Pre-Enrollment Mobile-Based Application (PREMA)

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Abstract. The Pre-Enrollment application is designed and developed to be used by college students as a new tool in processing their pre-enrollment. This application will assist the students in processing their pre-enrollment in a faster way by providing the updated checklist. The students can view their respective checklist. The Pre-Enrollment application will give updated information about the status of each class to the students by displaying the updated number of students enrolled under each classe which will determine whether a class is still open or closed for enrollment. The Pre-Enrollment application will compute the pre-assessment automatically including the tuition fee, miscellaneous and other school fees. The developed application performs several functionalities to accommodate the pre-enrollment process of college students. Thru the application the students can no longer experience long standing in queue for the processing of the pre-enrollment.

1. Introduction

Electronic-based network has brought widespread transformations in the way information flows in university campuses. Traditional face-to-face and paper-based campuses are now part of a more rich and complex environment where electronic networked information resources have grown in importance. Universities are traditionally highly decentralized organizations, so corporate information resources management is a challenge. Campuses offer students an information infrastructure to assist them in different aspects of university life.   And these infrastructures were traditionally based on two principal elements: paper document and face-to-face communication. By the end of the twentieth century, universities had a long experience in physical campus configurations, and had developed different spatial solutions in different geographical and cultural contexts. Enrollment is part of this infrastructure which needs the paper document and face-to-face communication aside from the assistance of the networked computer system [1].

An enrollment system is designed to perform the process involved in admission, pre-enrollment, assessment, and payment of the students. Face-to-face communication between the school officials and the students mostly happen in a huge situation during the pre-enrollment and assessment. Pre-enrollment is the process of providing information about the courses, schedule of classes, and tuition and other school fees of the student. During this process, long queue usually builds up and this has to be resolved by re-designing the enrollment process from time to time.

This project is designed to focus on a possible solution which can help in providing a more efficient and effective pre-enrollment process for colleges. The Pre-Enrollment Mobile Based Application (PREMA) is designed to minimize the reinforcement of long queue during the enrollment. In this context, the pre-enrollment is designed in a separate accessible device for the convenience of the students. The students can able to view their respective checklist. In this manner, the application can generate the courses a student should take for the incoming school term. Thus, the application can display the class list schedules and the corresponding status of each class which serve as a reference of the student in selecting their desired class schedules. Thru this application, the student can able to

view the computed tuition, miscellaneous and other school fees. This project is designed to provide a solution to the tiresome process of enrollment.

2. Objectives

In order to develop the application, the following specific objectives were considered:

1. An application that will give updated information about the status of each classes to determine whether the class is still open or already closed for enrollment

2. A mobile application that will assist the students in processing the pre-enrollment in faster way by providing them the updated checklist of courses

3. An application that will automatically computes the pre-assessment of the student including the total tuition fee, miscellaneous and other school fees.

3. Literature Review

3.1 Enrollment System

A good enrollment system can be useful to reduce the load of the people that normally has to do all the manual work. A well enrollment system is built for faster processing of information.   On top of that, the system must be updated for it to be at a more level and it must meet all client's requirements in order for it to have its functionality and service appreciated and it will be efficient to the clients to use the said system. It went further to describe how the system needs the manual requirement and its manual procedure. It executes the process by a process in a step-by-step mode, in which every process must be done inside the system the way manual process does. Like how students fill out the registration form for enrollment, assessment for the miscellaneous matters, and the paying scheme for parents on how they will handle financial transactions with the school.   Then the system will print out the registry form, included with the financial report on how much will be the tuition fee and on what term of payment will be used [2]. University enrollment is the process of entering and verifying data of student to register in a particular school. Different interrelated processes build up enrollment procedures called University Enrollment System (UES).   UES is used particularly in recording and retrieving student's information. Tracking student's information is also one features of UES, in which the school can trace the standing of a student.   Verifying payments is also added to update or browse student's billings. University enrollment system is a good example of a computer generated process. This can lessen the workload and provides accurate information needed of the school. As a result, it will benefit not only the student but the administration as a whole [3].

3.2 Mobile Application

Mobile applications have five (5) attributes of usability. First is efficiency which means resources expanded in relation to the accuracy and completeness with which the users achieve goals. Second in the satisfaction which explains the freedom from discomfort, and positive attitudes towards the use of the product. Next is the learnability: The system should be easy to learn so that the user can rapidly start getting work done with the system. Another attribute is memorability. The system should be easy to remember so that the casual user is able to return to the system after some period of not having used without having to learn everything all over again. And lastly, the errors. The system should have a low

error rate, so that the users make few errors during the use of the system and that if they do make errors, they can easily recover from them. Furthermore, the catastrophic error must not occur.

There are also three (3) factors when evaluating usability of mobile applications. First is the user or the person who interacts with the product. Second is the goal or the intended outcome. And lastly, the context of use. It is the users, tasks, equipment (hardware, software, and materials), and the physical and social environments in which the product is used [7].

4. Methodology

The developer used progressive approach for this project. The details used by the developer during the implementation are emanated from the existing school management information system of STI College Ortigas-Cainta. With this prevailing state, the developer takes this as an opportunity to design an instrument that will emphasise on the specified objectives.

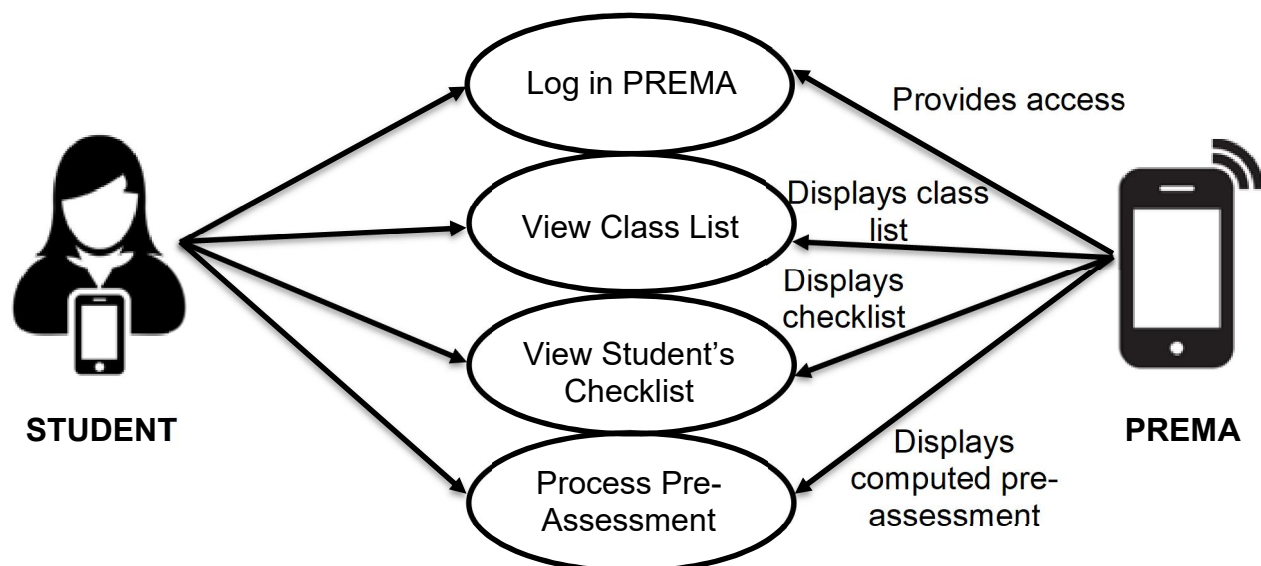Below is the Activity Diagram of the project:

Fig. 1. Activity Diagram

Once logged in, the student can able to view the student's checklist and the class list schedule for the incoming school term. The student can also process the pre-enrollment in the application wherein she/he can view all the recommended courses to enroll. The pre-assessment of tuition, miscellaneous, and other school fees can also be viewed after the student select the desired courses.

5. Results and Discussion

Upon completion of the development of the application, composition of respondents assessed the acceptability of the application. Composition of respondents are as follows:

Table 1. Summary of Respondents

Description	No. of Respondents
1st Year College	20
2nd Year College	20
3rd Year College	20
4th Year College	20
Total	**80**

Table 1 summarizes the distribution of the respondents from STI College Ortigas-Cainta who answered the survey.

Table 2. Scoring Scale

Remarks	Score
Strongly Agree	3.26 -4.00
Agree	2.51 – 3.25
Disagree	1.76 – 2.50
Strongly Disagree	1.00 – 1.75

Table 2 shows how the gathered remarks from the respondents will be scored based on their responses.

Table 3. Scores of the Survey

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree	Weighted Mean
1. Class List Schedule Module					
The module can give accurate information about the class information.	80	0	0	0	4
The module clearly state the class schedule.	80	0	0	0	4
The module accurately state the class status	64	16	0	0	3.8
2. Checklist Module					
The module accurately display the checklist	80	0	0	0	4
The checklist accurately show the updated final grades per course per term	56	24	0	0	3.9
3. Pre-Assessment Module					
The module can able to display the recommended courses to be taken by the student	56	24	0	0	3.7
The student can able to select/deselect the from the recommended courses	80	0	0	0	4
The module can able to compute and display the tuition, miscellaneous and other school fees.	80	0	0	0	4

Table 3 gives the scores of the responses. To get the verbal interpretation for each item, the developer follows this formula:

$$y = \sum_{i=1}^{n}(r \ x \ s) \ / \ t \qquad\qquad (1)$$

where:

        r – no. of respondents
        s – score assigned for each remark
        t – total no. of respondents

Equation (1) discusses the method on how to compute for the value of *y* refers to as mean where *r* refers to the number of respondents scored for every remark, *s* refers to the score assigned for each remark, and *t* refers to the total number of respondents.

The value of *y* was established to summarize the score or the weighted mean for each statement category.

Table 4. Interpretation

Statement Category	Weighted Mean	Interpretation
Class List Schedule Module	3.93	Strongly Agree
Checklist Module	3.95	Strongly Agree
Pre-Assessment Module	3.90	Strongly Agree

Table 4 shows the interpretation of the conducted survey. Majority of the respondents agree that the Class List Schedule module of the application can able to give them accurate information. The Checklist Module which received the score of 3.95 means that most number of respondents agree that this module provides an updated information. And lastly, the Pre-assessment module of the application received the score of 3.90 which means that most of the respondents agree that the module can able to compute the pre-assessment of each student.

6. Conclusion

In the light of the findings of the study after conducting the survey, the following conclusions were drawn:

1. The developed application can give updated information about the status of each classes to determine whether the class is still open or closed for enrollment.
2. The developed application can provide the student's checklist which can assist them in processing their pre-enrollment.
3. The developed application can display the computed pre-assessment including total tuition fee, miscellaneous fee, and other school fees.

7. Recommendations

The following recommendations were drawn in the light of the study:
1. The developed Pre-Enrollment Mobile-Based Application (PREMA) be integrated in the existing One STI application in advancing its pre-enrollment procedure.
2. IOS version of the developed application is also recommended by the developer.
3. Application for overload and class petition is also recommended.

Acknowledgements

References

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