during the planting process from this web application. Forecasting from linear data with low spread can be done and conclusions can be drawn, farmers can access the forecasting results via computer and open web pages using an internet browser (Hakim, 2008). Growth data is displayed on the Dashboard and information can be read.

METHOD

Website creation using PHP programming language connected to MySQL database. Website design is illustrated with a flowchart that can be seen in picture 1. The workflow in this system, the first on the Dashboard page is Available Data on the Number of Gardens to detect the location of the nursery,

the Number of Planting Seeds to find out the number of initial planting seeds, the Number of Care Seeds to find out the number and constraints that exist during treatment and the Number of Harvested Seeds to find out the final data on the number of seeds ready to be harvested (Tata, 2020). The data can be obtained from the input menu containing Farm Name, Garden Location, Input Date, Number of Seedlings, Seed Height, Description and Photo.
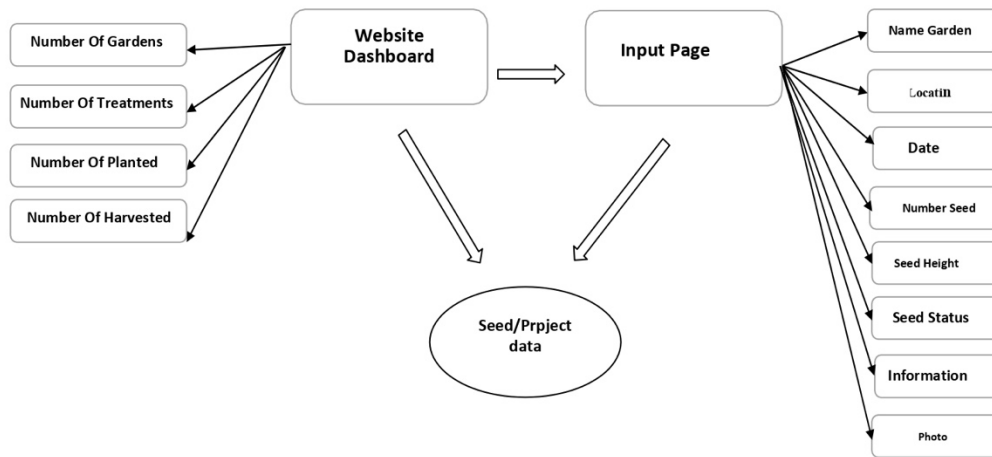

Picture 1. Flow Diagram

RESULT AND DISCUSSION

The following are the results and discussions obtained after conducting research and the process of working on Data System Management in the Growth of Mahogany Seeds (*Swietenia mahagoni*) Based on the Website. The results of Data System Management in the Growth of Website-Based Mahogany Seedlings (*Swietenia mahagoni*) are as follows:

Result

The result of the Data System Management in Mahogany Tree Seedlings (Swietenia mahagoni) Based on Website
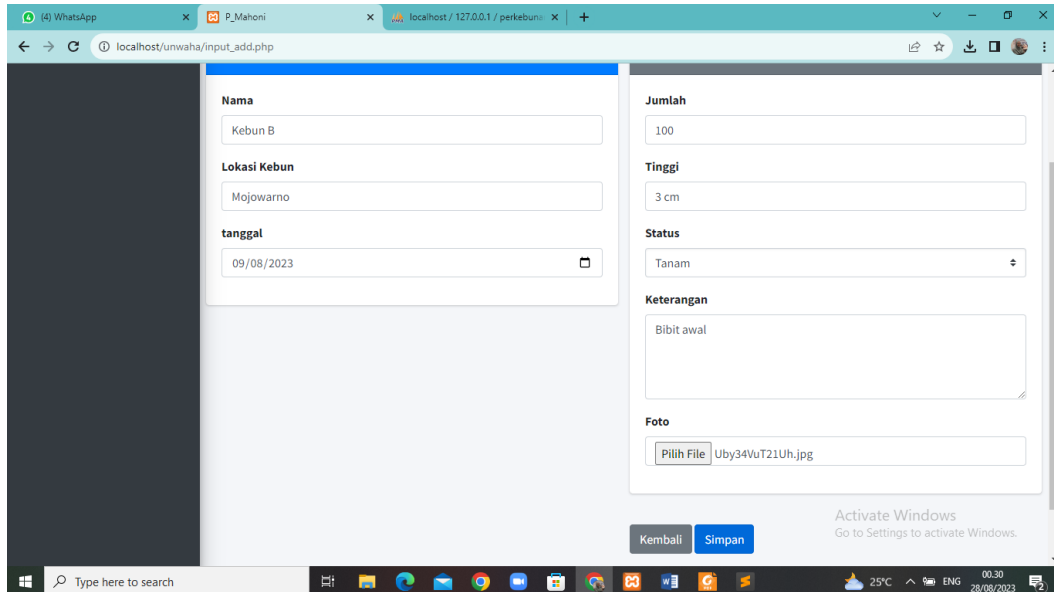- Dashboard Page
  Dashboard Page This page is as the main page to generate data from the nursery (Picture 2).
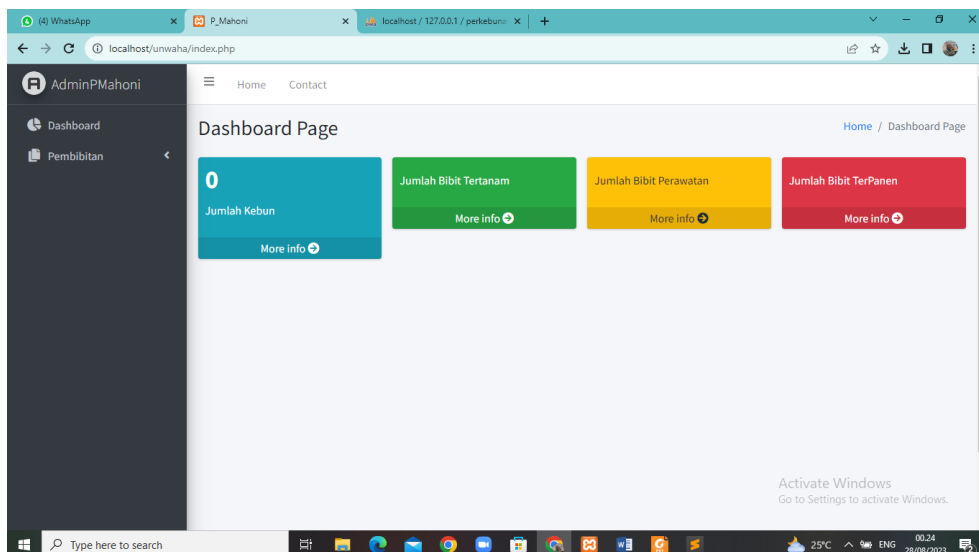
Picture 2. Dashboard Page

- Input Page
  Input Page This page contains parts of seed data from field survey results as follows (Picture 3).

Picture 3. Input Page

Menu section description:

- Name Used to fill in the name of the farm, to make it easier for users to know which part of the garden is being inputted.
- The location of the garden is used to make it easier for readers to find out the location of the garden area that is being inputted
- The date is used to make it easier for users to read the time of input of seedlings, whether seedlings are in garden, care or harvest status
- The number of seeds is used to find out how many seeds are being inputted
- Height Seeds are used to determine the development of growing seedlings
- Status there are three statuses to find out when the input of seedlings is already in the state of planting seeds, care or ready to harvest.
- Information is used to provide information on the condition of the garden if there is a reduction in the number of seeds from planting to harvesting. For example, it decreases due to dry markings or stagnant water that causes seedlings to die
- Photos are used to strengthen the evidence of nursery conditions in the garden.

- Table data page
  On this data page there is a complete table that provides the entire seed data starting from Planting Seeds, Care Seeds and Harvesting Seeds. There is also an Update Data or Clear Data menu to update information (Picture 4).

Picture 4.Table data page

- The Searching button

  The Searching button is used to make it easier for users to find seeds from planting, caring or harvesting status (Picture 5).
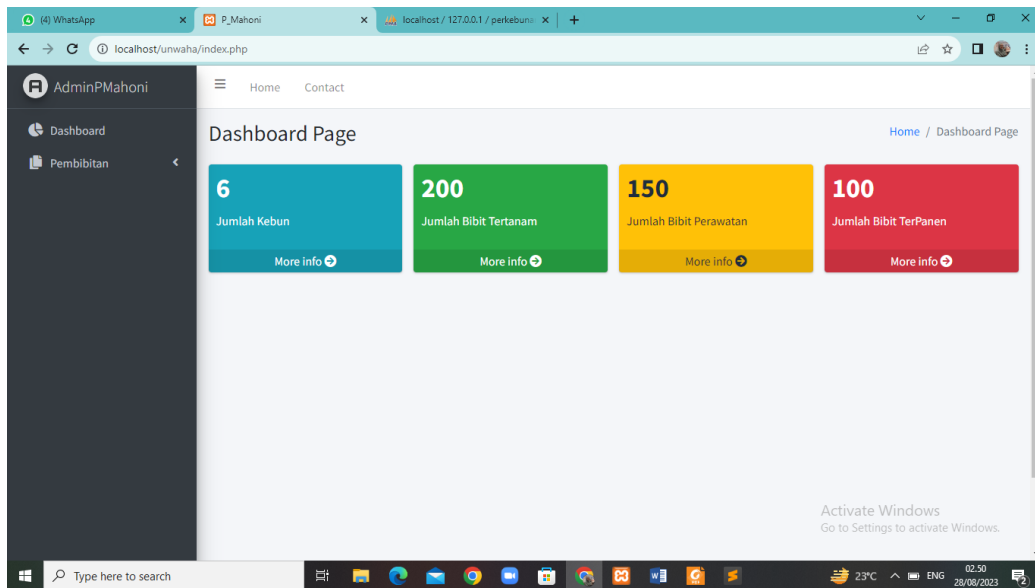

Picture 5. The Searching button

- Results Dashboard Page

  Results Dashboard Page When there is complete incoming data, the dashboard display will display the final result of the Total Number of Seeds (Picture 6).

Picture 6. Results Dashboard Page

Discussion

After developing the system above, as contained in the food research model, a Website-Based Data System Management in Mahogany Seed Growth (*Swietenia mahagoni*) was designed which in the future will facilitate farmers in breeding mahogany trees.

CONCLUSIONS

Based on the results of system design and testing, it can be concluded as follows
- This testing system website was successfully created
- This website makes it easy for farmers or business parties in the field of tree nurseries to monitor the development of seedlings from several planting garden locations

REFERENCES

Badiyanto. (2013). *Buku Pintar Framefork YII Cara Mudah Membagun Aplikasi Web PHP*. Yogyakarta: Mediakom.

Hakim, R. (2008). *Cara Cerdas Mengelola Blog*. Jakarta: Elex Media Koputindo.

Purba, J.A., Pulungan, J, Turnip, M., Marbun, A.T. (2020). Sistem Pembibitan PT. Agrowisata Porlak Parna Berbasis Web.

Tata, S. (2012). *Analisa Sistem Informasi*. Yogyakarta: Andi Media.

Widyawati, A. S. (2022). Rancang Bangun Aplikasi Learning Management System Dengan Framework Codenigner Untuk Meningkatkan Efektifitas Pembelajaran Pada Smk Darul Ishlah. *Jurnal Sistem Informasi Dan Informatika (Simika),* 10.

Yuwono, A.A., Suhendi, A., Darmawan,D. (2020). Sistem Pengolahan Data Hasil Pengamatan Tanaman Hidroponik Menggunakan Regresi Linier. e-Proceeding of Engineering,7 (1), 215-219