Web-Based Internship Information System

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Abstract. The purpose of this study is to solve all the problems that exist in each stage of the internship process, starting from registration, selecting an internship place, selecting a supervisor, submitting an internship report and appraisal of internship reports. This study used descriptive research methods, the system approach method is an object oriented approach and the system development method is the Prototype Method. Data collection techniques are interviews, observation and literature. The result of this study is web-based internship information systems. This web-based information system can minimize errors in the process of managing the internship as a whole. This system can also provide information about internships to students in quick time.

1. Introduction

One of the academic business processes of an educational institution is the implementation of internship program for the students. Internship is an opportunity that employers offer to students interested in gaining work experience in particular industries. In this primer, learn more about what internships are and why students benefit from them [1]. Internship can help students learn to enter the workforce [2]. The internship process provides a good experience for students in practicing the theory that they get in school with practice in the workforce [3]. The main purpose of the internship program is to develop and strengthen students' skills and to prepare them for the profession [4].

A Senior High School has collaborated with several companies. This collaboration is done so students can do practical work at the company. Placement of students in the company in accordance with the field of expertise of students. Usually internship programs are carried out when students in 2nd year, are held for 3 months. In the implementation of internship, data processing internship in the form of payment of internship, submission of internship, collection of reports on internship and appraisal of internship has not been fully computerized, there are still processes that are recorded manually so there are still errors and difficulties in processing data. The process of making reports submitted to the principal still takes a long time because there is no integrated data storage. If there is information conveyed to students, it is still orally notified or posted on the bulletin board so that the dissemination of information about industrial work practices is less widespread.

Research on the information system of internship has been carried out by Donald A. Carpenter. Shortage of information systems workers, especially in rural areas as well as those smaller and start-up companies which have difficulty competing with larger and more-established companies in metropolitan areas, often has resulted in a blurring of the distinction between internships and part-time jobs [5]. Hence, the nature of the internship loses its meaning to employer, intern and school. Forging a thorough, more aggressive plan for information system internships requires considerable effort. Yet such a plan can result in meaningful internships that lead to part-time apprenticeships during college, and full-time post-graduation employment, hence overcoming shortages of information systems workers. This paper presents such a proactive plan successfully implemented by far-sighted enterprises.

A similar study was also carried out by Teguh Andrianto, Risky Aswi R. which aims to create a management information system for internship by using a web service at the University of Nusantara PGRI Kediri [6]. This information system includes the process of internship registering, activating...
logins, group share of internship, and supervisor share of internship, uploading internship reports and internship assessments. In the design and development of the system produces an internship information system that is integrated with academic information systems.

Silvia Rizka Febrianti, Lusi Melian also conducted a similar study. This study develops a web-based internship information system that can provide Puncak Pass Resort in the process of receiving and scheduling student internship, facilitating student attendance, and processing internship assessments [7]. Likewise for the school, the web-based internship information system is useful for providing information about the procedures for implementing the internship and submitting the final report.

The purpose of this study is to design a web-based internship information system that will assist the school in managing all internship activities, such as payment of internship, determining the place of internship, determining the supervising teacher, collecting reports and evaluating internship results.

2. Method
The system approach method used in this study is an object oriented approach using the UML (Unified Modeling Language) modeling method. Object-oriented approach is a way of looking at the problem of object perspective.

The system development method used is the Model Prototype. Prototyping is defined as the process of developing a working replication of a product or system that has to be engineered. It offers a small-scale facsimile of the end product and is used for obtaining customer feedback [8].

The following are the stages in the prototype method:
1. Communication
   Making a prototype begins with communication between the software developer team and the customer, in this case is the school. The software development team will hold meetings with the school to define the overall goals for the software being developed, identify the specifications of whatever needs are currently known, and describe areas where further definitions of the iteration are necessary.
2. Planning quickly
   Iteration of making prototypes is planned quickly and modeling (in the form of "quick design") is carried out.
3. Fast design modelling
   A fast design focuses on representing all aspects of software that will be visible to the end user (eg the design of the user interface or display format).
4. Making of prototype
   The design will quickly begin construction of the prototype.
5. Submission of systems / software to customers / users, shipping and feedback
   The prototype will be handed over to the school and then they will conduct evaluations of the prototypes that have been made beforehand, then finally will provide feedback that will be used to refine the specifications.

3. Result and Discussion
System design is the development of a new system proposed based on a system analysis that is running on an organization. The design of this system is used to solve the problems that occur in the system running at this time, so that it can facilitate an organization in carrying out its entire business process.

The use case diagram for the proposed system is described as follows Figure 1:
The use cases contained in the proposed internship system are as follows Table 2:
Table 2. Definition of Use Case and Descriptions

| No | Use Case          | Description                                                                                                                                                                                                                                                                                                                                                     |
|----|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Registration      | The process for students to create an account so they can log in.                                                                                                                                                                                                                                                                                                 |
| 2  | Login             | The process for actors to enter the system with their access.                                                                                                                                                                                                                                                                                                  |
| 3  | Managing Information | It is functional for the chief executive in managing all news/announcements regarding internship.                                                                                                                                                                                                                                                            |
| 4  | Managing Master Data | Manage master data in the form of majors, classes, students, companies, school advisers and users. Managing master data is a functional chief executive where the chief executive can add data, change data and delete data.                                                                                                             |
| 5  | Payment           | Payment is a functional treasurer to manage payments made by students, treasurers can add, change and delete data. In the payment process the chief executive and students can also see payment data.                                                                                                                       |
| 6  | Submission        | It is the functional chief executive to make internship submissions by determining the company for students to do internship and determine the school supervisor. And functional students to see data submission internship.                                                                                                             |
| 7  | Collecting Reports | It is a functional student to upload reports on internship activities, and functional chief executive and school supervisor to see students who have collected reports and can download the internship report.                                                                                                                   |
| 8  | Scores            | Scores are functional supervisor teachers to manage internship scores, supervisor teachers can add, change and delete score data. In this process students and the chief executive can see the score data.                                                                                                               |
| 9  | Report            | It is a functional chief executive, supervisor teacher, treasurer and headmaster. Where the chief executive and the headmaster can see and print the payment report, submission, report collection, scores. Treasurer can view and print payment reports. The supervisor can view and print reports on the collection of reports and scores report. |

Implementation of the main page interface of internship information system with the following menus Table 3:

Table 3. Implementation of Internship Information System Main Page Interface

| Menu         | Description                                                                 | File Name       |
|--------------|-----------------------------------------------------------------------------|-----------------|
| Home         | This menu is the page that first appeared when opening the internship information system application. | index.php       |
| About        | This menu is a menu that contains information about school profiles and an explanation of internship | profil.php      |
| Registration | This menu contains a list page form for students to create an account         | prakerin.php    |
| Login        | This menu contains a form for user login                                     | index.php       |
| Gallery      | This menu contains photos of the school                                     | gallery.php     |

Class diagrams are the mainstay of object-oriented analysis and design [9]. Class diagrams help us in visualizing the structure of classes on a system and are the most widely used types of diagrams. Class diagrams show the relation between classes and detailed explanations of each class in the design model of a system. During the analysis process, class diagrams show the rules and responsibilities of the entities that determine the behavior of the system, during the design step, the class diagrams play the role in capturing the structure of all the classes that make up the architecture which is created [10].
Testing on this Information System is using black box method. Black box testing focuses on the functional requirements of the software which is created [11] (Tabel 4).

Table 4. System Testing

| No | Testing Class   | Testing Item                                      | Type of Testing |
|----|-----------------|--------------------------------------------------|-----------------|
| 1  | Registration    | Register student account                         | Black Box       |
| 2  | Login           | User login process to enter the system            | Black Box       |
| 3  | Manage Master Data | Department Data           | Black Box       |
|    |                 | Class Data                                      | Black Box       |
|    |                 | Student Data                                    | Black Box       |
|    |                 | Company Data                                    | Black Box       |
|    |                 | Teacher Data                                    | Black Box       |
|    |                 | User Data                                       | Black Box       |
| 4  | Manage News     | Process of adding news data                     | Black Box       |
|    |                 | Process of changing news data                   | Black Box       |
|    |                 | Process of deleting news data                   | Black Box       |
| 5  | Payment         | Process of adding payments                      | Black Box       |
|    |                 | Process of changing payment data                | Black Box       |
|    |                 | Process of deleting payment data                | Black Box       |
| 6  | Submission of internship | Process of adding submission data | Black Box       |
|    |                 | Process of changing submission data             | Black Box       |
|    |                 | Process of deleting submission data             | Black Box       |
| 7  | Report collection internship | Process of uploading internship reports | Black Box       |
|    |                 | Process of downloading internship reports       | Black Box       |
|    |                 | Process of deleting internship reports          | Black Box       |
| 8  | Assessment      | Process of adding assessment data                | Black Box       |
|    |                 | Process of changing assessment data             | Black Box       |
|    |                 | Process of deleting assessment data             | Black Box       |
| 9  | Activity Report | Select the year period                          | Black Box       |

4. Conclusion

Based on the results of the analysis and design that has been carried out regarding the internship information system, can be concluded that this system help treasurers in managing payment internship and printing transaction evidence, help the chief executive in managing internship submission by determining the company where students carry out internship and distribution supervisor teachers and can print a letter of application for internship, can help data collection of reports, can help supervisor teachers in managing the score of the school and the score of the company to be the final score of internship, can help students to get information about internship easily, with integrated data can simplify making reports.

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