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To cite this article: J C Wibawa *et al* 2018 *IOP Conf. Ser.: Mater. Sci. Eng.* **407** 012134

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HRIS (Human Resources Information System) Design for Small for Micro, Small and Medium Enterprises

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Abstract. The purpose of this study was to create a system that handles human resource management for all MSMEs. This research design using descriptive method, using object oriented approach using Unified Modelling Language (UML), while for its development method use waterfall model. Indonesian economy is dominated by small and medium-sized enterprises, the growth of a business is ideally balanced with the improvement and management of good human resources. Through the development of HRIS (Human Resources Information System) for MSME, it is expected to help the untapped MSME in Indonesia to have access to a better human resource management and relevant with the development era. With the existence of human resource information system design on this MSME, then the adoption of technology, able to be applied to the business processes in MSME. The realization of standardization of an information system of human resource management at all MSME in Indonesia.

1. Introduction

Indonesia is a country with the largest GDP (Gross Domestic Product) in the ASEAN region, even on the world stage, Indonesia is ranked 16th [1]. Coupled with Indonesia's stable economic growth is at 5% annually [1], promising a bright future for this country. This can be achieved because of the significant contribution of MSME which is very high in Indonesia, that is equal to 60.34% and absorb 97.2% workforce. With a very large amount, which is about 57.9 million [2]. However, there are some problems that occur in MSME, which are generally divided into two factors, namely internal factors and external factors [3]. Internal factors, the first the issue of HR (Human Resources) and manajemen which became the central point of deciding the growth of a MSME, and the last on internal factors is the problem on the technology side, where the adoption of the technology - the technology has not been applied to the process - the business processes in MSME. External factor is, the management of human resources in computerized, problems - problems that occur in human resource management in MSME can be solved with better governance, namely governance computerized Human Resource Information System (HRIS).

HRIS is an excellent tool for Human Resource Planning (HRP). It improves unaccounted positions accurately and analyzes each job position by its title within the organization [4]. It also provides insight into the organization's training needs, chooses the right people to be trained and evaluates the effectiveness of the training program.

HRIS as a synergistic factor needed to improve employee relations to enhance the organization's competitive advantage [5]. By moving to HRIS, companies can keep more accurate and updated records,



so they can be better prepared for future growth in their companies. In most situations, HRIS will also lead to increased efficiency when it comes to making decisions in HR. Decisions must also improve quality - and as a result, employee and employee productivity must increase and become more effective [6].

The purpose of this study was to create a system that handles human resource management for all MSMEs. This research used to understand what concepts and content are needed in HRIS because HRIS will consist of various elements and if one of the elements is not working properly, it can cause the function of the entire system to fail. When all elements work properly and the system works properly, it will benefit the organization.

2. Method

2.1. MSME

According to the regulations of Law No. 20 Year 2008 on Micro, Small and Medium Enterprises (MSMEs) [7]. So we can see the difference between SMEs and MSMEs with the following (Table 1).

Table 1. Type of MSME.

No	Enterprises	Criteria	
		Asset	Turnover
1	Micro Enterprises	Max 50 million	Max 300 million
2	Small Enterprises	>50 million – 500 million	>300 billion – 2,5 billion
3	Medium Enterprises	>500 million – 10 billion	>2,5 billion – 50 billion

2.2. HRIS (Human Resources Information System)

Human Resources Information System (HRIS) is a computer application program that organizes human resources management in the company to support the decision-making process or commonly called the Decision Support System by providing various necessary information [8].

The researchers confirmed that whenever the HRIS function is computerized, rapid decision-making can be done in the development, planning, and administration of HR as data becomes easier to store, retrieve, update, classify, and analyze. Therefore, HRIS can strengthen the organizational character in general [9].

Rao conveyed that the HRIS was designed to achieve the following objectives [10]:

- To offer an adequate, comprehensive and sustainable information system of people and jobs;
- To provide up-to-date information at a reasonable cost;
- To offer data security and personal privacy.

3. Results and discussion

3.1. Use case

As an illustration of the proposed system on MSMEs is illustrated by the relationship between the actors and their main activities (Figure 1).

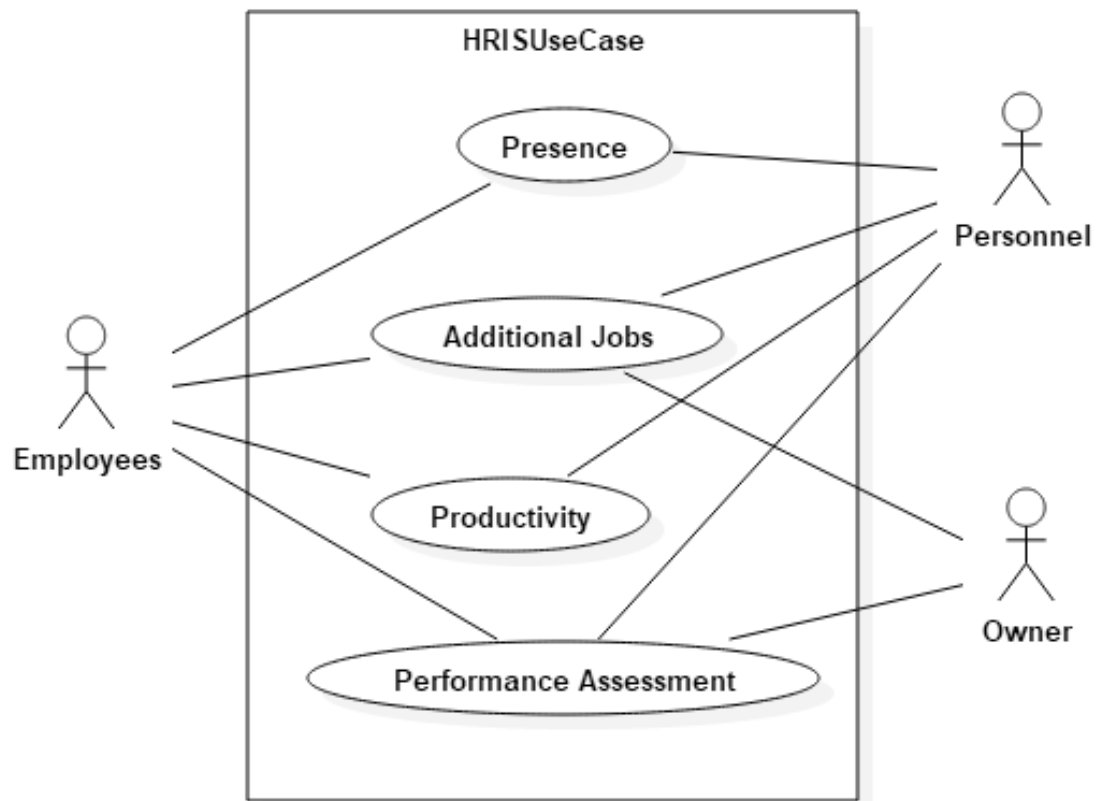


Figure 1. Use case HRIS.

3.2. Use case scenario of presence

3.2.1. Use case presence scenario. Use Case Presence Scenario (Table 2).

Table 2. Use case presence scenario.

Use Case Name	: Presence
Description	: The process of recording the presence of employees into the system.
Actor	: Employees, personnel
Goals	: Record attendance data by employee.
Main Scenario	
Action Actors	System Reaction
1. Employee to attend presence with finger print.	2. Displays identity and arrival time.
3. Employees performing the presence of returning home with finger print.	4. Displays the identity and return time.
6. Personnel prints monthly attendance recap.	5. Keep Daily Presence.

3.2.2. Use case scenario of additional job. Use Case Scenario of Additional Jobs (Table 3).

Table 3. Use case additional jobs scenario.

Use Case Name	: Additional Jobs
Description	: The process of assignment activities or additional work other than employee job desk.
Actor	: Employees, personnel, owner
Goals	: Record additional employee activities.
Main Scenario	
Action Actors	System Reaction
1. Employees choose menu schedule activities.	2. The system displays the activity schedule form
3. Employees fill out the activity form in accordance with the schedule	4. The system checks for any submission of activities.
	5. If there is, the system displays the message there is a submission
6. The owner receives the recitation message for approval	7. If rejected, the system will not process the activity.
	8. If approved, the system displays an employee select message for the job
9. Owners fill out the select form of employees who will be on duty	10. System will store activity data

3.2.3. Use case scenario of productivity. Use Case Scenario of Productivity (Table 4).

Table 4. Use case scenario of productivity.

Use Case Name	: Productivity
Description	: The process of recording the presence of employees into the system.
Actor	: Employees, personnel
Goals	: Record data of work per day or per period.
Main Scenario	
Action Actors	System Reaction
1. Employees take materials to work on. Then the personnel input to the system.	2. Saving data material taken by employees.
3. Employees provide the work and the remaining materials (if any). Then the personnel input to the system.	4. Saving data of work and material waste.
5. The personnel department prints the recap of each employee's work.	

3.2.4. Use case scenario of performance assessment. Use Case Scenario of Performance Assessment (Table 5).

Table 5. Use case scenario of performance assessment.

Use Case Name	: Performance Assessment
Description	: Assessment of the overall performance of employees.
Actor	: Employees, personnel, owner
Goals	: Record performance assessment data.
Main Scenario	
Action Actors	System Reaction
1. Personnel opens the performance assessment menu	2. The system displays assessment criteria based on attendance, additional tasks, and employee productivity.
3. Personnel selects employees who will be in value.	4. The system displays employee performance based on attendance, additional tasks and productivity through graphs.
5. Personnel assess employees.	6. System store performance appraisal results by superiors

3.3. Class diagram

Here is the design of class diagrams in Human Resource Information Systems on small and medium enterprises (Figure 2).

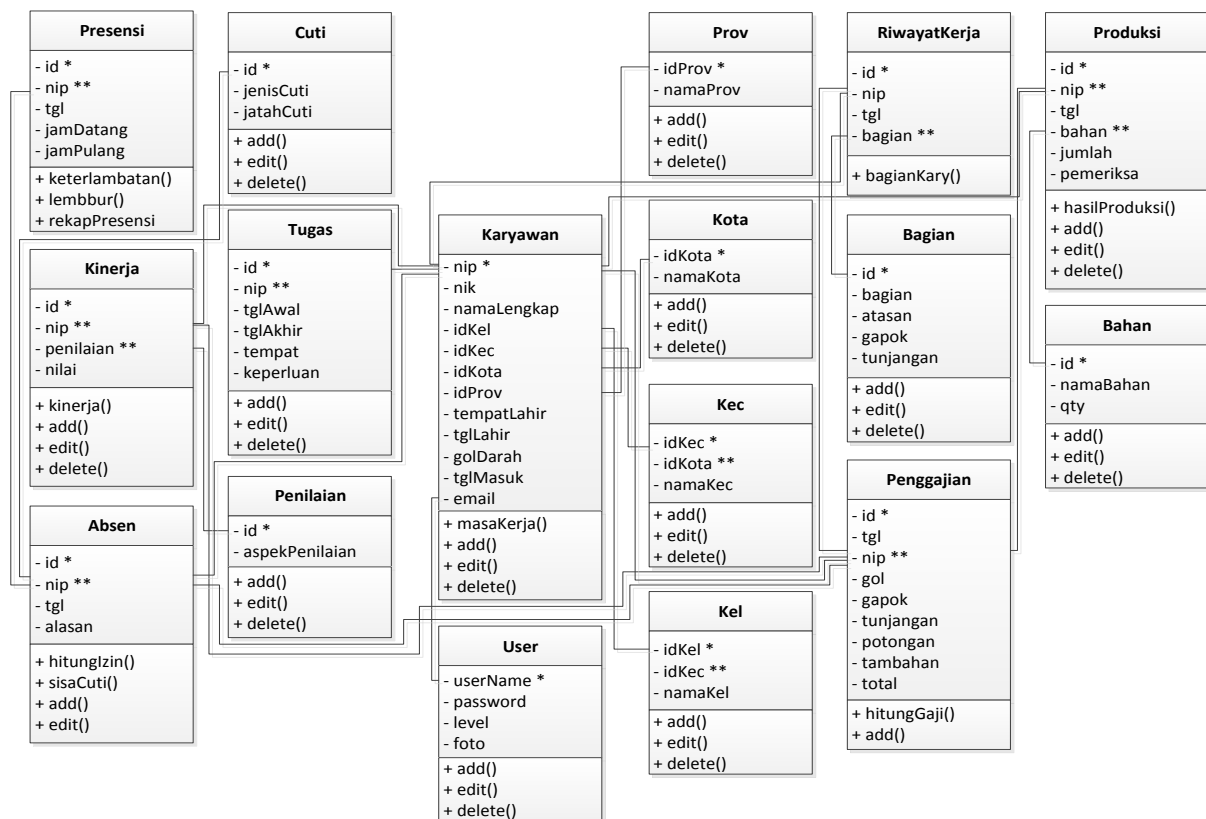


Figure 2. Class diagram.

4. Conclusion

Based on the results of the discussion that has been done in the previous chapter, it can be concluded that with the existence of human resource information system design on this MSME, then the adoption of technology, able to be applied to the business processes in MSME. The realization of standardization of an information system of human resource management at all MSME in Indonesia, especially in the field of handicrafts. Then the standardization of payroll obligation in accordance with the structure of salary based on Government Regulation No. 78 of 2015. So that employees who have high productivity, and have a good performance assessment can be managed properly.

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