Faculty of Computer Science and Information Technology

The Scheduling and Booking Appointment Student-Lecturer with Web-based and Android Platform System Appass

Muhammad Ramdani

Bachelor of Computer Science with Honors (Software Engineering)

2020

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Muhammad Ramdani

This project is submitted in partial fulfillment of the
requirements for the degree of
Bachelor of Computer Science with Honors
(Software Engineering)

Faculty of Computer Science and information Technology
UNIVERSITI MALAYSIA SARAWAK

2020

UNIVERSITI MALAYSIA SARAWAK

THESIS STATUS ENDORSEMENT FORM

TITLE Booking and Scheduling Appointment for Student - Lecturer with Web-based and Android Platform System

ACADEMIC SESSION: 2013/2014

MUHAMMAD RAMDANI (45376)

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(Muhammad Ramdani) 15th August 2020

ACKNOWLEDGMENT

First of all, I would like to thank to Allah Subhanahu Wata'alla that strengthen me to surpass the final year project. Without forgetting for all my beloved family member and also my precious friend that keep supporting until I reach this point.

Next, I would like to thank to my honored supervisor Encik Mohamad Johan Ahmad Khiri for his patiance for guiding me eventhough that I probably made lots of mistakes but, the supervisor keep spiritualize and inspiring me through the rough phase of my final year project.

Furthermore, I would like to show my gratitude for the blessing that Allah had given it to me to meet such a special friends that also build my personality in order to finish my final year project. We meet in the first place in UNIMAS and sadly parted into different path, I would like to state their name as my gratitude over them. The precious friend of mine are Fadel Achmed Ganesha, Muhammad Fadli Ashari, Muda Anugrah, Uun Yoga Pratama, and also Naufal harris. Eventhough they are not involved of my final year project progress, however the memories that we shared are really precious for me and meeting them is my most grateful thing in UNIMAS. Also my friend that keep supporting me on my hometown which also motivate me for keep moving forward while I feel depressed, I would like to thank them also and they are Alfitrah Ikbal Tawakkal, Muhammad Rifki Anugrah, Maramas Tua Hutapea, and last Jhorgi Hendra.

The special gratitude I present it to my precious family member especially my mother that keep asking me about my study progress, eventhough it is satirize question but I know that my parent do a hard work to educate myself and become my final motivation to finish this final year project. All these effort that Allah Subhanahu Wata'alla that give it to me is really precious and I will not forget such a blessing that come toward me.

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ABSTRACT

As student either has easy or serious matter regarding the study progress, the student really want to have a quick feedback regarding their issues from their respective lecturer, however the current system (E-leap) is not effective enough to accomplish the fast response from lecturer. This ineffectiveness are appeared from lecturer's side, even when lecturer probably does not have a proper time to make a meeting at least the lecturer simply answer the message from student however the response that student retrieve is a slow respond or even worse is no reply at all. This lead into ambiguous state for student especially if the occurring situation is really urgent for student. Adopting the case above, the proposed system is created for connecting the student and lecturer in term of booking appointment from student to lecturer with more proper way. It is more proper because it show the lecturer available time slot which is customized by lecturer and those available time slot is free to book by student. Students also may check the lecturer's time slot and may pick an available time and also may pick the reserved time slot due to queuing algorithm in case the first booked appointment is cancelled then the next student that queue will take the time slot.

ABSTRAK

Sebagai pelajar yang mempunyai perkara mudah dan serius berkenaan dalam kemajuan belajar, pelajar betul-betul ingin memiliki maklum balas yang cepat berkenaan perkara mereka daripada pensyarah masing-masing, walau bagaimanapun system semasa (E-leap) tidak cukup berkesan untuk berjaya terhadap tindak balas pantas daripada pensyarah. Tidak berkesanan ini telah muncul daripada sebelah pensyarah, walaupun pensyarah mungkin tidak mempunyai masa yang sesuai untuk membuat mensyuarat sekurang-kurangnya pensyarah mampu menjawab pesanan dari pelajar walau bagaimanapun maklumbalas yang diterima pelajar ialah tindak balasan yang lambat atau lebih teruknya ialah tiada jawapan sama sekali. Ini menyebabkan menjadi keadaan samar-samar bagi pelajar terutamanya jika situasi yang berlaku ialah sangat penting bagi pelajar. Mengadopsi kes di atas, system yang dicadangkan dicipta untuk menyambung pelajar dan pensyarah dari segi pelantikan tempahan dari pelajar ke pensyarah dengan cara yang lebih tepat. Ia lebih sesuai kerana ia menunjukkan slot masa pensyarah yang ada yang disesuaikan oleh pensyarah dan slot waktu yang tersedia bebas untuk ditempah. Pelajar juga boleh semak slot waktu pensyarah dan boleh memilih slot masa yang ada dan juga boleh memilih slot masa yang terpelihara disebabkan algoritma beraturan sekiranya pelantikan pertama ditempah dibatalkan maka pelajar seterusnya yang beratur akan mengambil slot masa.

CHAPTER 1: INTRODUCTION

1.1. Introduction

The importance for having contact or direct meeting to a specific person with higher level position is tend to continuously occurred in university environment. Due the specific reason for contacting or meeting those people, cause the positive environment of the university. Positive environment support or affect the better learning progress and student may get the better achievement if this kind of environment is occurred.

The university realize that these interaction between student and lecturer as a part of university, and as a proof that university support activities for contacting or meeting by providing E-leap system as a media for contacting the lecturer. As the function for contacting the lecturer, E-leap is considered as the well worked system for connecting lecturer and student, course evaluation, or even for arranging the project group, but on the contrary there are big number of students that are not satisfied with current system (E-leap) in term for contacting or meeting the lecturer.

The complaints that are coming from students that really want to have a serious matter appointment to the specific lecturer which focused on slow respond, and no respond at all from lecturer’s side which might affect the time loss by students because students may come into lecturer’s office with unanswered appointment and probability that lecture is not at the office uncertain and if the lecturer is absent, it would give a bad impact. This kind of issues are considered as the important since the serious matter regarding the studying progress is serious matter because it decides student study result.

Based on the complaints and issues regarding appointments between student and lecturer, the proposed system is appeared in order to give a proper way for booking any appointment to the specific lecturer. The proposed system is Appass (appointment assistance) which purpose for scheduling and booking appointment for student-lecturer with web-based and Android system. The Appass itself lets student to check when is the lecturer's free time and booking appointment

based on the lecturer's available time as a main function. The notification will come to the lecturer's smartphone and allow the lecturer to decline if the topic is inappropriate by the lecturer and the notification will appear to student that appointment cancelled for sure. The declined appointment will be freed automatically by the system and if there are student that queuing in the same lecturer and time, the next queuing be able to get this slot that used to be declined before. This queuing system is based on first come first serve concept. Once student book an appropriate lecturer, the system automatically set that student following the associated lecturer and notify the student. The concept of notification above is same like posting announcement on any social media (Facebook, Twitter), when lecturer post an announcement, all students that are following that lecturer may get the announcement exactly same and it may be shown on student's main page. Announcements are made in case that lecturer moving the meeting point, cancelled, or pending the booked appointment. Follow up remainder also remind the student to come earlier to meeting place.

1.2. Problem statement

The university environment is considered as success if the communication relationship between student and lecturer is established well (Richardson, 2003, p. 70). However the slow respond and absence of the lecturer in office might lead to inefficiency for those students who are in crucial situation and need fast respond from respective lecturer. The background of the problem appear on the lecturer's dense schedule that require the absence of the lecturer in office, due to commitments inside or outside the university.

Beside the dense schedule, the lecturers have the personal preference tools for contacting with the students, in fact that some of the lecturers prefer to use Whatsapp to set an appointment instead of E-leap. This incompatibility resulting the slow respond for those who book an appointment using E-leap without knowing that specific lecturer prefer another tools as a medium for book an appointment. Due to slow respond, the students may come into lecturer's office with unanswered appointment and probability that lecture is not at the office uncertain and if the lecturer is absent, then effects of this issues to students might not good, as the fact that most of the students are pedestrians while some of them stay out of UNIMAS.

Another consideration point is the unwillingly to share the Google calendar viewing access due to personal reason. Some of the lecturers in FIT using Google calendar as their scheduling management system included the personal schedule, however there are some lecturers prefer that the personal schedule in Google calendar is not supposed to be viewed by another user. By using Google calendar for work or school allowing lecturers to show their schedule and let anyone that have an access to book an appointment there, but with the privacy reason the lecturers decide not to commit that.

By some reasons above, which are; dense schedule, incompatibility tools, privacy reason lead to slow respond, poor scheduling management, lecturer's absence. Those reason also responsible for student productivity loss as stated on the paragraph above that student may come into lecturer's office without knowing the lecturer presence, this may lead to bad impact if lecturer is not there. By this system materialized, the efficiency for student and lecturer might increase in term of discussion appointment.

1.3.Scope

The system itself only worked for students and lecturers in UNIMAS, it is restricted to login by using the same way for common system with the help of email that have been registered. Based on the email, the main page will be generated either for students or lecturers. The personal information that stored in the system is personal responsibility. Next function is announcement notification that are made by lecturer in order to notify student that following the respective lecturer know the latest information regarding their appointment schedule.

There are two main user here; lecturer and student. The lecturer client have the first priority for defining lecturer schedule when their available time for having discussion with student, beside than that is lecturer's personal matter whether they are willing to share their personal schedule or not.

Student client focuses on booking the appointments, this started by finding the respective lecturers and once the respective lecturer is selected then the lecturer's availability template is shown with the information available discussion time only if the respective lecturer has set the available discussion time.

1.4. Objectives

1. To show available updated schedule from lecturer to student.

The lecturer have to show the availability schedule to student in order to have proper discussion time and this system is considered as working system if lecturer may be able to update and show their latest availability schedule which are accessed by student.

2. To let student book the available schedule of lecturer.

Student may be able to book provided slot which have been prepared or set by the lecturer. The queuing algorithm set the second student who book the booked slot as the second priority student in case that the first student who book the book has been cancelled or rejected.

3. Lecturer might be able to post announcement.

Lecturer might be able to set announcement to student who have made appointment with the lecturer. The announcement feature may send announcement to all student who made appointment or filtering who get that specific announcement based on the date or time.

1.5. Methodology

The (RAD) is going to be the choice here, with the consideration of handling changes with less development time. There are four phases in order to objectify the proposed system;

1.5.1. Requirement planning

- Reviewing the current and existed system

  By reviewing the current system (E-leap) and existed system (Appointflix.com, Google calendar, Schedulista.com, supersaas.com) or even the proposed system by previous student (App_Point), the reviewing result shows the system feature and weaknesses of the learnt system. Reviewing result also contributes for finding the future work or give ideas about the new functions into the proposed system.

- Surveying

  Survey to the approximately to twenty until thirty students with the variant year of study and faculty regarding their opinion about the current system weakness, issues, and response of the proposed system and so on.

- Interviewing

  Interviewing some of the lecturer regarding current system effectiveness, conclude the factor of appointment issues, and discuss whether the system is useful or not.

- Tools gathering

  Selecting the appropriate tools for constructing and supporting the system. The appropriate tools are variants based on the purpose for PHP framework, code editor application, database unit testing framework, development tools for Android, and proper emulator for android and so on.

1.5.2. User design

- Designing the UML (Unified Modelling Language)

  Designing the UML is the basis of every system, starting from database, class diagram, data flow diagram, and then activity diagram. During this process, the proposed system also may get first feedback based on the drawn UML if the proposed system is going to be discussed with another system developer.

- Designing the system interface

  Started with designing system interface either drawing in paper or using another software will really helpful for system developer to imaging how the system looks like, and also it is easy to explain how the system works and may get the useful feedback.

1.5.3. Constructing

- Coding

  The toughest phase is occurred here, and probably the longest phase with trial and error. The basic programming language that planning to used are; HTML, CSS, Java Script, PHP, MySQL, and Java.

- Testing

  The tested is done by the developer itself with the help of the supervisor to check the credibility of the system.

1.5.4. Cutover

The phase is depend on the testing result, if the feedback suggest any improvement regarding the system work then the system is updated or reconstructed again, when the system is satisfying then the system final report might be conducted then maintaining and user training might be carried on.

1.6. Significance of project

The advantage if this system is realized will affect the student's learning progress in case the student eager to have direct discussion. Another benefit is the lecturer no need to check theirs timetable or schedule, while proposed system only offer the available time of lecturer and this also lead to time saving which the only thing that have to be done by lecturer is only either accepting or rejecting the proposed appointment that made by students in android platform. The others benefit also resulted within university environment by enhancing the appointment system between lecturer and student, those benefit are;

- The time saving for student and lecturer might increase in term of discussion appointment as stated on above statement.
- Reduce the human error for handling manual (using book) or advanced (Google calendar) appointment. Since the lecturer have to input manually every schedules that are confirmed into lecturer's appointment system (Google calendar), the proposed system offer flexibility for students to book the best time based on the available offered time by lecturer.
- The probability for students to have approved appointment by lecturer is higher since the offered time is mostly available.
- Reducing the number of clashing appointment between students.

1.7. Expected outcome

Create a web-based system that may facilitate student to check and book an appointment based on lecturer's available time by using Laravel framework. Queuing algorithm by students, announcement feature by lecturer, notification and simple messaging are the expected outcome that might be able to achieve in the end of the project. The purpose to accomplish the proposed system due the lack of scheduling system in UNIMAS environment and if the proposed system is qualified by the future testing then it hopes that the proposed system becomes consideration point in order to apply the proposed system (Appass) into the current system (E-leap).

1.8. Project schedule

Task	Sub-task	Days to complete	Started day	Finished day
Requirement planning	Learning the current and existed system	7	22/10/2018	29/10/2018
	Surveying	7	31/10/2018	07/11/2018
	Interviewing	7	31/10/2018	07/11/2018
	Tools gathering	7	09/11/2018	16/11/2018
User design	Designing the system interface	14	19/11/2018	03/12/2018
	Coding first semester	28	05/12/2018	02/01/2019
	Semester break	30	03/01/2019	02/02/2019
	Coding second semester	30	03/02/2019	05/03/2019
	Approval	14	06/03/2019	20/03/2019
Constructing	Testing	7	21/03/2019	28/03/2019
	Sampling	5	01/04/2019	06/04/2019
Deployment	Distributing	5	08/04/2019	13/04/2019
		161	22/10/2019	13/04/2019

Table 1.1: Task progression

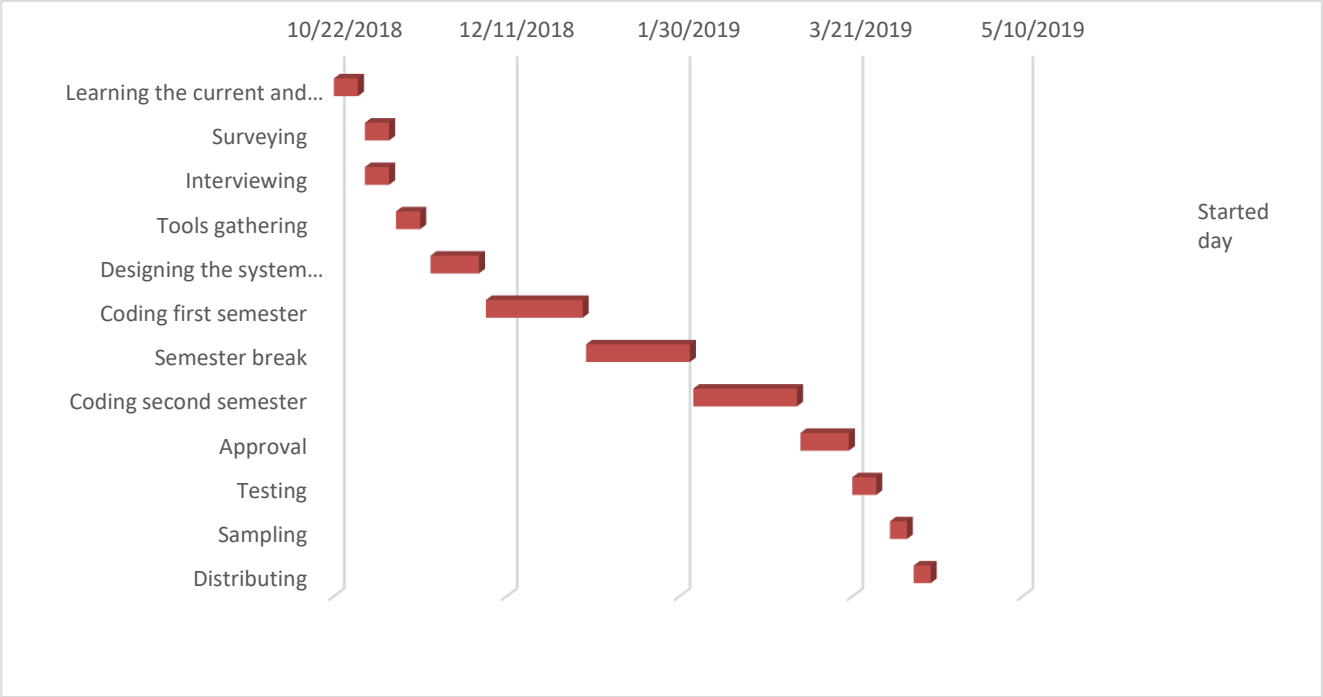

Figure 1.1: Gantt chart