SALARY INFORMATION SYSTEM  
(Case Study at SME’s Tiara Handicraft)  
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ABSTRACT  
The growth of Small Medium Enterprises (SME’s) today is rapid. The complexity of business activity becomes high. Salary system is one of the business activities that needed more concern. The purpose of this research is to understand the company salary system and analyze what is the weakness of the system in Tiara Handicraft. The solution given in this research is proposing the new system that more efficient and effective. The research method used in this research is descriptive research with case study approach. Data analysis will involve analyzing existed system characteristics and problems. The result of this research is a new system design which can solve the existed system problem. The process of making new system is designing the logic and physic of the system. Afterward designing database as central source of data and coding. Final process of system design is examine the system. Examining process is important to check the work of system as it design from beginning or still have bugs to fix.  
Keywords: Efficiency, Database, Design, SME’s  

I. INTRODUCTION  
Small Medium Enterprises is the fundamental subject for community economic condition. The influence of Small Medium Enterprises in minimizing unemployment are very crucial. With high influence to community economics, Small Medium Enterprises business activity increase rapidly. The complexity of business activity becomes high and effectiveness and efficiency is a must.  
To achieve efficiency and effectiveness, SME’s needs to move from manual system into computerize system and try to accept new technology development. The change needed because manual system still have many weaknesses around. Human involvement is still dominant, it makes human weakness weakened the system itself. Lack of accuracy is one of the weakness.  
With computerize system, the problem of manual system can be solved. One of the business activity which can be made by computerize system is salary information system. This system is very common in our daily lives, but distributing salary in this era is getting more complex, since amount of worker who work in company become higher, without good system information management the company can’t run well.  

Tiara Handicraft, a Small Medium Enterprise established in Surabaya in 1995 already found trouble with manual salary
system. Those weaknesses of manual system become great hindrance for SMEs to develop their business into new level. Tiara Handicraft try to develop new system to solve the problem. With computerize system, the complexity of productivity base salary information system which already run in tiara handicraft can be solved.

From these problems this research is entitled as “Salary Information System”.

II. THEORETICAL REVIEW
A. System
Term of system is very common in our daily life. This term usually describe many issues on technology science field. System itself can describe any other aspect that related with human daily life. Based on McLeod (2004:9), system is a group of elements that integrated in the same purpose to achieve a goal. Based on Jogiyanto (2005:1) “system is a set of procedures that are connected and integrated with each other to perform an activity to achieve a particular purpose”.

B. System Development Life Cycle
System Development Life Cycle can be used to develop system which most suitable used for solving company Problem. Based on Kendall (2011: 8) SDLC is a phased of analysis and design that holds the best developed system through the use of a specific cycle of analyst and user activities. Although each phase is presented discretely, it is never accomplished as a separate step. Several activities can occur simultaneously, and activities may be repeated.

C. Salary System
Salary systems are a collection of steps, policies and practices employers use to pay employees for their work (Mayhew, smallbusiness.chron.com: 2013). The objectives of the salary system are to pay each position as fairly as possible in relation to comparable positions at other places of employment and within budgetary limitations

D. System Design
System design is the determination of the overall system architecture consist of a set of physical processing components, hardware, software, people, and the communication among them, which will satisfy the system’s essential requirements (Dennis, 2012: 260). During system design process, researcher converts and translating the business requirements for the collection of design document and physical process with data model is the result of system requirement. Together, the design documents and physical models make up the blueprint for the new system.

III. RESEARCH METHODOLOGY
The type of research which is used in this research is descriptive research with case study approach. MacKenzie (2013:233) explain that Descriptive research is losing verbal analogy and metaphor in order to describe phenomena. There is no much endeavour to explore or explain why a phenomenon can occurs, but just to state that it does.

Qualitative data represents small numbers of cases such as situations, experiences, or events with using data from observations, interviews, or archives that are usually not chosen using probabilistic methods (Lynch, 2013: 17). The interpretation of data analysis is the process of bringing order, structure and meaning to the mass of collected data.

The step of data analysis of this research are:

1. Research the existed system
Systems analyst prepares a systems proposal that summarizes what about the users, usability, and usefulness of current systems (Kendal, 2011:10). That really helpful to find motivation of user from using current system and user expectation in the future.

2. Analyzing the problem of the existed system
The systems analyst needs to know the details of current system functions: who,
what, where, when, and how of the business under study (Kendal, 2011: 10). This is important to know what kind of thing that needs to be analyzed and find the problem.

3. Designing the new system
   The design phase decides how the system will operate and work in terms of the hardware, software, and network infrastructure that will be in place; the user interface, forms, and reports that will be used; and the specific programs, databases, and files that will be needed (Dennis, 2012:14).

IV. RESULT AND DISCUSSION
A. Description Section
   Tiara handicraft was established in 1995. It was started by Titik Winarti, the creative director of Tiara Handicraft as hobby in spare time. Titik Winarti started a production of a little household souvenir that familiar with daily activities. The production developed in sequent and fortunately it has been become a small business that could support the family income.
   Tiara Handicraft build training and workshop to reach skillful and developed human resources. At the beginning, Tiara Handicraft teach and held some training and workshop for some handicapped teenagers. Tiara handicraft hope that handicapped teenager eventually could become a ready-to-work human resources and moreover improving their creativity.
   Titik Winarti and all of people in Tiara Handicraft wanted to show the world and communities that they, with their limitation, could still participate in work life as a normal worker, and not treat them as normal people burden. An opportunity is their biggest hope. Their existence in a business world makes them think that they want to increase their capability.

B. Existed Information System
   Information system that already existed in Tiara Handicraft is Manual System. Manual system record every activity related with salary distribution in a book. Salary can be determined based on productivity and paid monthly. Productivity based salary system is a salary calculation system based on how much work that can be done by worker, in other word worker productivity. The advantage of productivity based salary in Tiara Handicraft is handicapped person can compete with normal people in the term of quality.

C. The Problem of Existed System
   Identifying problem is very important to describe system weakness into detail. The purpose of analysis system is identify and evaluate problem, needs and solution. Here is the problem identification of existed system in Tiara Handicraft:
   1. Employee work recorded manually and less control. Validity of data can’t be maintain.
   2. Miscommunication between departments
   3. Salary calculation is not efficient because calculated manually.
   4. Production progress can’t be control effective and accurate because information isn’t up to date
   5. Paper base archives is very fragile.

D. Designing the new System
   1. Context Diagram

   Figure 2: Context Diagram
   Source : Processed Data, 2014
   Context diagram explain system relationship integrally and external entity. All party involved in system are:
   a. Customer
      Party who made order data. All customer needed will be recorded in order data.
   b. Owner
      All report as output of system such as order, salary and process report will be presented to owner.
c. Worker
All worker personal information will be recorded in worker data.

d. Operational
Data flow from Operational to system are product and process data. Both data is very important in determine and calculate worker salary.

2. Levelled DFD
Levelled DFD is a description of context diagram which contain process involved inside of system including data store. Computer based salary information system Levelled DFD described in general from level 0 to more detailed in level n. The basic DFD form is DFD level 0, there were four main process. There are Login, Data Master, Transaction, and Report.

3. Database Design
Database is one of the most important component in information system, because database have function as basic place of information serve for user. That is why in designing database have to prepare what kind of table and entity needed for system information that designed.

Entity and attribute which formed salary information system like this:

a. Admin
   Is an entity which store administrator data with primary key admin_id

b. Customer
   Is an entity which store Customer data with primary key customer_id

c. Order
   Is an entity which store order data with primary key order_id

d. Worker
   Is an entity which store worker data with primary key worker_id

e. Product
   Is an entity which store product data with primary key product_id

f. Job
   Is an entity which store job data with primary key job_id

g. Work Plan
   Is an entity which store Work plan data with primary key work_plan_id

4. Table Relation
Table relation use to describe the connections between different database tables. Every component of table relation are connect each other and very important. Table relation can describe relationship of each entity with one to many relationship and connection of every element.

![Program Table Relation](source: Processed Data, 2014)

5. System Implementation
System that already analyzed and designed in detail, technology has been selected and chosen. Afterward, the time for system to be implemented. System implementation step is a step of placing system so that ready to operated. This stage including with coding.

6. System Examination
System examination is very important to test wether the system can be run well as it design from beginning or still have bugs to fix. The examination start from login check, input the data master, simulating the transaction process and the last is printing the report.

V. CONCLUSION AND SUGGESTION
A. Conclusion
Computer based information system which newly build can be explained clearly in research result as suggestion to solve the problem of Salary System. This new salary information system is very useful in calculating and organizing data related with salary system, there are the benefit of using salary information system:

1) Useful in recording order
2) Useful in organizing worker data
3) Useful in organizing product with each own different job process
4) Useful in calculating salary data
After all, salary information system is very needed in processing data in more meaningful form in order to give easy way for user to make decision.

B. Suggestion

Based on research result that already done to Salary Information System in Tiara Handicraft, suggestion that can be give by researcher are:

1) In order to use computer based salary information system, company need one people who has specialty in organize system to maintain this program. Even from people who know computer in practice, there still need training and demo to understand this system.

2) To anticipate problem in using system, back up periodically is very important. Threat of system malfunction can be found anywhere. Rather than rebuild or filling the new database, back up is the best choice.

3) System development still possible to done since user need of data still improve in future.

References

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