Integration System Application UKM and ORMAWA of Politeknik Negeri Manado

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ABSTRACT
This system will accommodate data about UKM and ORMAWA in the form of activity reporting, goods inventory data, members and activity plans. This application will be a website that can be accessed using the NIM and password provided. Students will be given access to read all activities and activity plans. UKM and ORMAWA leaders will be given access rights to send their respective activity reports and activity plans. All heads of UKM and ORMAWA cannot disclose data other than their own. For the leadership, in this case Deputy Director 3 and Staff, will be given access rights to open all data without exception. Apart from that, leaders will also be given access rights to post announcements and make contact via the account provided. Reports will be posted by each UKM and ORMAWA and will be approved by the leadership before corrections are made through the system. Correspondence can also be done through this application so that it can reduce the process of unnecessary meetings. So that each leader can submit letters of application and other things without meeting directly with the leader. Through this application, leaders can monitor student activities transparently, including goods, borrowing places, activities in the Student Activity Center Building and inventory of existing goods. Apart from that, UKM and ORMAWA leaders can report directly all activities through this application.

Keywords
Application, System, UKM, ORMAWA

INTRODUCTION

Manado State Polytechnic students have lots of UKM and ORMAWA activities. Unfortunately, these student activities cannot be maximized due to budget limitations or lack of development from the campus or sponsors. Student works in the form of scientific papers, final assignments or applied products, are currently still just memories because they have not been developed. Generally, these works and products are only prototypes or miniatures. In fact, many of them are just writings in the thesis in the form of final reports or simulations without being developed into a real product or tool that functions well. Likewise, products that have been finished and function well cannot yet be used by society or industry because they still need to be developed further. In terms of marketing, these products are still very difficult to sell because there are no facilities that can market these products to the right buyers. On this basis, currently we need an information system in the form of an interactive website that can promote student works and create an interactive system that can facilitate students and the industrial world in marketing student products. Likewise, through this application, the industrial world and society can post their needs so that students can create solutions and products for these needs. This information system will accommodate and display all student work to society and industry and become a medium for transactions and information with industry and society. This information system will make students more enthusiastic in developing their ideas in the form of marketable products. In this way, mutually beneficial communication will occur between students, the industrial world and society. This research will really help the Manado State Polytechnic in realizing a vocational campus which is a working partner for the industrial world to obtain products that suit their needs.

1. RESEARCH LITERATURE

According to Wahyono (2004:23), Management Information Systems in a company is a collection of management systems or systems that provide information aimed at supporting management operations and decision making in an organization which tends to be related to considering what information, for whom, and when. must be served. with computer-based information processing. A computer-based Management Information System (MIS) is a SIM that places computer data processing tools in an important position (Sutabri, 2005:99). Currently, when describing a modern SIM, what is meant is a computerized SIM, so the ideas about computerization in private and public organizations are actually related to the aim of improving the information system itself.OLTP is a form of data processing where each transaction is processed immediately, without delay in collecting transactions into batches. It has the characteristics of a large amount of data but the transactions carried out are quite simple such as insert, update, and delete. The main thing that becomes the concern of the OLTP system is to perform queries quickly and easily to be repaired and accessible. Online Transaction Processing (OLTP), which is a database concept that contains data processing to record daily transactions. Such as: daily sales transactions.

The characteristics of OLTP:

• Data access is read-write - insert, update, delete

• The orientation of the data in the application is the datataken from the business process

• Character data is not important

• Consistent data activity.

OLAP is based on a concept called a cube. The cube in OLAP is a multidimensional data structure (actual or virtual) that allows fast data analysis. It can also be defined as the ability to efficiently manipulate and analyze data from multiple perspectives. The arrangement of data into cubes aims to overcome the limitations of relational databases. Relational databases are not suitable for fast and close analysis of large amounts of data. Instead, they are better suited for manipulating records (adding, deleting, and updating data) that represent a series of transactions. Online Analytical Processing (OLAP), which is a database concept where data processing is used to analyze data.

Such as sales trends and age. OLAP features:

• Read-only

• Oriented on business subjects

• Data integrated

• Data is historical

• Uncertain data activity

Data extraction is the process by which data is retrieved or extracted from various operational systems, either using queries, or ETL applications. There are several data extraction functions, namely:

1. Automatic extraction of data from source applications.

2. Filtering or selecting the extracted data.

3. Sending data from various application platforms to datasources.

4. Changes in the data layout format from the original format.

5. Storage in temporary files for merging with extraction results from other sources.

Data transformation is a process where the raw data extracted is filtered and changed according to the prevailing business rules. The steps in data transformation are as follows:

1. Mapping the input data from the original data schema to thedata warehouse schema.

2. Converting data types or data formats.

3. Cleaning and removing duplication and data errors.

4. Calculation of derivative or initial values.

5. Calculation of aggregate or summary values.

6. Checking data reference integrity.

7. Filling empty values with default values.

8. Merging data.

The last process that needs to be done is the process of loading the data obtained from the transformation into the data warehouse. The way to load data is to run SQL scripts periodically.

The concept of Information Management has been defined as an organizational ability to create, maintain, retrieve information at the right time, in the right place, and to the right people, at low cost, used as the best media and used in decision making. In short, therefore, the key content involved in information management is managing information within an organization using modern information technology. The concept of an Information System is a system for receiving data/information as raw materials and through one or more transmutation processes, producing information as a product. It consists of the following functional elements related to the organization and the environment in the form of physical recording of data, processing - transformation according to the "special" needs of the organization, transmission - the flow that occurs in the information system, storage - presuming some expected use in the future, recovery - searching forrecorded data, presentation - reporting, communication, and decision making - the inclusion of which is controversial, except to the extent that the information system is involved in decision making that concerns itself.

Transformation is a process where the extracted raw data is filtered and changed according to applicable business rules. The steps in data transformation are as follows:

1. Map input data from the original data schema to the datawarehouse schema.

2. Convert data types or data formats.

3. Cleaning and removing duplicate and data errors.

4. Calculation of derivative or initial values.

5. Calculation of aggregate or summary values.

6. Checking the integrity of reference data.

7. Filling empty values with default values.

8. Data fusion.

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2. METHOD

Research Stages

The research stages that will be carried out include:

1. Data Collection.

2. System Analysis

3. System Design

4. System Configuration

5. System Implementation

6. System Simulation

7. System Testing.

3. RESULT

The admin dashboard page provides a real-time summary of user data, including the number of registered users, activity statistics, and current information about the organization. The intuitive design makes it easier for admins to monitor and manage user data. This feature also allows admins to take quick action, such as deactivating an account or editing user

information.

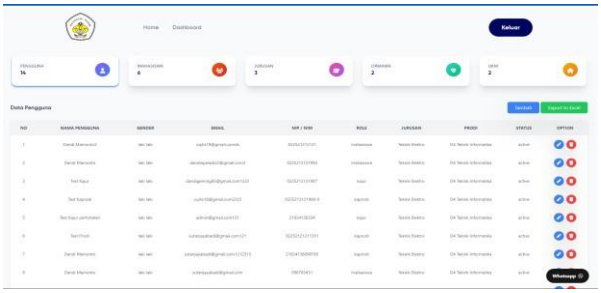

Fig 1: Admin Dashboard

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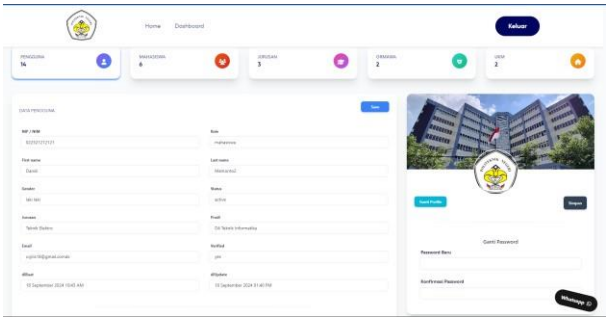

Fig 2: User Details

The user details page provides complete information about each user, including name, email, role, and membership status. Admins can view a user's activity history and interactions with the system, as well as access options to edit or delete accounts. The structured design makes it easier for admins to find and manage dataefficiently.

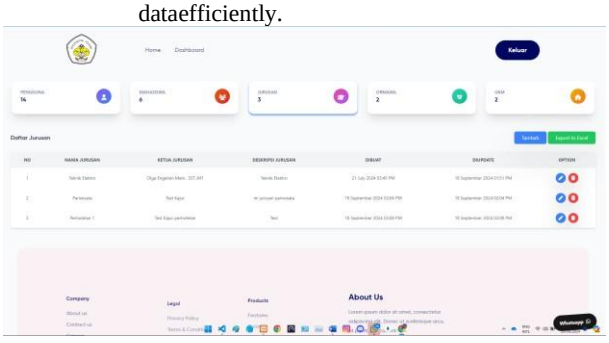

Fig 3: Ormawa List

The "Ormawa List" page displays a list of student organizations registered at the State Polytechnic. Users can see important information about each organization, including name, chairman and status. This page is designed to provide an overview of organizational activities, make it easier for new members to find suitable organizations, and support collaboration between organizations in various campus activities.

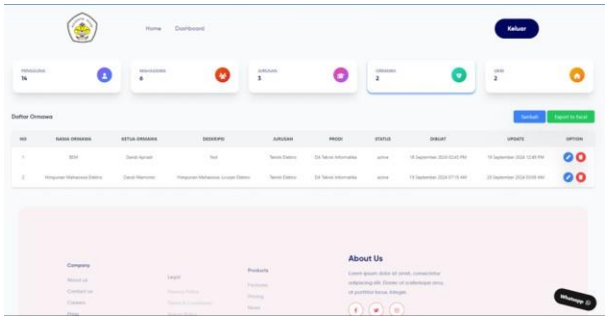

Fig 4: Ormawa Details

The "Ormawa Details" page provides in-depth information about a particular student organization. Users can see the name of the organization, chairman, description, department and related study programs. In addition, this page displays a list of activities and events that have been or will be implemented by ormawa, providing insight into their role and contribution on campus. This page aims to introduce the organization to new members and the campus community in general.

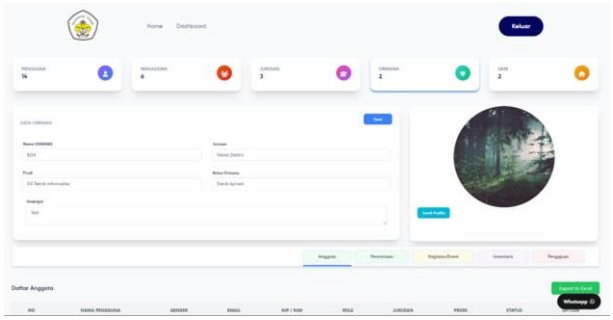

Fig 5: Ormawa Members

The "Ormawa Members" page displays a complete list of members of a student organization. Users can see the name, role and contact information of each member, including the chairman and administrators. This page also allows admins to add or delete members and edit existing information. With this feature, it is hoped that transparency and communication within the organization can be maintained, as well as facilitating coordination between members.

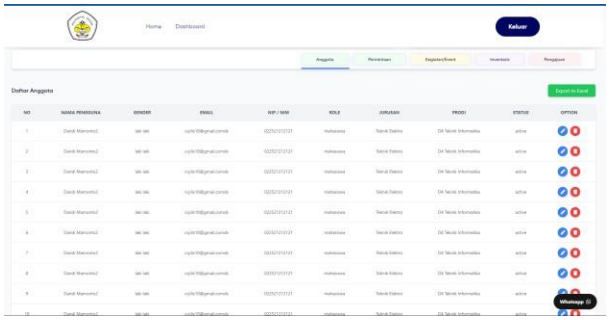

Fig 6: Ormawa Features

The "Activities or Events" page presents a complete list of activities organized by student organizations. Users can see details of each event, including date, location, description, andhow to register. This feature also allows users to register directly for activities of interest. This page aims to increase student participation in various events, strengthen the

community, and provide the latest information regarding ormawa activities.

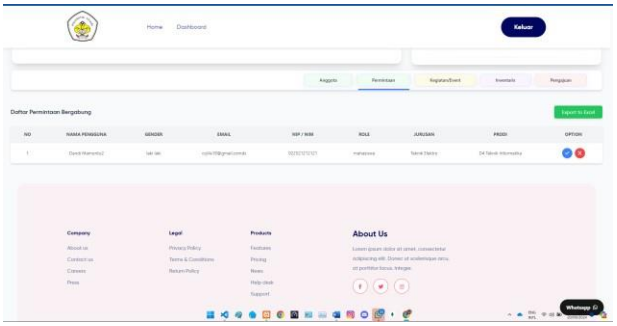

Fig 7: Events

The "Request to Join Ormawa" page provides a feature for students to submit a request to join a student organization. Users can fill out a form that includes personal information, reasons for joining, and interest in ormawa activities. Admins can easily review and manage these requests, provide decisions, as well as notify applicants about the status of their applications. This page aims to facilitate the registration process for new members and strengthen student participation in organizational activities.

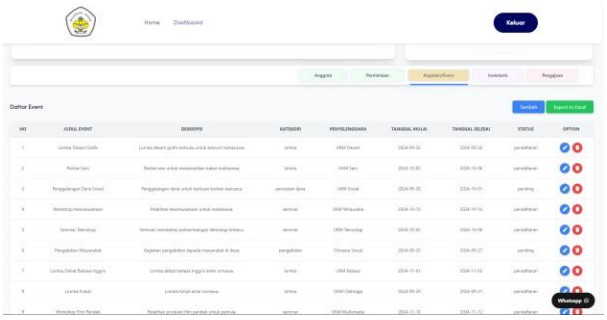

Fig 8: Joint Ormawa

The “Add Ormawa” page allows admins to register new student organizations into the system. Users can fill out the form with important information such as the name of the organization, chairman, description and category. This feature is designed to make it easier to manage student organization data and encourage the formation of more organizations in the campus environment. After filling in, the admin can save the data that has been entered to update the student organization database.

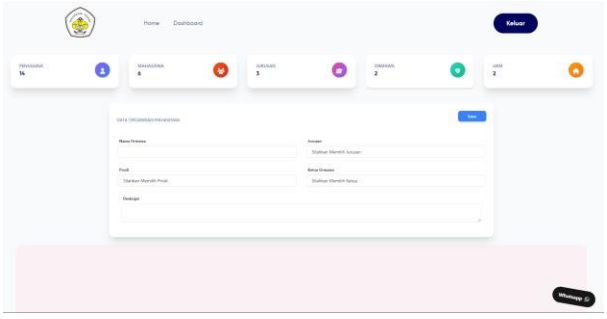

Fig 9: Add Ormawa

The "UKM List" page displays all Student Activity Units registered at the State Polytechnic. Users can view information related to each SME, including name, description and active status. This page is designed to make it easier for students to find and join UKM that suits their interests and talents, as well as strengthen community ties on campus. Search and filtering features are also provided to improve datanavigation and accessibility.

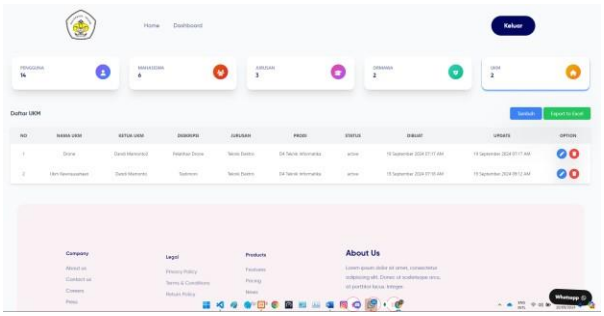

Fig 10: UKM List

The "UKM Details" page provides in-depth information about certain Student Activity Units, including history, vision, mission, and activities that have been carried out. Users can see the list of members, administrator contacts, as well as upcoming activities or events. This page aims to provide a complete overview of UKM, so that students can understand better about the organization and the decision to join. Interactive features, such as buttons to submit a join request, are also provided to make participation easier.

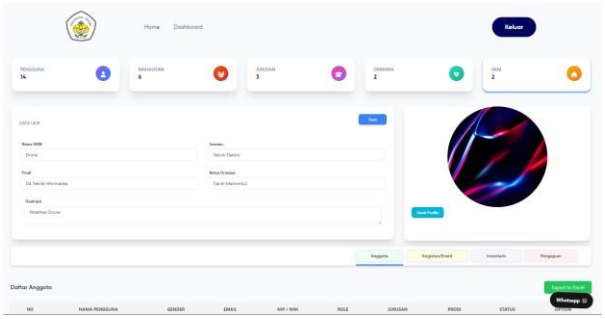

Fig 11: UKM Details

The "Student Dashboard" page provides a summary of important information for students, including activity schedules, latest announcements, and membership status in student organizations. Users can access personal data, such as grades and attendance, and view upcoming events. This dashboard is designed to make it easier for students to monitor academic and organizational activities, increasing their involvement and participation in campus life.

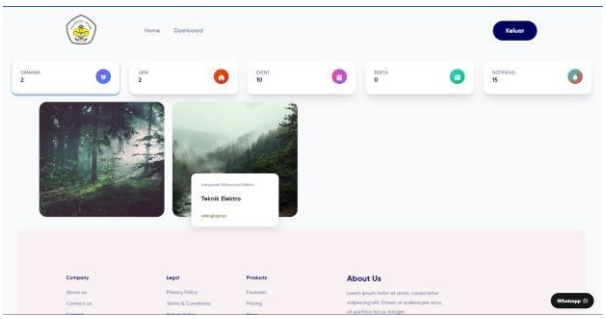

Fig 12: Student Dashboard

The homepage of the Ormawa State Polytechnic application provides important information such as activity agendas, the latest news and organization profiles. Users can easily differ sections of the app and find relevant events. Attractive andfunctional design ensures optimal user experience.

4. CONCLUSSION

It can be some conclusions that this system made the process of data ORMAWA and UKM becomes easier and faster. By this system the student can search and find the information of ORMAWA and UKM easily. The information and announcement can be accessed by the student any time. So, the student can ask many questions by system to the leaders.

5. ACKNOWLEDGMENTS

Many thanks to our ORMAWA and UKM who provide data to our research. Special thank you to our director who gave us opportunity and aims for us. Especially for the Vice Director of Student Affair who gave us data of students in several department who is the leader in ORMAWA and UKM. And thanks to our friends who support some ideas in this research.

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