

PLACEMENT APPLICATIONS SCHEDULING LECTURE IN INTERNATIONAL PROGRAM UNIKOM BASED ANDROID

Andri Sahata Sitanggang
Universitas Komputer Indonesia
Jl. Dipatiukur No 112-116 Bandung

E-mail:
[andri.sahata@email.unikom.ac.id'](mailto:andri.sahata@email.unikom.ac.id)

Abstract

One who determines life of a classroom namely mapping scheduling courses especially at college. The process scheduling has included time or schedule of a class of available, room available, lecture who is scheduled for, and schedule for lecturer going to teach. Hopefully with a scheduling it will facilitate the students and teachers in obtaining information lecture schedule. With the emergence of the android application (is implanted in mobile phones , the public can now use the internet so fast that is based .So with that researchers give one a technology based solutions to build android application .This is because one of the technology has given the functions which may make it easier for students and university lecturers in terms of access to information. In building this application used method of the prototype consisting 2 access namely access user and admin , where module user consisting of modules register , login , scheduling module , while for admin given module login , register and arrangement information scheduling courses both the administration and lecturers .Application made will be integrated with internet so that this program is real-time application.

Keywords: The application of scheduling , lecture , android , prototype.

1.0 INTRODUCTION

1.1. Background

The presence of computer technology with force the process has enabled the development of information systems computer-based .Computer-based information system itself is is a system processing a data to a information quality and can be used as the tools support decision-making , coordination and control and visualize and analysis. By using computer technology , obtained benefits in the form of ease store , organize and taking on various data. Supported by software and hardware proper configuration , the company can build information systems that reliable and influential significantly on the performance of the company as a whole.

One ease information technology is the arrival of information systems that can be accessed from various devices. We realize that now mobile media has grown very much to thrive. With the device mobile user clearance for the information all the time and anywhere indefinitely, are connected in a network or internet.

Technology based mobile itself is not was really intended to communicate via telephone as well as through SMS, but technology based mobile are now develop and have different features interesting, for example, smart phone with an operating system android which

currently very interested in by various parties because it is open source, so anyone can make application own in accordance with their needs.

So then application scheduling should have been able to made with uses a base android , where application Scheduling can be implanted in hand phone good students and teachers so application it may help in providing information on scheduling quickly and avoid error flags information obtained.

1.2 Identification problem

Some identification of problems that emerged in study program international program included:

1. Constrained the distance travel by students solely information boards of study program so that sometimes students often skip information that is essential especially about the problems schedule.
2. Information the scheduled often have a problem either by students and teachers concerned because long making schedule so lecture will fire in the second week. Long process of making schedule because need to adapt the availability of the room and time lecturer teaching.

1.3 Objectives and Benefits of Research

1. To make application scheduling based android who will facilitate inside information schedule and process of making schedule both in the students, lecturer and academic department / prodi.
2. Application made can be used directly by related parties that is students , lecturer and academic department.
3. Dealing with the problems of timing in making the class that would give information quickly and accurately

2.0 A LITERATURE STUDY

2.1. Scheduling

Scheduling is a collection of wisdom and a mechanism in operating system pertaining to the order work done a computer system .Scheduling on duty decided [1] :

1. A process that had to walk
2. When and for how long the process would work.
3. The main target of scheduling the process optimize work according to a specified criterion

2.2. Scheduling criteria

Criteria for measuring and optimize performance scheduling [2] :

1. Fair (fairness)
2. Efficiency
3. Time response
4. Turn Around Time
5. Throughput.

2.3. Application

According to Nazrudin Safaat H [3] application software is a subclass computer software that honing the skills computer directly to do a job desired users .Usually compared with a software system that integrating all skill ranges computer , but not directly apply this capacity to do a job Favorable users.

While application [4] is a set of special instructions on computers in designed that we finish off certain duties.

From the description above can be concluded that application is a software that containing a command to resolve the issue and data processing.

2.4. Mobile

Mobile according to Rangsang Purnama is appellation to the application of that runs in mobile device. By using application mobile, can be easily do various kinds of activity starting from entertainment, selling, learning, do office work, browsing and others. [5]

2.5. Application Mobile

1. Messaging
Example: SMS, MMS, Instant Messaging
2. Mobile transaction
Example: SMS alert, MMS alert, report analysis
3. Mobile workplace
Example: Email, Calendar, CRM, Instant Messaging
4. Mobile music and videos
Example: Monotone, RTTTL, Midi, mp3, wav, mp4, screensaver, picture message, A2DP
5. Mobile games
Example: Monochrome games, java games, symbian

2.6. Understanding computer network.

According to forouzan in his book titled "Computer network a top down approach", in mentioned that the network computer relationships are of a number of device that can be communicate with one another (a network is a interconnection of a set of device capable of communication).A device that in intent is covering all kinds of computer (desktop computer, laptops, smartphone and others) and devices liaison (switch, hub, router, modem, access point and others).[6].

2.7. Android sense

Android is an operating system for mobile software based on linux operating system that includes , middleware and applications .Android gives them a platform open to developers to create their application .Originally , google inc android inc bought a newcomer make the cellular phone / smartphone software .And to develop android , formed the open handset alliance , a consortium of the hardware , software , and telecommunications , including google , htc , intel , motorola , qualcomm , t-mobile , and with nvidia [7].

3.0 RESEARCH METHOD

Android is an operating system for mobile software based on linux operating system that includes , middleware and applications. Android gives them a platform open to developers to create their application . Originally , google inc android inc bought a newcomer make the cellular phone / smartphone software. And to develop android , formed the Open Handset Alliance , a consortium of the hardware , software , and telecommunications , including Google , Htc , Intel , Motorola , Qualcomm , T-mobile, and with Nvidia.

3.1. Approximation Method

The method applied is the method of objects based approach , where a bantunya is use case , a diagram of the activity , sequence diagram , class a diagram , coloboration diagram , a component , deployment and diagrams

According to Rosa U.S, M.Shalahudin, that the approach oriented object [8] is a technique or approach in see problems in the system (the software, information system, or other system)5].

3.2. Development Method

The method proposed in this system apply prototype model
Stages the phase that done in the design and the implementation of scheduling lecture in international the program is:

1. Listen to their customers

The first stage of this method is to listen customers namely in collecting data system of the need to be made. This stage begins by gathering needs required to perform the process scheduling lecture in international program.

2. Build renovate prototypes.

After obtain the is needed to make the prototype, the next stage done is to build improve the prototype of this stage done to the creation of whole system until all based on analysis needs that have performed before.

3. Customers test prototype

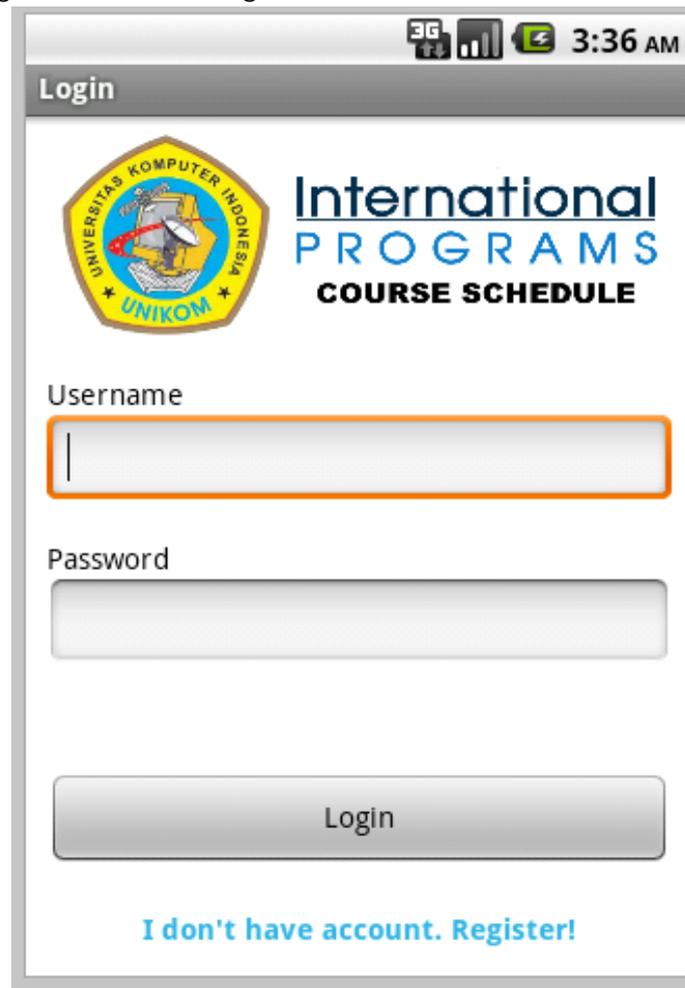
The final stages of his prototype model is testing stage () testing .Testing conducted by users of the system .Testing stage to be a response to a system that has been made .The process is a third berulang-ulang , until he had the satisfaction of customers for a system that has been made .The process should be according to the order

4.0 RESULTANTS AND DISCUSSION

4.1. Placement applications

1. Login User

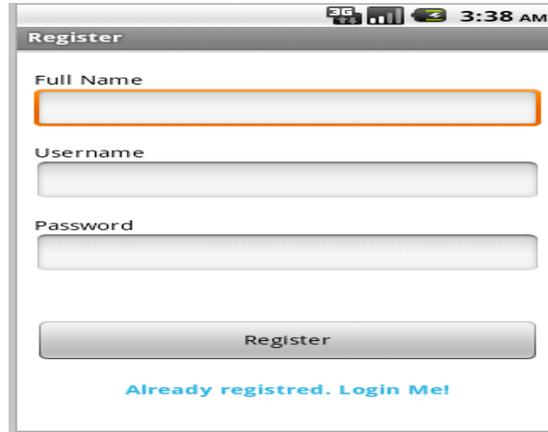
Is display early having been paved application scheduling lecture , first users can be fall into the form login account students , next admit username and password students and next directly to fit into the main menu by choosing button login .If they have not been having account for access schedule lecture students can choosing menu " I don't have an account .Register !" to do registration in form register.



Picture 4.1 The user login form interface

2. Register user.

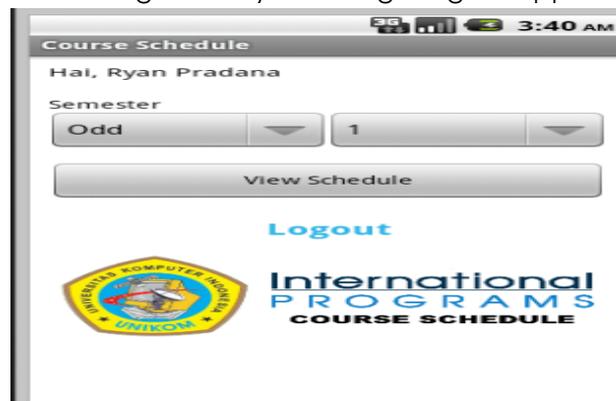
A form to register for college students to register new to render an account for college students who do not have an account to access the college .Get into the service for those who have direct choosing menu “Registered already .Login me !” login to return to form .In this register form students are required to fill full name , the username , and passwords , after register finished user going back to form login and login entered the main menu



Picture 4.2 The user interface form register

3. Menu select the first half

Is menu to choose the first half on the application penjadwal lecture after students login in application, on the primary menu are menu select semester and logout.To choose the first half students directly select “Select the first half “ odd or even and to go out of application scheduling this students can straight out by choosing “ logout application



Picture 4.3 The implementation of the select menu interface

4. List schedule lecture

Is display from the schedule lecture after choose the first half and list schedule lecture will bring in accordance the first half selected

Day	Time	Course	Credit	Lecturer	Room
Kamis	12.00 - 14.30	Konsep Sistem Informasi	3	Citra Noviyasary, S.Si, MT	Ruangan

Picture 4.4 The interface list schedule lecture

5. Form Login admin

Is form place to sign admin or sejour to be scheduled lecture in interntaional program .The following the sight of form login admin

Picture 4.5 The implementation of interface form login admin

6. The main menu of admin

A dish consisting of , input the lecture , student data input , the lecturer , the lecture , data rooms and logout .Who will conduct the scheduling lecture .Following the main menu of admin.

Picture 4.6. Menu admin

7. Input schedule admin

Is form penginputan lecture which will if it chose lecture , automatically code mk , the first half , sks , hours , will be adjusted class to practice and the theory

INPUT DATA PENJADWALAN	
Kode Matakuliah	<input type="text"/>
Nama Matakuliah	-- Pilih Nama Mata Kuliah --
Semester	-- Pilih Semester --
Sks	-- Pilih Sks --
Hari	-- Pilih Hari --
Jam	--Pilih Jam--
Ruangan	-- Pilih Ruangan --
Nama Dosen	-- Pilih Dosen --
Kelas	--Kelas--
Prodi	--Prodi--
<input type="button" value="Simpan"/> <input type="button" value="Reset"/> Kembali	

Picture 4.7. input scedule

8. Display schedule admin

Is perform scheduling already diinputkan in form input schedule lecture which will be automatically log into the android application

No.	Kode Matakuliah	Nama Matakuliah	Semester	Sks	Hari	Jam	Ruangan	Nama Dosen	Kelas	Prodi	Action
1	IS1317L	Komputer Aplikasi SI	1	2	Senin	07.00 - 07.50	International Program	Mariaana Budhningtyas, MSI	IP	SI	Update Delete
2	IS3227B	Konsep Sistem Informasi	2	3	Kamis	12.00 - 14.30	International Program	Citra Noviyastary, S.Si, MT	IP	SI	Update Delete
3	IS32374L	Lab. Pemrograman Dasar	2	2	Jumat	07.00 - 08.40	Lab 4	Andri Sahata S, S Kom, M Kom	IP	SI	Update Delete
4	IS3328B	Analisis Proses Bisnis	3	2	Sabtu	10.20 - 12.00	International Program	Mariaana Budhningtyas, MSI	IP	SI	Update Delete
5	IS33375L	Lab. Pemrograman I	3	2	Kamis	13.40 - 15.20	Lab 8	Andri Sahata S, S Kom, M Kom	IP	SI	Update Delete

Picture 4.8 Display schedule admin

9. The tasks view teaching & print teaching

Is a display teaching tasks that will be printed by pdf and microsoft excel into the xls or for a lecturer teaching tasks will provide a schedule for a lecturer teaching tasks .Following a teaching tasks and printing teaching tasks

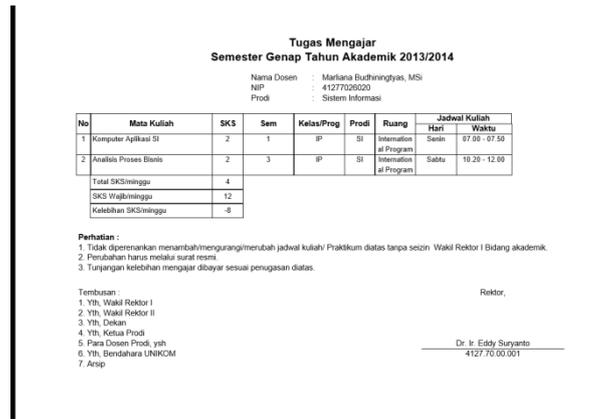
Tugas Mengajar
Semester Genap Tahun Akademik 2013/2014

Nama Dosen : Mariaana Budhningtyas, MSI
NIP : 41277936620
Prodi : Sistem Informasi

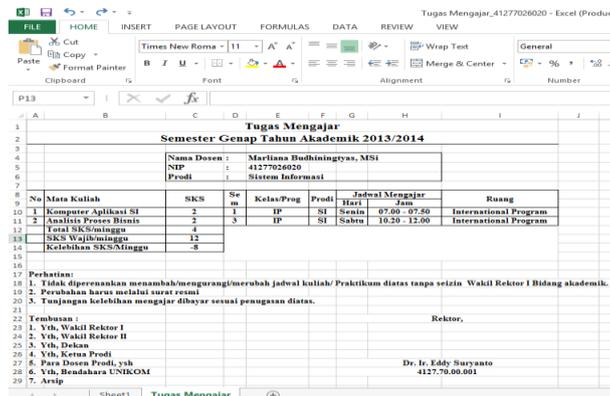
No.	Matakuliah	SRS	Sem	Kelas/Prog	Prodi	Jadwal Kuliah		Ruangan
						Hari	Jam	
1	Komputer Aplikasi SI	2	1	IP	SI	Senin	07.00 - 07.50	International Program
2	Analisis Proses Bisnis	2	3	IP	SI	Sabtu	10.20 - 12.00	International Program
Total SRS/minggu		4						
SRS Wajib/minggu		12						
Kelebihan SRS/Minggu		-8						

Picture 4.9 Will teach a teaching

So the form of their printed teaching in the form of pdf is presented in figure 4.10 and excel in figure 4.11.



Picture 4.10 The prints in the form of PDF



Picture 4.11 The prints in the form of EXCEL

4.2. The application

4.2.1. Hardware

To be able to run applications designed it takes a hardware (penunjangnya) as hardware .The hardware that is required is as follows:

a. The implementation of hardware admin :

1. Processor : Intel(R) Core2Duo 2.10 GHz
2. Memory : 1024MB RAM
3. Hardisk: 250GB Seagate
4. VGA : Intel(R) HD Graphics
5. Monitor : 15" Advance

b. The implementation of hardware client :

1. Processor : 1.4 GHz Scorpion processor, Adreno 205 GPU
2. Network 2G : GSM 850 / 900 / 1800 / 1900, 3G: HSDPA
3. Memory : 512 MB RAM.

4.2.2. Software

a. The software admin :

1. System Operasi Windows 7 Ultimate.
2. XAMPP 1.7.4 For local internet database and storage.
3. Adobe Dreamweaver CS3 For writing coding on the php and json.
4. Mozilla firefox 11 as browser.
5. Eclipse juno 4.2.1 for writing coding on the android.

b. The implementation of software client:

1. Sistem Operasi Android 2.3 (Gingerbread).

4.3. Testing application

4.3.1. Plan testing

As for the testing system to be tested in any testing black box will were brought in the table below .Here is the result of testing of program scheduling lecture in international program UNIKOM based on android

Table 4.1. Plan Testing

No	Components being tested	Scenario grains tes	The results of testing
1	Display logi user	Showing form the logins for user	BlackBox
2	Display register user	Showing form registers for user	BlackBox
3	The menu select semester	Showing choice the first half odd and even	BlackBox
		Select logout application	BlackBox
4	Display login Admin	Showing logins for form admin	BlackBox
5	Main menu Admin	Featuring menu for Scheduling lecture	BlackBox
		Select menu input schedule	BlackBox
		Select menu data students	BlackBox
		Select menu data teacher	BlackBox
		Select menu data lecture	BlackBox
		Select menu data room	BlackBox
	Select Logout	BlackBox	

4.3.2. The results of testing

The following is the case to test the software already built using the method based on the Black Box testing plan table that you created earlier, this test implemented in on a cell phone like a smartphone that has the the android operating system for a web server to the client and admin/Department Secretary

No	The case	Scenario grains test	Expected outcomes	The testing
1	Display login user	Showing the computer to form user	When first open this application will bring logins for form user	[X] Received [] Rejected
2	The appearance of register user	Showing form registers for user	When picked register , would bring them to form registers for user	[X] Received [] Rejected
3	The menu select semester	Showing choice the first half odd or even	When he picked the odd would bring them to list the lecture the odd and on the other hand	[X] Received [] Rejected
		Select logout application	When picked logout application, he will out of application	[X] Received [] Rejected

No	The case	Scenario grains test	Expected outcomes	The testing
4	Display login admin	Showing the computer to form admin	When first open application admin this would bring them to form the logins for admin	[X] Received [] Rejected
5	The main menu admin	Showing menu for the scheduling lecture	When login admin successfully will enter the main menu admin	[X] Received [] Rejected
		Select menu input schedule	When select menu input schedule so would bring them to form to input schedule	[X] Received [] Rejected
		Select menu data students	When the menu and select students would bring them to form student data input	[X] Received [] Rejected
		Select menu data lecturers	When data lecturers and select menu will bring form for data input lecturers	[X] Received [] Rejected
		Select menu data lecture	When select menu data lecture so would bring them to form for data input lecture	[X] Received [] Rejected
		Select menu data room	When select menu data room so would bring them to form for data input room	[X] [] Ditolak
		Select logout	When the Select menu logout the admin will then exit the application scheduling	[X] Received [] Rejected

5.0 CONCLUSION

5.1. Conclusion

1. Application built basing android consisting of 2 access namely admin and user (students and teachers.
2. Application built use testing black box.
3. Application built could deliver information schedule lecture more effective and efficient , because reduces the time and distance much though to access schedule lecture that has been granted

5.2. Suggestion

In the construction of application scheduling lecture based android is still far from perfect and still much negativity .By because it was necessary further investigated and improvements further .As for suggestions to make this application can serve with more optimal of them :

1. Application made to have a better equipped with additional features as menu for the offer lecture for a lecturer printable and given to lecturer concerned as the beginning scheduling lecture given by admin or secretary majors
2. Application built uses a base ios that supports car the base iphone.

REFERENCES

- [1] Muhamad Yusup, Ary Budi Warsito, Ninu Apriyanti. 2014. "Pengembangan Sistem OJRS+ (Online Jadwal Rencana Studi Plus) Sebagai Media Perencanaan Jadwal Kuliah". KKP STMIK Raharja: Tangerang
- [2] Ferdian Tomhart, Afriyudi, Mutakin Bakti . 2013. "Optimasi Penjadwalan Perkuliahan Di Universitas Tridinanti Palembang". Palembang.
- [3] Safaat H. Nazruddin, "Pemograman Aplikasi Mobile Smartphone dan Tablet PC Berbasis Android", Edisi Revisi, Bandung: Informatika, 2012
- [4] Vermaat. Shelly Cashman., "Discovering Computers Menjelajah Dunia Komputer FUNDAMENTAL", 3rd ed, Salemba: Infotek. STIKOM, 2011
- [5] Purnama. Rangsang, "Mari Mengenal J2ME", Jakarta : Prestasi Pustaka Publisher, 2010
- [6] Pratama. I Putu Agus E, "HandBook Jaringan Komputer", Bandung: Informatika, 2014
- [7] Pratama. I Putu Agus E, "Sistem Informasi dan Implementasinya", Bandung: Informatika, 2014
- [8] Rosa A.S, M. Shalahudin, Rekayasa Perangkat Lunak, Terstruktur dan berorientasi objek (Agustus 2013) Penerbit Informatika Bandung.