

Student Excellency Database System

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Abstract : Nowadays, the web-based system such as Database Management System or known as DBMS are widely use in every sector. With the existence d this system, the aim of increasing decision-making and organizational performance of a company will be realized. Currently, HEP still depends on manual processes and suggestions from the club's advisor in selecting students for a competition. The staff will select those who are potentially eligible based on the information that they already on hand such as the data that retrieved from google form. This circumstance poses a serious difficulty for HEP, namely, the limited number of potential students who can compete on behalf of the university in a competition. A Student Excellency Database System were designed and overall get the good result at the stage of field testing.

Keywords: Database Management System, Web-Based System, Information

1. Introduction

Student Excellency Program is a program managed by Student Affairs Department (HEP), Universiti Utara Malaysia. The purpose of this program is to select students to represent the university to participate in the competition held outside the university or national level competitions. A database management system that called Student Excellency Database System (SEDS) is designed for Student Excellency and Leadership Center (SELECT), Student Affair Department (HEP). All the data and information that collected will become reference for them to select the student that need to involve. For example, the student who involved in basketball tournament before will become one of the potential student that might giving the chance to involve in the coming competition based on the data or record. At the moment, there is a limited number of potential students who can represent the university in a competition. The purposed design of SEDS is to provide an easier, user friendly and manageable platform for HEP to find out the most suitable student that can representing the university to participate in the competitions. Student's information such as name, course, semester, and achievement will be listed in a report form.

User of Student Excellency Database System were categories into three roles, which are student, admin and staff from Student Affairs Department (HEP). The interface for each roles are definitely different in each dashboard. Figure 1, Figure 2 and Figure 3 are the interface for each of the role.

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Functionality that designed for student role are inserting their information, updating and viewing their information in anytime. Thus, approving, declining, searching, viewing, saving and printing the student information are the functionality for admin users. The admin also allow giving the feedback to those students who are declined after reviewing their information. Lastly, searching, viewing, saving and printing are the function that can handle by staff HEP on their dashboard.

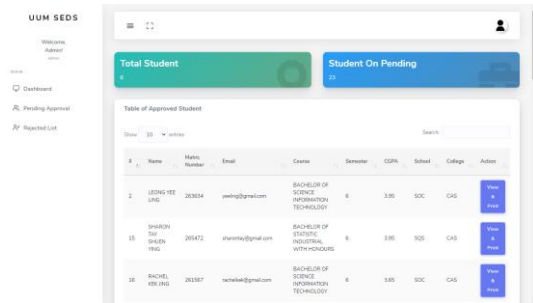


Figure 1. Admin Dashboard

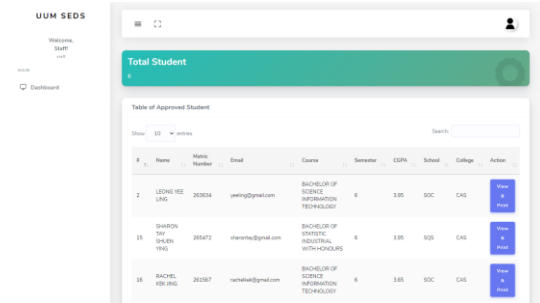


Figure 2. Staff Dashboard

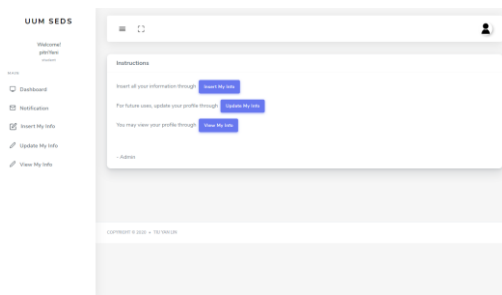


Figure 3. Student Dashboard

2. Materials and Methods

The methodology that used in this development of Student Excellency Database System (SEDS) is waterfall methodology. Figure 4 show the cycle of the methodology.

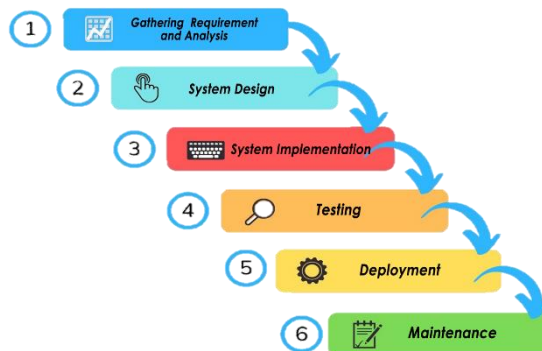


Figure 4. Waterfall Methodology.

Gathering requirements and analysis will be going on in the first stage of developing Student Excellency Database System (SEDS). An interview session was conducted with the client, FYP student, and supervisor to collect all the specific requirements such as problems faced and functionality of the system. In the stage of system design, FYP student will select the most suitable tools and programming languages for use in this project. Sublime Text and phpMyAdmin are selected as the tools that need in the development of SEDS. The languages are HTML, JavaScript, CSS, and PHP. The third stage that is system implementation will start the actual built-up process for the frontend interface, backend system, and database of a system. Thus, the student will ensure the system work as the client expected by integrating the unit test code once the system implementation is completed. SEDS system will be deployed in a testing environment (client-server) to test its performance, in this stage student has to make sure that the client won't face any problem when the system was deployed. Lastly, maintenance. This stage will cover system development following the introduction of the application and also the stage responsible for ensuring that the application is operating with the parameters envisaged. All the bugs and errors found in the system need to be documented and fix it as well as they can. The additional feature can be added in this stage if the client requests it [1].

3. Results and Discussion

The usability evaluation of Student Excellency Database System are carried on after the completion of system by the students studying in University Utara Malaysia and staffs from Student Affair Department. From the result of the usability evaluation, most of the respondent are both agree and strongly agree that they are satisfied with the ease of using and the design of Student Excellency Database System. Figure 5 and Figure 6 shows the result of usability evaluation.

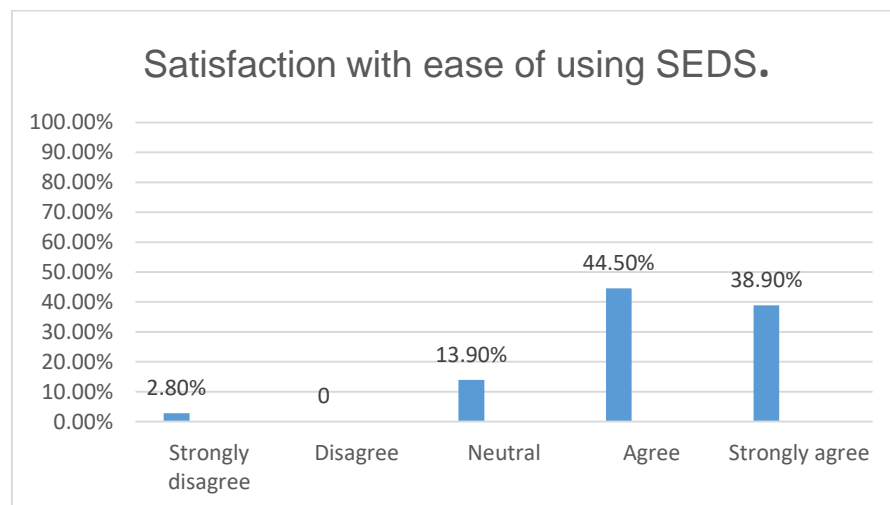


Figure 5. Satisfaction with ease of using SEDS.

According to Figure 5, 44.4% of respondents are satisfied and 38.9% are strongly satisfied with the “Student Excellency Database System”. 13.9% of respondents are neutral towards the system while only 2.8% gave a negative review on the SEDS.

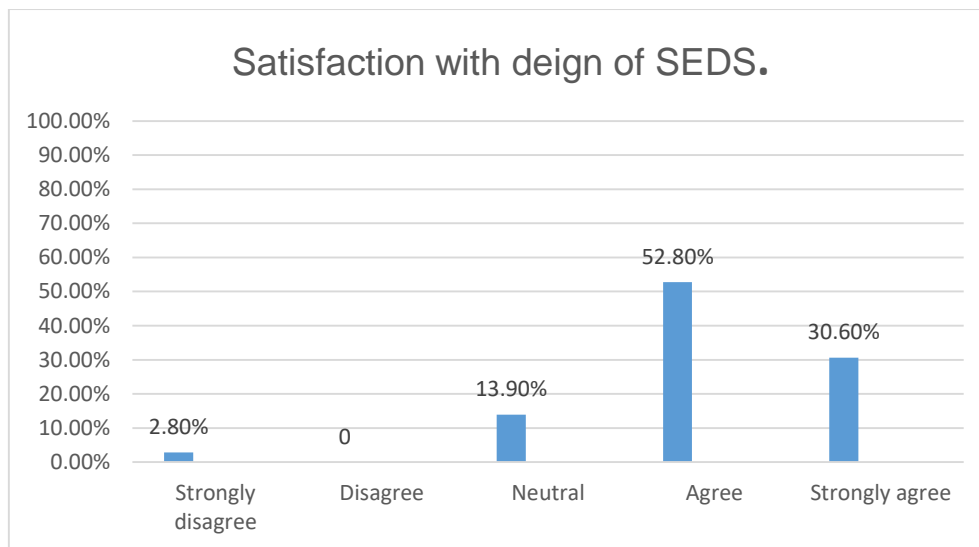


Figure 6. Satisfaction with design of SEDS.

According to Figure 6, 52.8% of respondents are satisfied and 30.6% strongly satisfied with the design of “Student Excellency Database System”. 13.9% of respondents feels neutrals towards the design while only 2.8% felt strongly dissatisfied with the design of SEDS.

4. Conclusion

Student Excellency Database System can be categories as Database Management System or DBMS that allow the Student Affair Department to manage the student information and provide the data files access for a computer program. As the result, majority of users of “Student Excellency Database System” are satisfied how easy and pleasing the design of the system. This means that the system proves its purpose of usage and appeal. Thus, Student Excellency Database System is a convenience, user-friendly and manageable platform for students and HEP staffs. The future work on Student Excellency Database System should focus on enhancing more functionalities such as provide statistic based on each section, that might make the task of HEP become more effective and efficient. With the developed SEDS, the staff in HEP can complete their job only in few clicks in this system, and the use of paper works will reduced. Thus, if a student is chosen for a competition, they will have the opportunity to obtain more experience, achieve greater success and improve their resume. Furthermore, the good reputation of the university will be appreciated and recognized by the community.

Acknowledgement

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References

- [1] McCormick, M. (2012). Waterfall vs. Agile methodology. MPCs, N/A.