

Utilization of Microsoft Excel for Ease of Management of Admission of Student Internships at RSUD Ngimbang Lamongan

Sujono¹, Eky Mita Nisayanti², Muhyiddin Zainul Arifin³

¹⁾Departement of Informatic, Faculty of Information Technology, University of KH. A. Wahab Hasbullah

^{2,3)}Departement of Information Systems, Faculty of Information Technology, University of KH. A. Wahab Hasbullah

Correspondence Author: sujono@unwaha.ac.id

Article Info :	ABSTRACT
<p>Article History :</p> <p>Received : 09-05-2023</p> <p>Revised : 21-05-2023</p> <p>Accepted : 07-08-2023</p> <p>Available Online : 13-08-2023</p> <p>Keyword : Technology, Microsoft Excel, Data Processing</p>	<p><i>Along with the development of technology and the improvement of socio-economic life in the community, the community's expectations for improving health services and the expectations of patients for health workers have also increased. An agency or institution needs a system or media that can help their needs in achieving work efficiency and effectiveness to improve the quality of service to the community. In this case, the COMMORDIC of the Ngimbang Regional General Hospital has not yet integrated its information system, so there are often difficulties in managing student admissions for internships. So an application or media is needed to facilitate KOMKORDIK in mapping and integrating information systems at Ngimbang Hospital. One of the data processing applications that can be operated freely or without payment and is easy to use is the Microsoft Excel application. Microsoft Excel is designed with functions to help solve administrative problems starting from the simplest to the more complex parts. In making this information system using the waterfall method because the system created is not too large and the scope of development is not so wide that it will be easier if you use the waterfall model, the approach is carried out systematically and sequentially. Making this Microsoft Excel-based information system can assist in processing student data such as student origin data, activity schedule data, and room data that has been provided. The existence of this information system can also help carry out data processing of PKL / Internship student activities effectively and efficiently</i></p>

1. INTRODUCTION

Patient demands on health workers will decrease if the quality of service is optimally increased (Imbalo, 2007). Besides that, the development of information technology along with increasingly sophisticated computerized technology in a relatively short and fast time has had a big influence on various aspects of human life at every level of society. The Information System is an example of the application of the rapid pace of development of information technology, especially in the area of health services at the Ngimbang Regional General Hospital.

One example of previous research developed by Shohabatussa'adah and Muasomah from Sharia Accounting, Faculty of Islamic Economics and Business, IAIN Pekalongan on "Utilization of Microsoft Excel in Assisting the Preparation of Financial Statements at Tpq An-Najah Tirto

Pekalongan" has an important role in preparing the system accounting information on financial statements. Microsoft Excel is implemented here, the user only makes journal entries, only financial report ledgers like other accounting software. By using sheet formulas with other sheets, one file with another file becomes related. By using accounting software, the information system will be faster. Likewise, at TPQ An-Najah the speed of producing a financial report is faster and the error rate is smaller.

With a data information system, it is expected that data processing will be easier and more efficient. Recording and processing of PKL/Intern student data is the responsibility of the head of KOMKORDIK and its members, where the acceptance service needs to be done quickly and precisely to obtain information. But in reality, the processing and presentation of data in the COMMORDIC section of the Ngimbang Regional General Hospital is still carried out in the form of books or archives, so errors often occur and even data archives are lost or damaged because there are too many records.

So that a solution was found regarding One of the data processing applications that can be operated freely or not paid for and is easy to use is the Microsoft Excel application. Microsoft Excel is a part of Microsoft Office that was created with the function to process worksheets or also known as a spreadsheet program. Microsoft Excel is a media or software that is used for automatically designed data processing functions which includes various parts of basic calculations, graphing, use of functions and formulas as well as data management.

This is a solution to overcome some of the problems in admissions management, namely by "Utilizing Microsoft Excel-based Applications for Ease of Management of Acceptance of Student Activity PKL/Interns at Ngimbang Lamongan Hospital". With this Microsoft Excel-based application for the administration of student admissions for PKL/Internships, it is hoped that universities working with hospitals will find it easier to place their students in spaces that are still available and can be occupied for PKL/Internship activities.

2. METHOD

The development of "Utilization of Microsoft Excel-based Applications for Ease of Acceptance Management of PKL/Intern Student Activities at Ngimbang Lamongan Hospital" has several models in the waterfall model (linear sequential model). The reason for using the waterfall model in making this information system is because the system created is not too large and the scope of development is not so broad that it will make it easier to use the waterfall model, the approach is carried out systematically and sequentially (Badrul & Preface, 2021). Broadly speaking, the waterfall method Software development with the waterfall method is divided into five main stages. These stages include analysis of system requirements, system design, system implementation, system testing and maintenance. The workflow of the software development method with the waterfall method can be seen below :

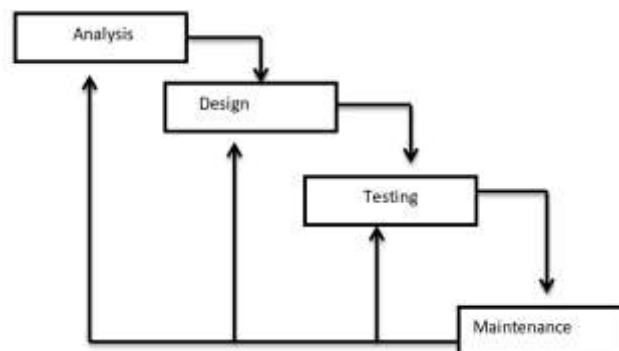


Figure 1. Waterfall Method

a. Software Requirements Analysis

The requirements search process is intensified and focused on software. To find out the nature of the program to be made, the software engineer must understand the information domain of the software, for example, the functions needed, the user interface, and so on. The need for analysis at this stage includes data that needs to be entered into the system including room data, activity schedules, organizational structure, types of services, related contacts and information about the acceptance of PKL/Intern students.

b. Design

The design must be able to implement the requirements mentioned in the previous stage. Like the two previous activities, this process must also be documented as a software configuration. The system design is made so that it is not confused with the system that is applied so that it can be easier to use. The design at this stage includes the implementation of a menu system that is made according to the needs of the relevant agencies.

c. Testing/Verification

Something that is made must be tested. Likewise with software. All software functions must be tested, so that the software is free from errors, and the results must match the requirements that have been previously defined. Testing the system at this stage is by testing the menu that is displayed by inputting data on PKL/Intern students in a predetermined room.

d. Maintenance

Maintenance of software is required, including development, because the software that is made is not always like that. When it is run, there may still be small errors that were not found before, or there are additional features that do not exist in the software. Development is needed when there are changes from external companies such as when there is a change in the operating system or other devices.

3. RESULTS AND ANALYSIS

a. System Design

In building an application, first, prepare a system design that is suitable for the application you want to make. So the researcher made a Use case diagram. Use Case Diagram is a description of the functionality of a system so that system users understand and understand the usefulness of the system to be built. Use cases are used to model and state the units of function or services provided by the system to users. Use case diagrams can be very helpful in compiling the requirements of a system, communicating the design with the client, and designing test cases for all the features in the system (Kurniawan, 2018). The diagram below that there is 1 level of users who can use this system, namely administrative staff.

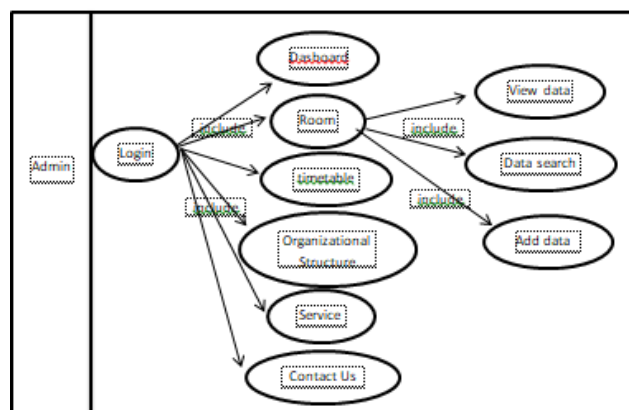


Figure 2. The Level of Users

b. Testing and Discussion of the System

System testing is the final stage in system development, at this stage logic and functions will be tested so that it is feasible to implement. The following are the results of testing using several test scenarios in order to get the results that are as expected.

No.	Statement	Answer				
		SS	S	BS	TS	STS
1	The appearance of the system is very good and easy to use.	3	2	0	0	0
2	The system makes the work of employees easier.	4	1	0	0	0
3	The system is already working according to its usability and function.	2	3	0	0	0
4	The system has been able to produce output in the form of PKL/Intern student information.	3	2	0	0	0
5	The system is in accordance with the needs of the agency.	2	3	0	0	0
Total		14	11	0	0	0
Percentage		56 %	44 %	0	0	0

Figure 3. The result of functional system test

1. Login Page

It is an implementation of the dashboard login page of the system "Utilization of Microsoft Excel-based Applications for Ease of Acceptance Management for PKL/Intern Student Activities at Ngimbang Lamongan Hospital". This page is the first display that will appear when the admin actor accesses the application.



Figure 4. Login Page

2. Room Menu Page

Is the Implementation of Room Menu Pages. This page is a display that shows several menus available at the Ngimbang Regional General Hospital as information for the University if they want to register their students or students for PKL / Internship activities. There are 19 rooms available at the Ngimbang Regional General Hospital.



Figure 5. Room Menu Page

3. Quota Menu Page

Is Implementation of Quota Menu Page. This page is a display of the Outpatient Installation Room which is marked in red as information to certain universities not to place their students in that room because it is declared full.



Figure 6. Quota Menu Page

4. Schedule Menu Page

Is Implementation Schedule Menu. ”. This page is a display that shows some student schedule data according to the room accompanied by the number of participants during the PKL/Internship activities. There were students from Muhammadiyah Lamongan University and students from the STIKES HUSADA JOMBANG. The university can see this menu before registering its students or students so that double data does not occur.

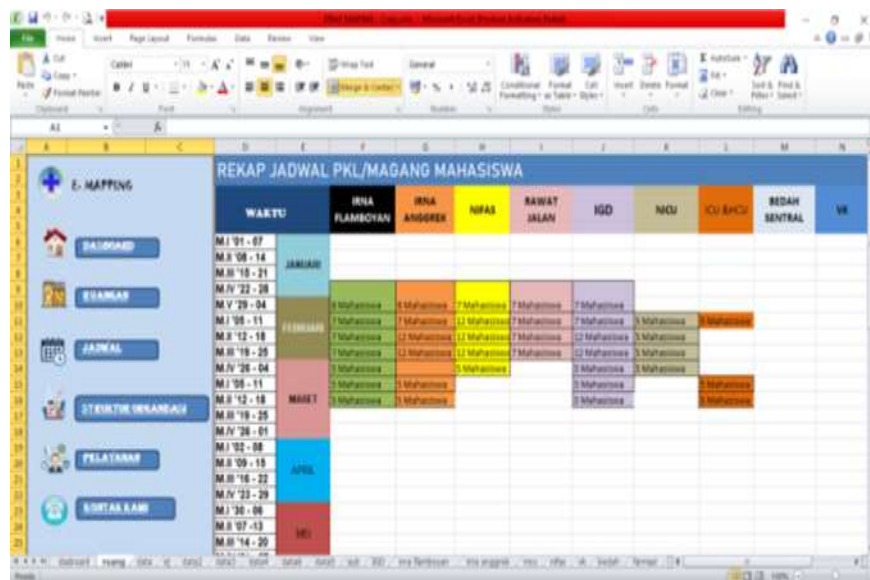


Figure 7. Schedule Menu Page

5. Student Data Page.

Is the Implementation of the Student Data Menu Page according to the room. This page is a display that shows some student data according to the Emergency Room that was occupied during the PKL/Internship activities. There are 7 students from Muhammadiyah Lamongan University and 5 students from STIKES HUSADA JOMBANG. The university can see this menu before registering its students or students so that double data does not occur.

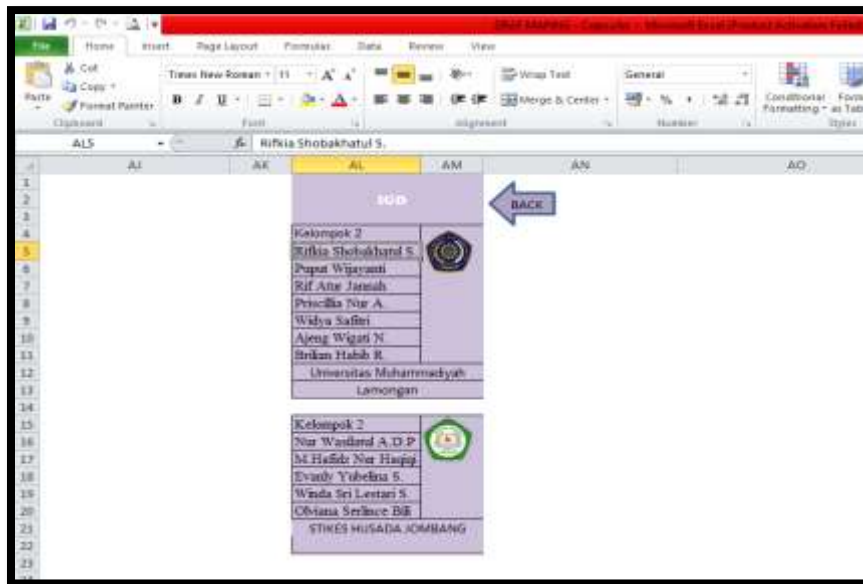


Figure 8. Student Data Page

6. Organization Structure Menu Page.

Is the Implementation of the Organizational Structure Menu. This page is a display that shows some data on the organizational structure of the KOMKORDIK at the Ngimbang Regional General Hospital. This display is used as important information so that we know more about the people who will guide us during PKL / Internship activities at the Ngimbang Regional General Hospital.

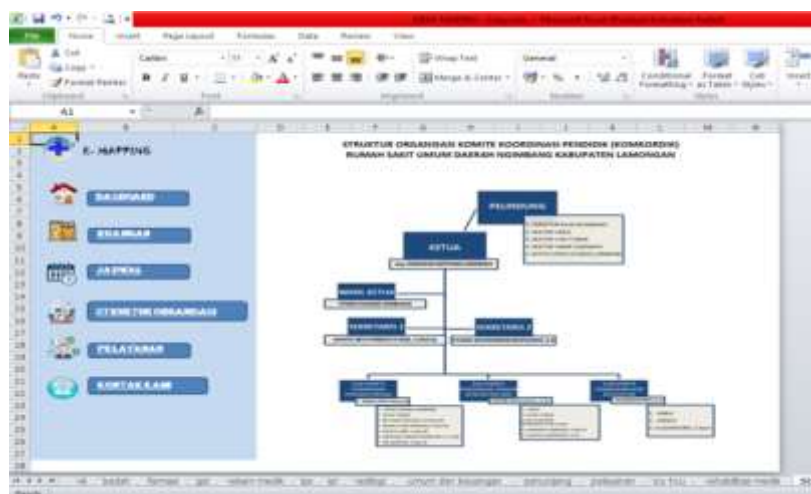


Figure 9. Organization Structure Menu Page

7. Display Service Menu

Is the Implementation of Service Menu Pages. This page is a display that shows several activity agendas while at the Ngimbang Regional General Hospital. This display is used as important information so that we know more about what activities have been scheduled so that when adding an activity agenda there are no double activities or clashes with other activities that take priority.

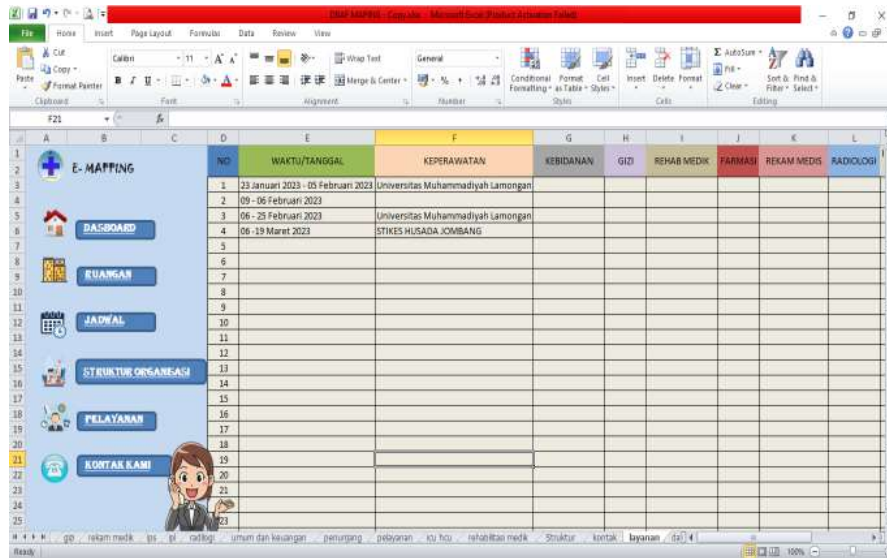


Figure 10. Display Service Menu

8. Our Contac Menu Page

Is an Implementation of Our Contact Menu Page. This page is a display that shows several numbers and contacts that can be contacted when the University registers its students for PKL/Internship activities at the Ngimbang Regional General Hospital. This display is used as important information so that we know more about the contact for further information about the acceptance of PKL / Internship students.



Figure 11. Our Contac Menu Page

4. CONCLUSION

Based on the results of Field Work Practices at the Ngimbang Regional General Hospital, namely in the form of an Information System Utilization of Microsoft Excel-based Applications for Ease of Acceptance Management of Student Activities PKL/Interns at Ngimbang Lamongan Hospital, several conclusions can be drawn as follows:

1. The design of an Information System Utilization of Microsoft Excel-based Applications for Ease of Management of Acceptance of PKL/Intern Student Activities at Ngimbang Lamongan Hospital has been completed based on the results of an analysis of the needs and work environment at the Ngimbang Lamongan Regional General Hospital.
2. Making this Microsoft Excel-based information system i can assist in processing student data such as student origin data, activity schedule data, and room data that has been provided. The existence of this information system can also help carry out data processing of PKL / Internship student activities effectively and efficiently.
3. The use of this information system can minimize the occurrence of clashes in the placement of students from certain universities in filling up the empty room quota.

5. DECLARATION OF COMPETING INTEREST

We declare that we have no conflict of interest.

6. REFERENCES

- Andriyani, D., Harahap, E., Badruzzaman, F. H., Fajar, M. Y., & Darmawan, D. (2019). Microsoft Excel Application in Solving the Average of Group Data Problems Microsoft Excel Application in Solving the Average of Group Data Problems. 18(1), 41–46.
- Anthonie, R., Studies, P., & Information, S. (2019). STUDY PROGRAM GRADUATE SOCIOLOGY FISIP. 10(2), 501–512.
- Cell, Z., & Regency, S. (2018). Journal page: http://jurnal.stmik-dci.ac.id/index.php/jumantaka/LPPM_STMIK_DCI page: <http://lppm.stmik-dci.ac.id>. 1(1).
- Diah, A., Putri, I., Mantofani, R., Hak, M. Z. El, & Saefullah, A. (2020). Utilization of Microsoft Excel to Simulate the Graph of Electric Forces of 3 Point Charges to Determine the Position of the 3rd Charge with Zero Electric Force. 3(1), 368–374.
- Excel, M. (2021). USE OF MICROSOFT EXCEL TO ASSIST IN THE PREPARATION OF FINANCIAL REPORTS AT TPQ AN-NAJAH TIRTO PEKALONGAN The digital era is characterized by. 4(1), 28–35.
- Hidayati, N. (n.d.). The Use of the Waterfall Method in the Design of a Sales Information System. 3(1), 1–10.
- Islahuddin, B. N., Wicaksono, S. A., & Purnomo, W. (2020). Development of an Internship Information System to Assist Intern Student Administration Process (Study on: State Civil Service Agency). 4(5).
- Julaeha, S. (2019). SOCIALIZATION OF MICROSOFT EXCEL OPERATIONS FOR. 02(03), 280–286.
- Kurniawan, T.A. (2018). USE CASE MODELING (UML): EVALUATION OF ERRORS IN PRACTICE USE CASE (UML) MODELING: EVALUATION OF ERRORS IN PRACTICE. 5(1), 77–86. <https://doi.org/10.25126/jtiik.201851610>
- Luh, N., & Erni, G. (2019). The Implementation of a Village Financial Administration Teaching Model through Microsoft Excel Program. 5(6), 19–34.

- Najilah, N. (2019). Application of Microsoft Excel in the financial reports of the Jaya Palm Cooperative.
- Nurrahman, D., Aulianita, R., Nisa, K., Informatics, T., Makassar, K., & Timur, J. (2019). MICROSOFT EXCEL TRAINING AND INTERNET USE TO IMPROVE INFORMATION AND SERVICES. 1(2), 5–10.
- Ogearti, R. (2020). IDENTIFICATION OF CONSTRAINTS IN USE OF MICROSOFT EXCEL. 11(2), 339–350.
- Patmawati, H., & Santika, S. (n.d.). Use of Microsoft Excel Software as an Alternative to Statistical Data Processing for Final Level Student Research. 124–129.
- Fractions, M. (2020). Analysis of Student Motivation at SMPN 8 Cimahi Using Visual Basic Media for Applications Based on Microsoft Excel at. 3(2), 133–140.
- Pedagogic, J. R. (2019). Dwija is a scholar. 3(2), 156–161.
- Youth, P. T. (2020). Journal of wira pratika vol.7 - july 2020. 7, 68–93.
- Programs, E. (2019). IBM Utilization of Microsoft Word in Reporting Governance for PAUD Korwilcam Jambu Teachers. 2(2), 108–113.
- Profile of 2022 Ngimbang Regional General Hospital Page I. (2022).
- Rosdani, R., Waliansyah, R. R., Floor, G. P., Ji, K., & Timur, S. (2020). INFORMATION SYSTEM OF DATA COLLECTION OF STUDENT INTERNSHIP AT UPT-TIK UNIVERSITAS PGRI SEMARANG. 5(Sens 5).
- Students, P., PGRI, S. M. P., Insani, A., Sari, R., Fitriyani, A., & Prabandari, R. D. (2020). Optimization of the Use of MS . Word and MS . Excel. 3(2), 95–104.
- Skill, K. H. (2019). Microsoft Excel Training as a Support for Hard Skills for Students at the YPSEI Palangka Raya Vocational School. 2(2), 280–286.
- Tasikmalaya, U.S. (2019). The effectiveness of using problem-based worksheets with the help of Microsoft Excel in computer program courses. 4(1), 23–30.
- Vocational, J. T., Studies, P., Engineering, P., & Tamansiswa, U. S. (2017). EFFECTIVENESS OF APPRENTICESHIP IMPLEMENTATION OF. 5(2), 246–254.
- Wedasuwari, A. M., Gede, D., Erawan, B., & Hayati, E. (2020). Microsoft Office Utilization Training for Heads of Environment in the Abianbase Village. 3(1), 55–61.