

INTERACTIVE WEB-BASED FKE LECTURERS APPOINTMENT MANAGEMENT SYSTEM

¹Wan Norsyafizan W.Muhamad, ²Nurul Asyiqin Zakaria, ³Suzi Seroja Sarnin, ⁴Nani Fadzlina Naim, ⁵Azlina Idris.

¹Dr, Fakulti Kejuruteraan Elektrik, Universiti Teknologi MARA (UiTM), Malaysia,
syafizan@salam.uitm.edu.my

²Miss, Fakulti Kejuruteraan Elektrik, Universiti Teknologi MARA (UiTM), Malaysia,
Nurulasyiqinzakaria@gmail.com

³Madam, Fakulti Kejuruteraan Elektrik, Universiti Teknologi MARA (UiTM), Malaysia,
suzis045@salam.uitm.edu.my

⁴Dr, Fakulti Kejuruteraan Elektrik, Universiti Teknologi MARA (UiTM), Malaysia,
nanifadzlina@salam.uitm.edu.my

⁵Dr, Fakulti Kejuruteraan Elektrik, Universiti Teknologi MARA (UiTM), Malaysia,
azlina831@salam.uitm.edu.my

Abstract

The smart appointment reservation system is an electronic paper less application designed with high flexibility and ease of usage for students to book their appointment within the scheduled appointment slots according to their preference. In this paper, a web-based appointment management system called FKE-AM is designed and implemented which provide students and lecturers an effective and convenient ways to arrange and manage their appointments and meetings. This system serves in managing appointment that arrange by student and provides lecturer to cancel or accepted the appointment by integrating distributed systems into a set of consistent and convenient services accessible. FKE-AM are developed using HTML, PHP and MySQL database support by 000webhost.com that offer as web hosting uses version 5.1 and the latest version for phpMyAdmin, this is to ensure that the application is robust, cheap and is able to run on different platforms. In addition, this FKE-AM system also can be view via apps which is develop using appypie.com online software.

Keywords: Appointment, interactive website, FKE-AM, MYSQL database.

1 INTRODUCTION

With the amazing growth of web technology in the past few decades, great changes have taken place in every area of our life. It brings about the evolution on the ways of teaching, registration/administration activities and processes, such as e-learning, e-library, online portal for administrative system and so forth. However, it is not in the case of handling appointment management (between lecturer and student). There are two common approaches in the universities/college. Lecturers either put sign-up sheets on their door (normally) or release a fixed time over a period for students to reserve a meeting. These methods do not reflex the dynamic changes or cancellation of the appointment; take an example, managing consultation time, if the lecturer only release the consultation time, many student may want to meet at the same time. The

main purpose of FKE-AM is to provide more easy and convenient way of booking appointment and to propose new way of data management and data processing. The main task of the system is to process all the data and provide a good result.

In literature, there are few works presented an online appointment management system (Norlida 2009), (Noraziah, 2010) (Ooi Lee, 2010). (Muhamad Helmy, 2007) proposed an online appointment manager system where student access to website through any computer that connected to internet to set an appointment and the lecturer receives the SMS on their mobile phone and decides on the appointment with the particular student. At the same time, the give feedback to the student via SMS through SAS using their mobile phone was also proposed in literature (Noraziah, 2010). This method have a disadvantages because the system only can accept and reject through SMS and the student cannot choose a particular date to meet a lecturer and with the growth of web technology the usage of SMS is outdated. Besides that, most of the existing web-based of appointment system is not a responsive website as well as they do not interfaces the system with apps. Nowadays, most of people are using their smartphone as a main tools for communications. With responsive website, it's easy for user/students to browse this FKE-AM through their mobile without need to open/access their laptops and desktop. Responsive web is an approach that suggests website should respond to user's behavior and environment based on screen size, platform and orientation because it consist of a mix of flexible grids and layout. As for other online management system, problem will occur if the user open website using mobile such as website show overlays the partially or completely cover the contents of the page the user is visiting. Furthermore, website with non-friendly mobile will give a small of font size to be legible on mobile device, forcing those user to "pinch to zoom" in order to read. That is one of the advantage of this system as compared to other online management system in literature. On top of that, FKE-AM is first project of appointment manager that represented of UiTM and also for faculty of electronic engineering.

The target users of this project are students, lecturers and administrator. FKE-AM is develop to help the students arrange an appointment with lecturer that they intend to meet. In FKE-AM system, the lecturer can update their schedules and student can review updated timetable. Student can check the timetable of the lecturer before they set the date and time. By doing this student able to select the slot that already adjusted by lecturer. Following that, the student can make online appointment by sending request to meet at particular time via this FKE system. The lecturer immediately get a notification of that request and make a decision whether he/she accept or reject the appointment. In this case of lecturer reject the request, student can select another date to book an appointment with the same lecturer. FKE-AM also display the dashboard of student and lecturer to remind the time slot of meeting or the history of appointment. This system is develop as a responsive website and use user side scripting such as HTML and MYSQL as a database for the system that supporting by a database run by phpMyAdmin (Muhammad Faiz, 2017). In addition to that, significant feature of this FKE-AM is a responsive web based system. It is designed to be adjustable when user view the webpage through smart phone or mobile apps. That's the reason why we also developed an apps for this FKE-AM.

2 METHODOLOGY

2.1 FKE-AM Procedures

The FKE-AM consists of several modules such as student registration module, lecturer login menu, student's activity menu and lecturer's activity menu. The following section describe functions of each modules in details.

2.1.1 Student Registration Menu

Before student access this FKE-AM, they need register to set their username and password. Any student that does not register will not be allowed to access appointment booking Menu. Fig. 1 show the flow chart when the new student sign up using this FKE-AM system.

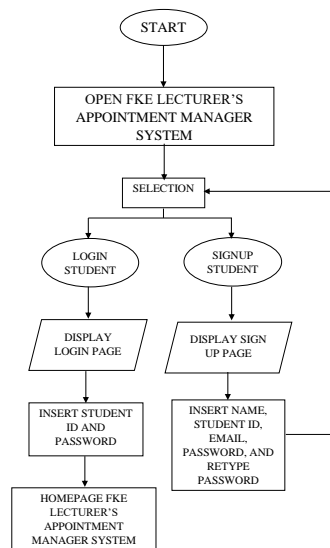


Figure 1: Registration and login menu.

2.1.2 Lecturer Login Menu

The availability of lecturers in FKE is stored in database. To access to this FKE-AM, the lecturer can enter their id with the password that fixed by admin. Fig. 2 show the procedure accessing FKE-AM by lecturer.

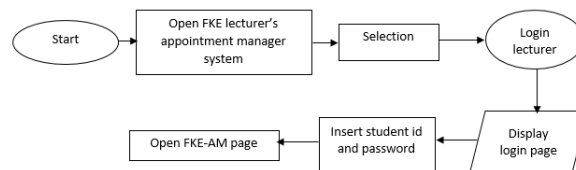


Figure 2: lecturer login FKE-AM

2.1.3 Student's Activity Menu

when the user access to FKE-AM system, there are several selection menu display on the top of page.

- Dashboard
- Lecturers' schedule
- Book an appointment
- Log Out

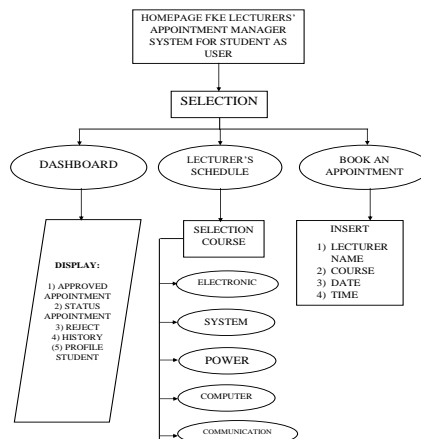


Figure 3: activities students as a user

When the student click on lecturer's schedule page, list of department in FKE will be displayed. There are five department such as electronic, system, power, computer and communication. After student select the date and time to book an appointment, the particular lecturer will get notification of appointment via email.

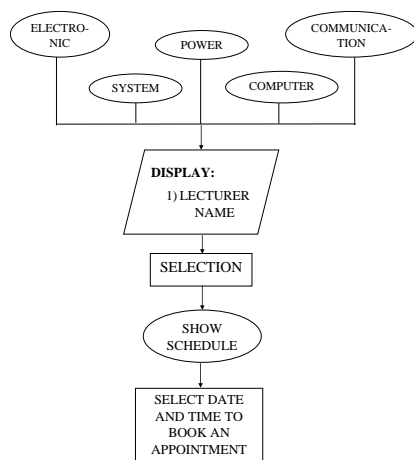


Figure 4: Lecturer's schedule page

2.1.4 Lecturer's Activity Menu

When lecturer login as user through FKE-AM among selection menu that available are:

- Dashboard
- Schedule
- Appointment
- Logout

Fig. 5 show the activity menu for a lecturer as a user. The appointment page displays list of appointment made by students. From here, the lecturer can decide whether the booked appointment is accepted or rejected. The acceptance or rejection from lecturer will be displayed in student's dashboard. As for schedule's display, lecturer can update their schedules or appointments. From student activity menu, the updated timetable will be shown in lecturer's schedule page .

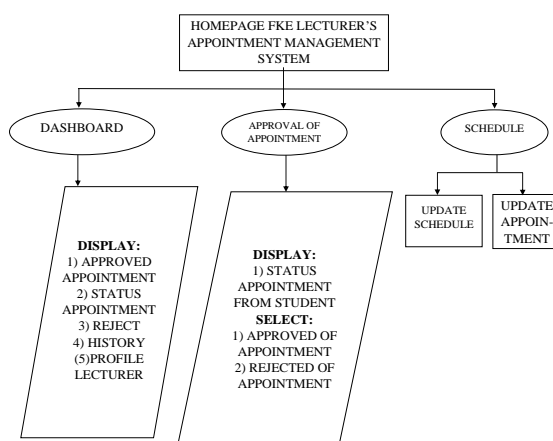


Figure 5: lecturer activity menu

2.2 System Requirements of FKE-AM

The whole idea of database driven web site is to allow the content of the site to reside in the database, and for that content to be pulled from the database dynamically to create web pages for people to view with a

regular web browser. Therefore, at one end of the system ready to have a visitor view the site which uses a web browser to request a page, and expects to receive a standard HTML document in return. At the other hand, the content of site, which sits on one or more tablets in MySQL database that understand only how to respond to SQL queries which is called as commands.

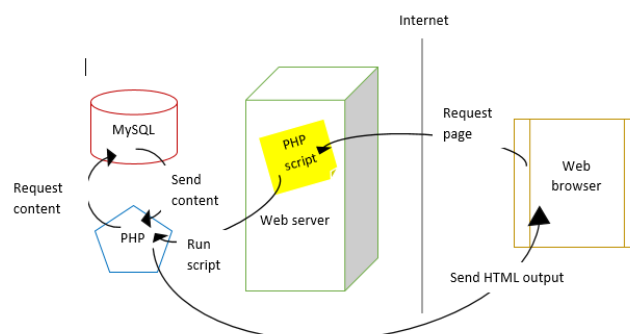


Figure 6: processing flow between the user of web page, web browser, PHP and MySQL.

As shown in the Fig. 6, the PHP scripting language can speak with both languages. It processes the pages request and fetches the data from the MySQL database (using SQL queries), then bring it out dynamically as the nicely formatted HTML page that the browser expects. This will happen when visitor is visiting the webpage:

- The visitor's web browser requests the web page using a standard URL
- The web server software (000webhost) recognizes that the requested file is a PHP script, so the server fires up the PHP interpreter to execute the code contained in the file.
- Certain PHP commands connect to the MySQL database and request the content that belongs in the webpage.
- The MySQL database responds by sending the requested content to the PHP script.
- The PHP script store the content into one or more PHP variables, then uses echo statements to output the content as part of the web page
- The web server sends the HTML to the web browser as it would a plain HTML file, except that instead of coming directly from an HTML file, the page is output provided by the PHP interpreter.

2.3 Website Page to Applications

The final step when design FKE-AM is created an apps for smartphone. Due to the significant feature of this FKE-AM system which is a responsive website, thus it can be interfaces directly to apps with the help of online software. The software that have been used to interface between the website and the apps is appypie.com which is a mobile app creator released for Android, iOS, Fire iOS and Window Phone platforms that allows its users to create and use to different types of mobile apps.

3 RESULTS & DISCUSSIONS

3.1 Activity Menu for Student

When the student access FKE-AM, there are selection menu for student to choose. Fig. 7 show the menu on FKE-AM.

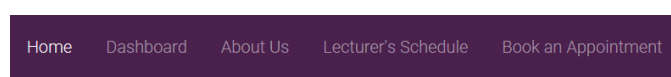


Figure 7: menu selection for student

When the user click on the lecturer's schedule menu, selection of the department will be displayed as shown in Fig. 8.



Figure 8: lecturer's schedule

Following the list of department as shown in Fig. 8, students can select the list based on specific lecturers. Subsequent to this, list of lecturers for specific department will be presented in the FKE-AM. Fig. 9 show the name, designation, room and no phone of each lecturer for Communication departments.

No	Name	Designation	Room	No. Phone	Show Schedule
1	Miss Wan Norsyafzan Wan Muhamad	Lecturer	T2- A12-9A	6-03- 55435036	Show Schedule
2	Dr. Mas Izyani Md. Ali	Lecturer	T2- A15-4C	0133696906	Show Schedule
3	Mrs Suzi Seroja Samin	Senior Lecturer	T2- A12-2C	6-03- 55436011	Show Schedule
4	Dr Nani Fadzrina Naim	Senior Lecturer	T2- A15- 11A		Show Schedule

Figure 9: list of communication lecturer

Moreover, student can select the name of the lecturer to see details information's of specific lecturer. From here, the timetable of that lecturer will be displayed. Thus, it's easy for the student to arrange their time for appointment booking.

Profile Lecturer

Name: Miss Wan Norsyafzan Wan Muhamad

Picture:

Phone No: 6-03-55435036

Email: [Send Email](#)

Room No: T2-A12-9A

Designation: Lecturer

Centre of study: Centre for Communication Engineering Studies

Academic qualification: Academic Qualification Master (Telecommunication Engineering)

Research area: Wireless Communication Energy Efficient Techniques for Wireless Local Area Networks (MAC layer approach)

Publication: Publication List of Publications (Priaa UTM)

Figure 10: Lecturer's profile

LECTURE'S DIARY

AVAILABLE APPOINTMENT DATES:

Miss Wan Norsyafzan Wan Muhamad Schedule

Days/Time	8 am - 9 am	9 am - 10 am	10 am - 11 am	11 am - 12 pm	12 pm - 1 pm	1 pm - 2 pm	2 pm - 3 pm	3 pm - 4 pm	4 pm - 5 pm
Monday	-	Have Class	-	-	-	Student Appointment	-	-	-
Tuesday	-	Have Class	-	-	-	-	-	-	-
Wednesday	-	Have Class	-	-	-	-	Student Appointment	-	-
Thursday	Student Appointment	Have Class	-	-	-	Student Appointment	-	-	-
Friday	-	Have Class	-	-	-	-	-	-	-

[NEXT](#)

Figure 11: lecturer's timetable

Fig. 11 shows the case when the respective lecturer is not available for the appointment which have been requested by the student. If the student decide to book another appointment with the same lecturer, he/she needs to click select, then the time slot for appointment will be displayed as can be viewed in Fig. 12.

Figure 12: time slot for appointment

When the students click the select button, form of request will be displayed, as shown in the Fig. 13.

Figure 13: form of request

To book an appointment, there are two method available, either student can directly book an appointment via lecturer's schedule or student fill in FKE book appointment manually as can be seen in Fig. 14

Figure 14: FKE book an appointment

Fig. 15 shows the dashboard of student where they can review summary their appointment schedule. From this menu student can view either their request have been accepted or rejected lecturer approve or reject the appointment. Besides that, it also shows the history of appointment that student had been made before this and students are allowed to update password, name and picture.

No	Lecture Name	Date	Time	Approval
1	Maternal & Child Health	2018-01-15	10:00	Accepted
2	Maternal & Child Health	2018-01-17	10:00	Accepted
3	Maternal & Child Health	2018-01-19	10:00	Accepted
4	Maternal & Child Health	2018-01-21	10:00	Accepted
5	Maternal & Child Health	2018-01-23	10:00	Accepted
6	Maternal & Child Health	2018-01-25	10:00	Accepted

Figure 15: dashboard of student

3.2 Activity Menu for Lecturer

When the lecturer access this FKE-AM, selection menu available are shown in Fig. 16

Figure 16: menu selection for lecturer

This FKE-AM acts as a lecturer's diary, where the lecturer can update their schedule and appointment. By viewing this lecturer's schedule, students can manage their time to see a specific lecturer in efficient way.

Figure 17: schedule update

From Fig. 16, it can be seen that there are two option available when the lecturer click on schedule menu. This two option are update schedules and updates appointment, as shown in Fig. 17 and 18 respectively.

Figure 18: appointment update

Fig. 19 shows an example when the student sends the appointment request to the lecturer and the lecturer can decide whether boooked appointment is accepted or rejected. As can be viewed in Fig. 19, when the appointment is rejected by the lecturer, it is marked in red color. On the other hand, if the appointment is accepted by the lecturer, it is marked green color

Figure 19: appointment status

Fig. 20 shows the dashboard of lecturer where they can review summary their appointment schedule. From this menu student can view either their request have been accepted or rejected lecturer approve or reject the appointment. Besides that, it also shows the history of appointment that student had been made before this and student are allowed to update password, name and picture.

Figure 20: dashboard of lecturer

3.3 FKE-AM on Apps

Additional feature of this FKE-AM system is the system is interfaced with the apps. The apps is developed via appypie.com mobile app builder. With this feature, the system also can be found in system apps as

shown in Fig. 21. User can install this apps in android/IOS and navigate to where the Android Package Kit known as APK file is located (O. Osunade, 2014).



Figure 21: front page of FKE-AM apps

4 CONCLUSION

As discussed earlier, appointment system between lecturer and student still in manual way whether student put a note in lecturer room, or student go to lecturer's room without confirmation from lecturer. This problem have been recognized, and this system was introduced to help organizing an appointment system in easy way. Development of working prototype such as registration menu module, lecturer login menu module, student's activity menu module and lecturer activity's menu module with aim of connecting student and lecturer with FKE-AM system systematically and well organize. FKE-AM has shown the success in its functional aspects when tested and proved FKE-AM system provide the valuable solution to the way of handling appointment between student and lecturer.

5 RECOMMENDATION

As a future recommendation, this FKE-AM will be interface with the navigation of map using GPS. This additional feature will helps student to find specific lecturer's room, classroom or lab in real time. In addition to that, the system will be improved to make it more mobile friendly and can acts as more interactive solution for appointment management system

ACKNOWLEDGEMENT

This research was supported by Universiti Teknologi MARA and "Geran Penyelidikan LESTARI 600-IRMI/MYRA 5/3/LESTARI (0161/2016)"by Universiti Teknologi MARA, Malaysia.

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