



Palestine Polytechnic University

College of Information Technology and Computer Engineering

Department of Information Technology

## College Announcement Notification

### Mobile System

Graduation project submitted to fulfill the requirements of the B.Sc. in Information  
Technology

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## **Abstract**

During this era, the era of developments and technologies, our world has witnessed a massive and huge changes at every level of our lives, especially in the medical and educational fields. Now, students are more capable of performing their responsibilities and duties easily and more quickly. However, they still having some sort of difficulties in the process of being daily aware and acknowledged by momentary and day to day changes. The students have a dilemma in reading and seeing the new posted advertisements, if there any. So, the team found out that this is a serious issue for our students, in addition to that the team found it an interesting study and great benefits can be driven out of it.

The idea of the project is, to build and design a mobile application that students may have on their smart phones. The idea is based on notifying the students by any ads added, whether they are posted by the college board of directors or by the course instructor himself. So, it's all about the announcements, instead of sticking them to the wall, the students can receive them on their mobiles.

The application will work like this, the instructor who is the sending party will write the ad and choose to which course he want to send that ad, the ad will be stored in the database until the college secretary (Admin) see it on the server site, he can accept to send the ad to the student or reject sending. If he accept it, the ad will reach to the students wherever he is, using his mobile by accessing with Internet. After he login to his account, he can see new ads that are related to his courses. In the other hand, if he did not open his Wi-Fi, or even if he don't have a smart phone that can't implement the application, after a while, one day or six hours for example, the student will receive the advertisement as SMS that contains whatever information the announcement holds. Finally the instructor could care less if the students read the announcement board that day and see his ads, because wherever the student is, he will receive all the ads of his own.

## المخلص

نحن الآن في عصر التكنولوجيا والتطور، السرعة والاتصالات. في كل يوم تظهر الحاجة الى ايجاد تقنيات جديدة لمواكبة التطورات الحديثة. وكطلاب جامعيين، نحن بحاجة لحل المشاكل التي تواجهنا من أجل تسهيل مسيرة العملية التعليمية.

وجد فريق العمل المكون من ثلاث طالبات، من تخصص تكنولوجيا المعلومات، أن غالبية طلبة جامعة بوليتكنيك فلسطين يواجهون مشكلة، ألا وهي متابعة ما هو مفيد من مستجدات الجامعة، أيضاً ما يتم إعلانه من قبل الإداريين والأساتذة، حيث ان الاعلانات التي يتم لصقها على لوحة الإعلانات لا يتم قراءتها و متابعتها بشكل دائم وفعال من قبل الطلبة.

تستند المشكلة إلى واقع إهمال الطلبة. ومشكلة الوقت أيضاً، إذ ليس بإمكانهم الوصول إلى لوحة الاعلانات ومتابعتها بشكل دائم. أحياناً تغيبهم عن الجامعة - بعذر أو بدون عذر- يعتبر أحد الأسباب أيضاً، وأسباب أخرى تعود لظروف الطالب نفسه من حيث برنامج محاضراته وأماكن تواجده في مختلف مباني الجامعة.

بعض هذه الاعلانات، كإعلان تغيير موعد امتحان، أو إلغاء محاضرة، في العادة لا تسبق موعد الامتحان أو المحاضرة بفارق زمني كبير، فقد يتم اتخاذ مثل هذا القرار لأي سبب من الأسباب قبل ساعة من مواعده.

تقوم فكرة المشروع على حل هذه المشكلة عن طريق بناء وتصميم تطبيق للهواتف الذكية التي تعمل بنظام الأندرويد، يستطيع الطالب من خلال هذا التطبيق الوصول إلى ما يتم الإعلان عنه، حتى وإن كان هذا القرار وليد اللحظة. فعلى سبيل المثال: إن أراد مدرس تأجيل أو إلغاء امتحان لمساق معين، يستطيع أن يعلن لجميع طلبة هذا المساق بأنه تم الغاء ذلك الامتحان. عن طريق حسابه الخاص حيث يقوم بكتابة الإعلان وإرساله، عندها سوف يتم تخزين هذه الرسالة على الخادم لحين الموافقة على إرساله من قبل مسؤول النظام (سكرتير الكلية مثلاً). إذا تمت الموافقة على إرساله، سيصل للطلبة المعنيين على حساباتهم الشخصية في هذا التطبيق. في حال لم تصل الرسالة للطالب أو لم يتم بالاتصال بالإنترنت لفترة زمنية معينة، أو إذا كان الطالب نفسه لا يملك هاتفاً ذكياً لتشغيل التطبيق، ستصله الرسالة بشكل رسالة نصية من خلال رقم الجوال المخزن في قاعدة البيانات.

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# **College Announcement Notification Mobile System**

Software Project Management Plan

Version 1.0

## Revision History

Date	Version	Description	Author
7/May/13	1.0	Preliminary version of the College Announcement Notification Mobile System	S.Azeeza, A.Isra, S.Rihabb

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## **1. Overview**

The purpose of this document is to specify the project plan to develop the software application, CANMS. This document outlines a brief plan about how the project is to be planned and also include the milestones and deliverables. This document has been prepared as a project plan document of the CANMS. It will also serve as a guide for the developers, developing the product as part of the project. Updates of this document will serve to record the progress of the project.

### **1.1. Purpose, scope, and objectives**

Collage Announcement Notification Mobile System (CANMS) is a simple mobile application that aim to allow for all instructors in the university to send the announcements to the students on their mobiles. As a result the paper based ads will no longer exists. This application facilitates the communications between students and instructors. The scope of project is that it is applied at our university, including all colleges, all instructors are involved and students as well.

The objectives that are aim to achieve by this product:

1. The process of announcing ads is made centralized, the messages that are sent to the students by teachers, all come out from one and only one location. That achieved by connecting all together.
2. The product removes obstacles and complications that students was suffering in keeping up with the newly announced ads.
3. The product make it easier for teachers to communicate with the students.

### **1.2. Assumptions and constraints**

The team of this project is expected to complete the project within four months. The project shall not exceed the established budget.

This project will use resources in the form of time and effort that will be spent developing the project deliverables.

The application is developing under java platform with the environment of eclipse and the required database is designing with WAMP Server. CANMS can be operated and in any

smart phone that have android operating system (OS), it can simply be implemented using a smart phone that has android OS. So, the basic requirements for this application is a computer with java framework and WAMP server, and if the smart phone with android OS didn't exist in the implementation phase, the team can use the emulator to run the code.

Constraints contains the following:

1. The data that can be held by an SMS message is very limited. A normal SMS message can hold at most 140 bytes (1120 bits) of data. The message length limit of an SMS text is 160 characters for Latin alphabets like English (using 7-bit character encoding) and 70 characters (using 16 bit characters) for non-Latin alphabets like Arabic. [1]
2. The limited budget and schedule mustn't be exceeded.
3. The application must be reliable which delivers its intended purpose, which is sending the ads successfully to the students.
4. The product must be user friendly, easy to use, the product should be able to perform its intended goals and must be used by users without any complications.
5. At the process of development we might encounter an obstacle, the management won't allow the access to database.

### **1.3. Project deliverables**

The list of project deliverables is:

- Project Management Plan.
- Software Requirements Specification.
- Software Design Description.
- Software Test Description.
- Source (object) code.

### **1.4. Schedule and budget summary**

The project has a budget of \$2630 (development and operational cost).

A tentative schedule is as shown below in the table:

Item	Due date
Software Requirements Specifications	March 30, 2013
Software Project Management Plan (this document)	May 7, 2013
Software Design Document	May 21, 2013
Database	May 9, 2013
Software Testing Description	May 23, 2013
Final document	May 26, 2013

Table 1- Schedule of the Project

### 1.5. Evolution of the Plan

All changes to the project management plan must be agreed to by all team members and the supervisor before they are implemented. All changes should be documented in order to keep the project management plan correct and up to date.

## 2. References

1. Gupta, P. (2010). Short Message Service: What, How and Where?. Retrieved from <http://www.wirelessdevnet.com/channels/sms/features/sms.html>
2. Lee, W.M. (2011). *Beginning Android Application Development*. Indiana, Wiley Publishing, Inc.

## 3. Definitions and acronyms

Term	Definition
CANMS	College Announcement Notification Mobile System
SPMP	Software Project Management Plans. The basic template to be used from IEEE. It is the process where software projects are planned, monitored and controlled.
SRS	Software Requirement Specification, is comprehensive description of the intended purpose and environment for software under

	development. The SRS fully describes what the software will do and how it will be expected to perform.
Database	Any collection of data organizes for storage in a computer memory and designed for easy access by authorized users
SMS	Short Messages Services
Milestone	A scheduled event used to measure progress
SDD	Software Design Descriptions
Project deliverable	A work product to be delivered to the acquirer. Quantities, delivery dates, and delivery locations are specified in a project agreement
Work activity	A collection of work tasks spanning a fixed duration within the schedule of a software project. It includes the project planning, requirement specification, software design, implementation, and testing
UML	Unified Modeling Language. It includes a set of graphic notation techniques to create visual models of object-oriented software-intensive systems
OS	Operating system
Android	An operating system that uses java, PHP and other programming language
IEEE	Institute of Electrical and Electronics Engineers

**Table 2 - Definition and Acronyms**

#### **4. Project overview**

CANMS is a new system, which is built on the android platform, that is based on notifying the students by any ads added to keep them being daily acknowledged by changes. The system at all is about the announcements, instead of sticking them to the walls or ads

boards, the students will receive them on their mobiles. The system will function in the university, which is full of students and teachers.

The advantages of the system over older others, if any, is that it's in line with the current development in the world of the importance to use the mobile and non-indispensable it more than any other device, so the implementation of the system as a mobile application is a big benefit. Also the system will make communication between the students and teachers more easier and faster than the traditional way of announcement.

The potential users of the system are the teachers, students and the administrator, who is the secretary of the college dean. They all will benefit from the system. The student will keep acknowledged of all announcements all the time. The instructor will save his time by just writing the ad on his mobile and send it to the admin waiting the acceptance of sending it to the student, instead of going to the secretary and ask him to write the ad and then paste it on the college ads board, and the instructor will never care if the student see the ads board or not yet, all ads will receive him on his mobile. And this process will organize the secretary work on the ads in general, it's easier to him just click on a button than writing the announcement or even it is written, he has to print and paste it on the ads boards according to the traditional way.

## 5. Managerial process plans

### 5.1. Time planning

Gantt chart about time planning and project management is stated as:

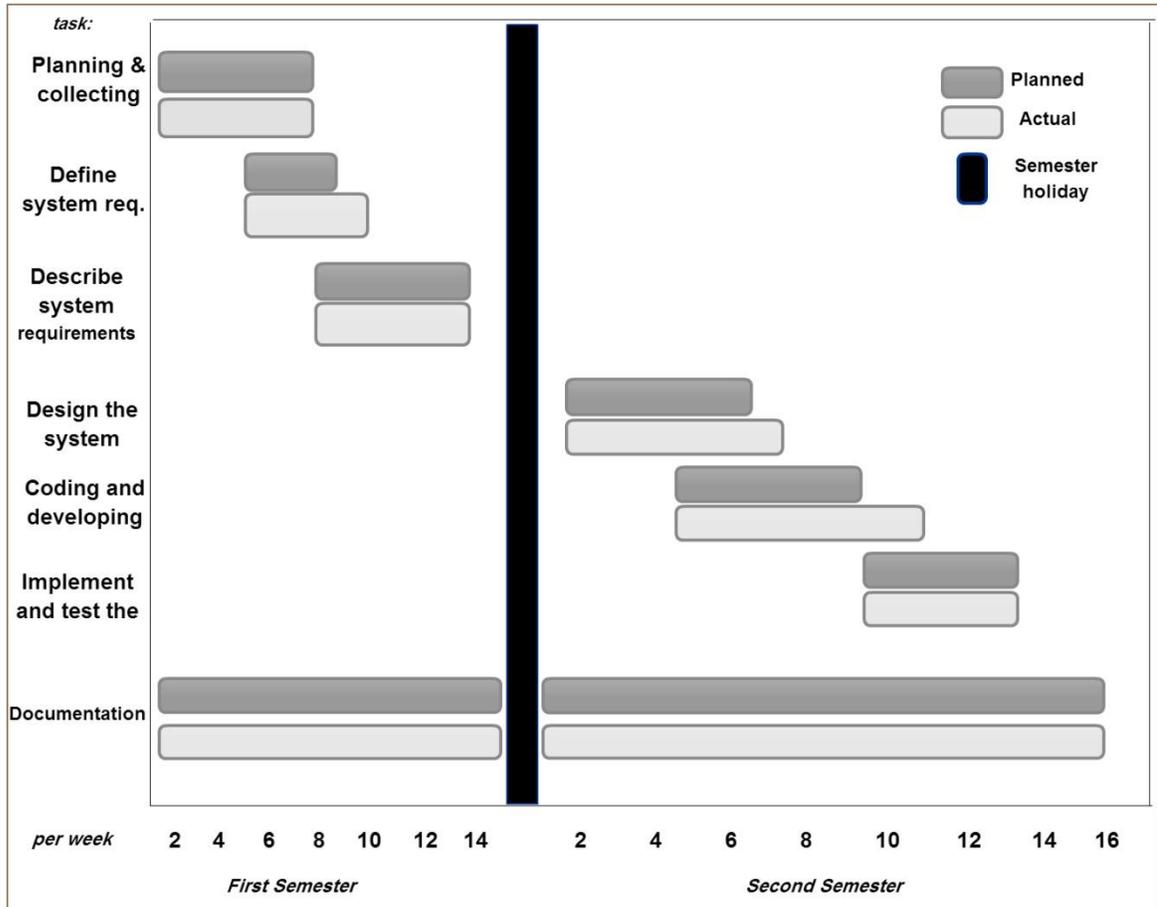


Figure 1 - Gantt Chart for Planning

#### 5.1.1. Schedule allocation

Week 1	Met with students, for definition of problem and update the SRS.
Week 2	Parts of SPMP are written.
Week 3,4	Analysis and finishing SPMP.
Week 5,6	Design Phase, producing needed diagrams and charts.
Week 7-13	Implementation and coding, unit testing and producing SDD.

Table 3 - Schedule Allocation

### **5.1.2. Resource allocation**

This project will use resources in the form of time and effort that the team shall spend developing the project deliverables as mentioned in section 1.1.3.

The three team members will work separately on their assigned tasks , and will work jointly on some other tasks. The weekly progress is monitored by our supervisor. Team members met each two days to report their progress and declare their achievements, in addition to discuss and asking for advice for their separated assignment if needed.

## **5.2. Start-up plan**

### **5.2.1. Staffing plan**

After writing the SRS document two months ago, the team spent 8 weeks defining the requirements of the project and writing the software requirement specifications. Team is needed for the entire 13 weeks. Azeeza will need the first 3 weeks in only preparing and writing parts of SPMP, for Isra and Rihabb, they will participate in writing SPMP. The rest of the weeks is for the design phase with programming, all members in the team will participate partly in programming and testing. Azeeza and Isra' will have the side of android programming in conjunction with Rihabb, who will get the PHP side of coding. All team members performed the testing together.

### **5.2.2. Resource acquisition plan**

All necessary hardware, Software, and CASE tools for the project are provided. The project delivered to the college and installed on necessary computers and mobiles.

## **5.3. Control plan**

Any major changes that affect the milestones or the budget have to be approved by all team members and documented. All team members are responsible for ensuring that the project is completed on time and budget, ensuring that everything is working according the plan. At each meeting, the team members will discuss their achievements and decisions will be made.

### **5.3.1. Requirements control plan**

When changes are to be made in the requirements after the SRS has been released, the changes shall be brought to the attention of the supervisor and discussed. Any changes that are to be made will be with the prior approval of the supervisor and only if feasible and permissible within the constraints of the project mentioned in section 1.1.2. Once the changes have been made to the SRS document, an updated version of the SRS shall be released and deliver it to the team supervisor.

### **5.3.2. Schedule control plan**

If the work scheduled in section 1.1.4 is gets behind, the developers are ready to spend extra time on the project in between and after the schedules and also during this semester to make up for the lost time and deliver the final project on time.

### **5.3.3. Reporting plan**

The updated documents will be delivered as mentioned in schedule of section 1.1.4. All versions of all the documents and updates will be sent and discussed with the supervisor and upon approval the approved document will be delivered.

## **5.4. Risk management plan**

The risk factors and the tracking mechanisms are as follows:

- There is no existing product with which the new product can be compared. Accordingly, it will not be possible to run the product in parallel with an existing one. Therefore, the product should be tested extensively.
- The lack of skills and knowledge of tools needed for coding and developing by the team especially that this is a mobile application. The team don't have sufficient knowledge about android OS and how to program its applications. In this case, we are expected to do the best we can and update our knowledge that is needed to done the work correctly.
- There are some sort of restricted policies that is applied by the college on the database. Access to the database by students is not allowed, so the students built a virtual database that imitates the one that exists in our collage.

- Because of possibilities of major design and faults, extensive testing is performed, each one of team members whose major responsibility is programming will test its own code and integration is made for testing as well as product testing is performed by all team members.

## **6. Technical process plan**

### **6.1. Process model**

The CANMS will be analyzed using the UML, also it will be implemented and executed using model and prototyping.

### **6.2. Methods, tools and techniques**

The workflows will be performed in accordance with the Unified Process. The product will be implemented in Android. This project adapts the system for use on a smart phone using some interfaces that would be built using eclipse, and WAMP as its database management system.

### **6.3. Infrastructure plan**

The product will be developed using Android operating system that is running on necessarily personal computers and mobile phones.

The hardware resource is a 2.30 GHz core i5 computer running Windows XP Operating System. Computer should have at least 2 GB RAM and a minimum of 512 MB of disk space. The type of the device that we will use in testing process is Samsung galaxy 6102, we will use two mobile devices, one for the instructor, the other is as the student mobile.

## **7. Support process plans**

### **7.1. Documentation plan**

The IEEE standards would be followed for all documentation purpose. All the documents would be discussed before their baseline versions are issued and distributed to the members on the due dates mentioned in section 1.1.4 for delivery dates.

## **7.2. Problem resolution plan**

Any major problems faced by the team members will immediately be reported to the team supervisor.

## **8. Additional plans**

Additional components:

- **Security:** Instructors and other staff members will need A password in order to use the product while student won't need that.
- **Training:** Explanation about how to use the system will be done by the team members.
- **Maintenance:** Corrective maintenance will be performed by the team.
- The team members are responsible for all documentation to be developed and for all work to be done.

# **College Announcement Notification Mobile System**

Software Requirement Specification

Version 2.0

## Revision History

Date	Version	Description	Author
19/Dec/12	1.0	Preliminary version of the College Announcement Notification Mobile System	S.Azeeza, A.Isra', S.Rihabb
7/Mar/13	2.0	Final version of the College Announcement Notification Mobile System	S.Azeeza, A.Isra', S.Rihabb

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## **6. Introduction**

This Software Requirements Specification (SRS) document provides a complete description of all the functions and specifications of CANMS project.

### **1.1. Problem Definition**

At our college the way that is followed in announcing the news is traditional and old. The news are written down on paper then placed on the announcement board at the college walls. This way can affect the students ability to keep up with important news that are announced daily at every moment. The announcement board is so messy, a lot of ads can be posted per day, some students may not see them or even notice them; because of lack of time or laziness. The ads themselves sometimes fall on the ground accidentally or intentionally, in either case the ad is not read. As a result students will have trouble or issues, for example, they may not attend an exam or an essential homework.

In addition to the paper based method in announcing ads, our college uses the e-mail to send the ads, that only exclusive between management and staff. Our solution to all these problems is using mobile application, that may at least remove some problems, or reduce the side effects of these problems.

The team agreed that reading posted ads is a problem that need to be solved. In order to prove that it's a real problem, the team used a questioner as a tool to accomplish that.

Based on the questioner analysis, most of students miss reading some ads at the time that they posted on the announcement board, this cause problem need to be solved.

### **1.2. Purpose**

This document includes software requirements for CANMS project. Further requirements, features and functionalities of CANMS will be explained and analyzed in detail throughout this SRS document.

The main purpose of our software project, is to provide an electronic replacement for the collage traditional way in presenting the posted announcements. This system aims to make the process of reading as well as getting to the paper-based ads more easily.

The following project objectives will be generated as a result of using this system:

1. Gives the college centralization in sending their messages and controlling them.
2. Makes the communication much easier between the student and other parties such as instructors, board of PPU administration and other staff members.
3. Keeping up with the newly announced news easily and quickly.
4. Solves the problem that students already encounter in reading the paper-based announcements.

### 1.3. Scope

The system covers all departments in PPU, including management, teaching and Deanship of student affairs that contains everything related to students, such as, Financial aids, sport and student activities and others. All the external interfaces and the dependencies are identified in this document.

This software project will target students and staff members (both management and instructors) in Palestine Polytechnic University in Hebron city.

### 1.4. Definitions, Acronyms, and Abbreviations

Term	Definition
CANMS	College Announcement Notification Mobile System
SRS	Software Requirements specification
Database	Collection of all the information monitored by this system
SMS	Short Messages Services
UML	Unified Modeling Language
Eclipse	Is a multi-language software development environment
Android	An operating system that uses java, PHP and other

	programming language
WAMP	Stands for Windows, Apache, MySQL, PHP. Its A server for building databases
PHP	Hypertext Preprocessor
SQL	Structured Query Language
Use case	Is a methodology used in system analysis to identify, clarify, and organize system requirements. It represents the users interaction with the system
Wi-Fi	Wireless Fidelity
IEEE	Institute of Electrical and Electronics Engineers
PPU	Palestine Polytechnic University

**Table 4 - Definitions and Abbreviations**

## **1.5. References**

1. Gupta, P. (2010). Short Message Service: What, How and Where?. Retrieved from <http://www.wirelessdevnet.com/channels/sms/features/sms.html>
2. Drager, D. (2008). How to set up your own WampServer. Retrieved from <http://www.makeuseof.com/tag/how-to-set-up-your-own-wampserver/>
3. IEEE Std 610.12-1990, IEEE Standard Glossary of Software Engineering Terminology.

IEEE publications are available from the Institute of Electrical and Electronics Engineers, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA (<http://standards.ieee.org/>)

## **1.6. Overview**

College Announcement Notification Mobile System, is the process of replacing the old traditional way of announcing with a new one, that is electronically-based through a mobile application. This project is built to enhance that process, application can access to the application, you can explore the added ads and other stuff.

General outline of the remaining part of the document is so that:

- In section 2, an overall description of CANMS is provided. First, a visual model are given, which is the general use case model. Then, the product perspective and product functions are given related to the previous model. Finally, general constraints are stated.
- In section 3, specific external and internal requirements are stated. Interfaces are associated with the use cases drawn in section 2. Then, product function and system features are explained in general. Also, the budget are stated in this section.
- In section 4, general planning and estimation about the project mentioned.
- In section 5, we ended up Software Requirements Specifications Document.

## 2. Overall Description

### 2.1. Use Case Model

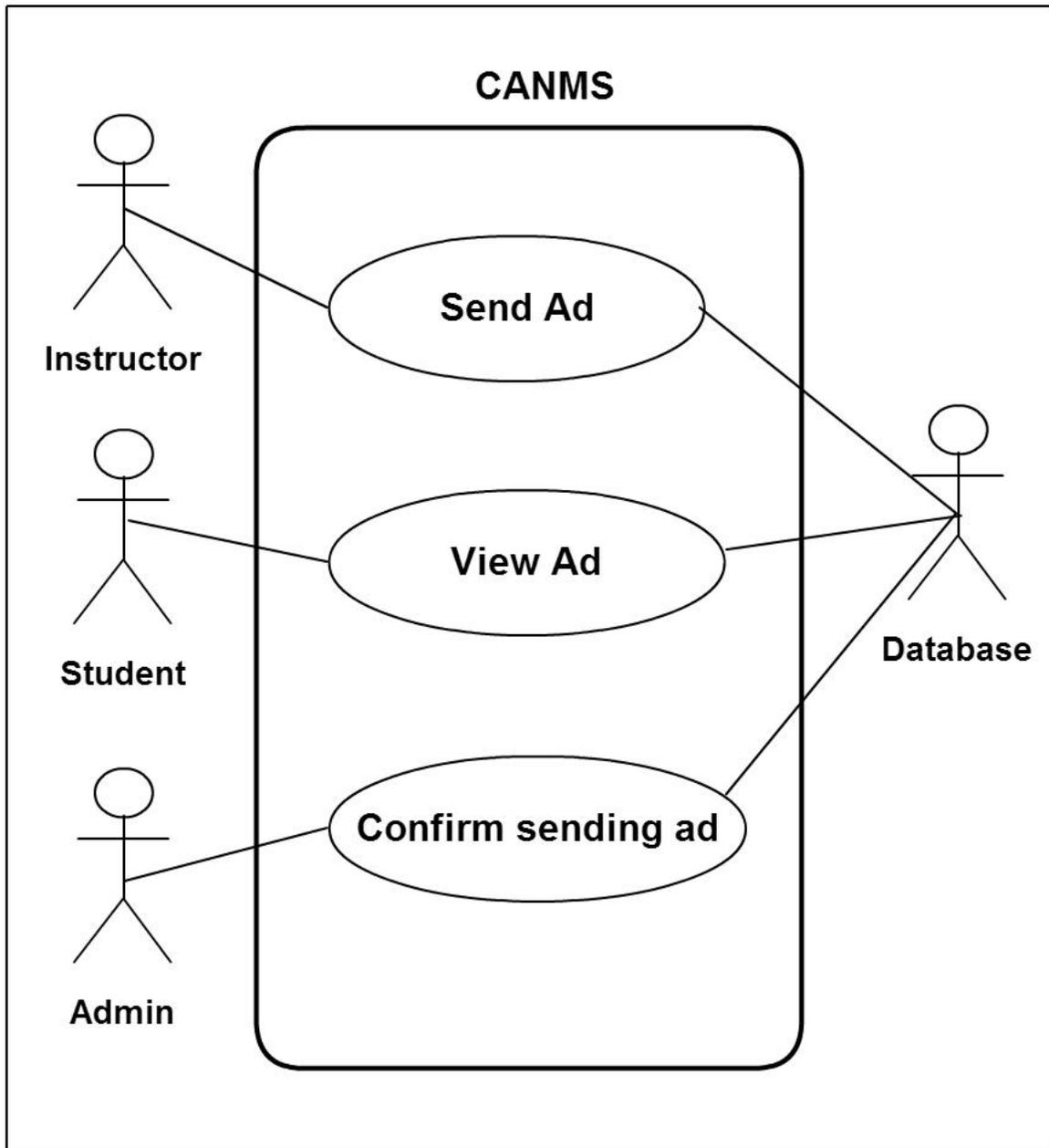


Figure 2 - General use case

## **2.2. Use case model survey**

### **2.2.1. Use cases**

- **Send ad:** The instructor can send the announcement after he/ she logged in to the system, then write the ad and select for which courses he want to send it.
- **View ad:** The student can view ads on the system after being logged in to the system. Student can see all new and old ads.
- **Confirm sending ad:** this use case related with the admin of the system, who is the secretary in our project. When he login to the server, he can see the ad stored in the database and waiting for confirmation. The admin can confirm sending that ad to the students, and reject sending other ads.

## **2.3. Product Perspective**

Main concern of the project is to replace the old traditional way of announcing with a new one, that is electronically-based through a mobile application. CANMS product will be integrated with Android operating system of smart phones, and the already established collage database.

## **2.4. Product Functions**

Different functions will be performed for each user. For the instructor, the application will perform just the send ad function. For the student, he can import new ads from the server, also he can view old ads on his application.

For the admin, he has a web interface, which is the server of the college with a database that contains all information needed about students, instructors, courses, old ads, new ads, and all details to perform the process of CANMS correctly.

The system will help all the involved parties to communicate easily and rapidly. It assists in the process of making the ads to get to the student in a quick and simple manner.

## **2.5. User characteristics**

The application will be built and designed to be user-friendly, it means the ordinary user will be able to use it without any complications. Only basic mobile skills are required to use such system.

## **2.6. Constraints**

The following constraints might limit the development process of our system:

9. Regulatory policies, that is a probability that the college may restrict or even want allow to give the permission to its database, which is needed to be integrate with our system.
10. The availability of hardware such as smart phone, many inhibit the advantage of system, if little number of student using the phone or the application isn't downloaded on their cell phone the application will not be able to fulfill its purpose, which is sending announcements to student, because student are not able to use the service.
11. The integration is necessary between database and the system. The students mobile numbers and the schedule for the current semester are required on the server to send the ads to the students correctly.
12. The data that can be held by an SMS message is very limited. A normal SMS message can hold at most 140 bytes (1120 bits) of data. The message length limit of an SMS text is 160 characters for Latin alphabets like English (using 7-bit character encoding) and 70 characters (using 16 bit characters) for non-Latin alphabets like Arabic. [1]

## **2.7. Assumptions and Dependencies**

- Assumptions: We assume that all announcements which will be confirm to send should be reach to all related students, and the system will be run correctly without any error.
- Dependencies: CANMS will depend on android platform, which is required to run this application.

### **3. Specific requirements**

This application is mobile application, it will be built using Android and PHP platforms, the eclipse program and WAMP server, Will be used in the development and programming of application.

WAMP Server is a Windows web development environment. It allows you to create web applications with Apache, PHP and a MySQL database. Alongside, PhpMyAdmin allows you to manage easily your databases.

Apache is the web server, which handles browser requests and sends the information across the internet to your browser. PHP is the programming language that many sites are written in – this creates dynamic content which in turn is sent to Apache, which sends the data to your browser. And finally, MySQL is the database which stores the information for programs. PHP is used to access this database. [2]

The system gives the instructor the ability to send the announcements using smart phone applications by accessing the college database. Then the announcement will reach to the student on his smart phone by the college network if he in the college campus, otherwise it will reach to him as an SMS message.

#### **a. External Interface Requirements**

##### **i. User Interfaces**

###### **➤ Student and instructor**

In our project, user interaction with the system will have some complication because some actions will not be relying on background processes.

(There are initial screen designs below. They may evolve with alternate requirements.)

While using the system, firstly user will see the login interface of the application.



Figure 3 - Login interface

This is the login interface, when the application start running, this interface appear to the user, either he/she is a student or instructor. After login, different interfaces will appear depending on who is the user (student or instructor).

The following interface is just for the student, it contains these three buttons. Import Ann from Web button perform the process of viewing all the new announcements that the student didn't see it yet. The View Old Ann button show all announcements that have seen before. The Exit button will close the application by clicking on it.



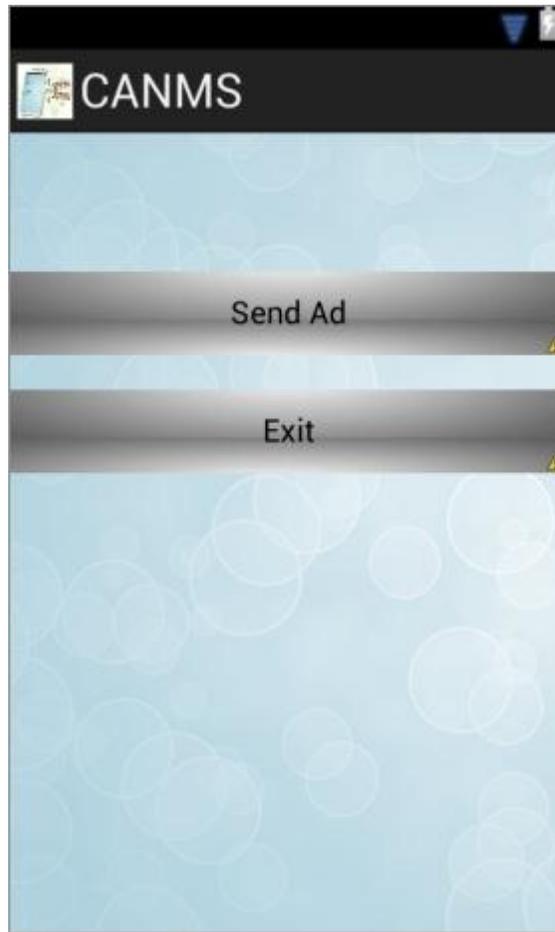
**Figure 4 – student home interface**

When the student click on the first button, if there are new ads, it will be display in a list view to the student, if there is no new ads for him, it will return nothing and just tell that there are no new ads to you.

When the student click on the second button, which is viewing the old ads, he will see a list of all read announcements.

In the previous two buttons, if the student click on any announcement from the list, a new screen will open, this screen contains the all this announcement details.

This interface is for the instructor, after he login to his account, he can see this screen, which contains two buttons, the first is for sending announcements process, and the other for logging out and close the system.



**Figure 5 - Instructor home interface**

When the instructor click on the first button, a new screen will appear. This new screen contains the place for writing the content of the ad, all courses of that instructor, and button to send it for students. This interface will be as follow:



Figure 6 - Send Ad interface

➤ **Admin interface**

The following interface is the main interface for the admin of the system, in this interface he can see all announcements that have been stored in on the server waiting for confirmation on sending to students. He can confirm sending by clicking on the confirmation button. If he don't want to confirm sending a specific ad, he just do nothing.



موافقه على الاعلان	تاريخ الاضافه	وقت الانتهاء	الكلية	وصف الاعلان	عنوان الاعلان
الموافق على الاعلان	0000-00-00 00:00:00	0000-00-00 00:00:00	it	text	add
الموافق على الاعلان	0000-00-00 00:00:00	0000-00-00 00:00:00	graphic	text	add
الموافق على الاعلان	0000-00-00 00:00:00	0000-00-00 00:00:00		text	add
الموافق على الاعلان	2013-05-19 23:40:37	2013-05-14 14:01:00		يبي	يبي
الموافق على الاعلان	2013-05-19	2014-02-02		سبيلر	سبيلر

**ادارة المحتويات**

ادارة الكليات

ادارة المساقات

ادارة المدرسين

ادارة الاعلانات

ادارة الطلاب

**ادارة الاعلانات**

اضافة اعلان جامعه

اضافة اعلان كلية

**التحكم**

الخروج من الموقع

Figure 6 - Admin interface

## ii. Hardware Interface

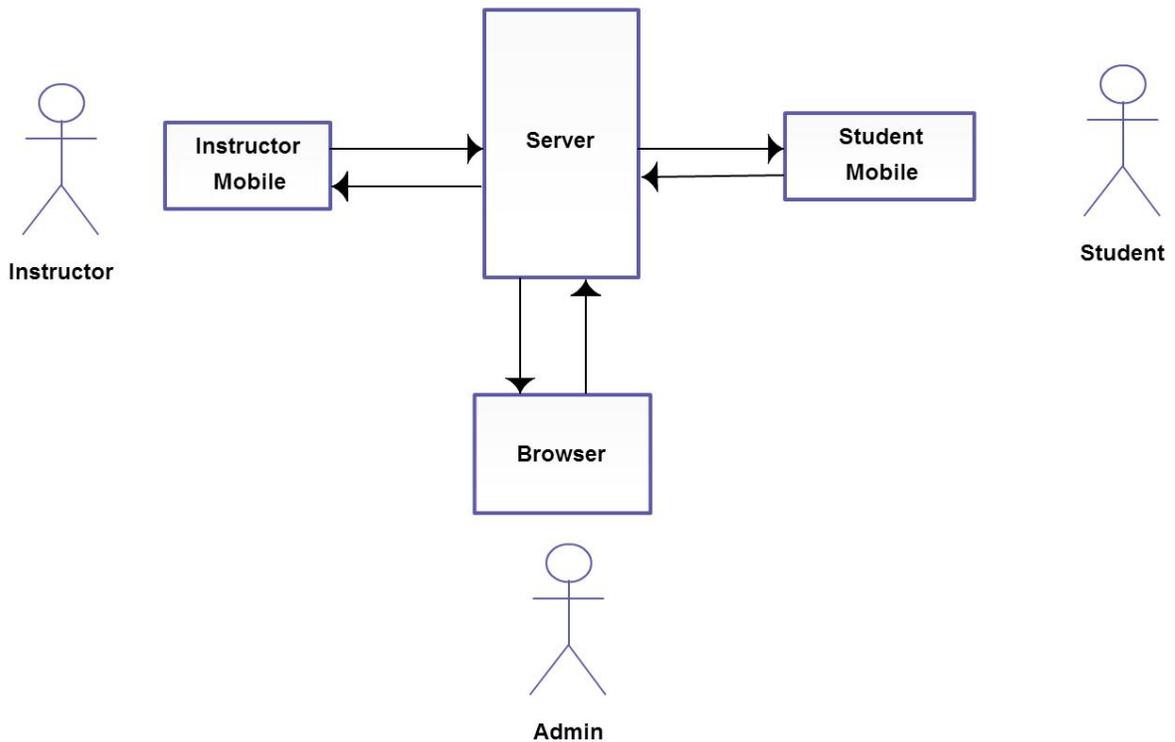


Figure 7 - Hardware interface

## 3.2 Functional requirements

1. The application ability to send an announcement, if that is not included in the application, the whole system will not be able to perform the required mission.
2. Provide that student a service that enables him to see the collage ads, including the recently announced ones.
3. Provide the instructor a service that enables him to communicate with his students easily and quickly. The Instructor can send to the student an ad whenever needed and without any troubles.
4. Students ability to view the announcements of the college immediately whenever necessary.

## **b. Non-Functional Requirements**

1. **User-friendly interfaces:** The project interfaces will be designed in a simple and friendly manner. It means any user with basic skills in using mobile as well as the internet is able to use the application. Designing the interfaces in that way, eliminates the complications that might face the user, also it increases the efficiency of our system and provides speed in the process of adding or even browsing the announced decisions.
2. **Security:** Having a secure system that protects the system and its data, preventing the unauthorized persons to access to the system, and giving each user the right level of privileges, for example, the student only allowed to see the ads and search the ads as well, but he is not allowed to access the database or make changes on the system. On the other hand, the administrator can do that.
3. **Ease of use:** According to the instructions and guidance related to the design of system interfaces, the interface should be easy to use, the colors should be appropriate and comfortable for the human eye. The interface should suits the project idea, goals and target customers, their skills and needs. The team will design the interface according to those instructions, so it will suits the screen of smart phone size and dimensions.
4. **The system is accurate and responds rapidly:** The application is accurate and specific in the process of identifying the involved students, for instance, the students that the instructor wants them to receive the ads. The application will be fast in locating the student and make the expected action according to his location. In addition, the system will be fast in responding to the users, whether they are searching in the ads in case if the user was a student or send an ad if he is allowed to do that.

## **c. Design Constraints**

The following android will be used as the programming language while developing the product.

There is a hardware constraint, that is we need a smart phone that has the android operating system, and no one of the team member has that mobile, so we are working on having 2 devices for the development and testing phases.

**i. Standards Compliance**

All the documents of the project will conform to IEEE specifications.[3]

**ii. Software System Attributes**

- **Availability**

Main requirement is to have CANMS is to be a student or instructor in the PPU.

- **Correctness**

System will work correctly if all the requirements, assumptions and dependencies are met.

- **Maintainability**

CANMS can respond new requirements as the time passes. New features can also be added.

**d. Budget**

The following development and operational costs are needed in order to build the system:

**Development Costs:**

- Hardware Resources Costs:

Hardware	Specifications	Number	Price per unit
Computer	Ram 2G, Windows7	1	600\$
Mobile	Samsung Galaxy 6102	2	200\$
Total Cost:			1000\$

Table 5 - Hardware costs ([www.amazon.com](http://www.amazon.com))

- Software Resources Costs:

Software	Number	Price per Unit
Windows 7 home Premium	1	200\$
Eclipse	1	Free
Microsoft Office 2010	1	150\$
PHPMYADMIN	1	Free
WAMP	1	Free
Total Costs :		350\$

**Table 6 - Software costs (Microsoft,2012)**

- Human Resources Costs:

Human resources are the project team members as shows the table below:

Human Resource	Number	Total Cost
System Design	1	500\$
Database and System Programming	2	500\$
Total Cost		1000\$

**Table 7 - Human resources costs**

**Operational Costs:**

- Hardware Resources Costs:

Hardware	Specifications	Number	Price per unit
Mobile	Samsung Galaxy 6102	2	200\$
Server	Domain with hosting for one year that support C panel and PHP	1	80\$
Total Cost:			280\$

**Table 8 - Hardware Operational Costs**

## 4. Planning

In every software project, there should be a team structure. Our team consists of three members who exchange roles with each other throughout the stages of development of the system between the administration and programming and analysis, and to other tasks because every member of the system is characterized by skills in certain areas more than others, and if you encounter a member of any problems will consult with the other members of the team. The goal of this rotation to give dynamic to work, and to benefit as much as possible of the project to increase capacity and skills in all areas of the project.

- **First role:** data collection through interviews and questionnaires and then analyzed and exit information and statistics.
- **Second role:** Start Website programming and mobile application, through assigning all members in each area, based on the experience that is characterized by team members.
- **Third role:** Test the system.
- **Fourth role:** Documenting the system.

## 5. Conclusion

In this SRS document, complete description of CANMS behavior, requirements were stated. These requirements will help the progression of the project in other stages. However, all of these may be subject to changes in further development stages.

# **College Announcement Notification Mobile System**

Software Design Description

Version 1.0

## Revision History

Date	Version	Description	Author
25/May/13	1.0	Preliminary version of the College Announcement Notification Mobile System	S.Azeeza, A.Isra, S.Rihabb

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## **1. Introduction**

This document intends to present the design and progress of CANMS, which is mobile application, that is based on notifying the students by any ads added by teachers to keep them being daily acknowledged by changes. This document explain the descriptions of the proposed software system design. In the design document, general design architecture of the project will be enlightened and current project status will be indicated.

### **1.1. Purpose**

The purpose of this document is to explain the design details of CANMS project. As IEEE standards document indicates, the design document show how the proposed software system will be structured in order to satisfy the requirements identified in the Software Requirements Specifications document. In other words, it aims to translate software requirements defined in SRS document into a representation of software components, interfaces and data to be used later in implementation phase of the project. However, since every software design is open to changes and modifications, it is highly possible to make changes during implementation and update SRS and SDD documents accordingly.

### **1.2. Scope**

SDD document will contain the general definition and features of the project, design constraints, the overall system architecture and data architecture, a brief explanation about our current progress and schedule of the project. With the help of UML diagrams, design of the system and subsystems/modules will be explained visually in order to help the programmer to understand all information stated in this document correctly and easily.

### **1.3. Overview**

This document encompasses a design model with architectural, interface, component level and deployment representations. Design model will be contained in this document, which will be used as a medium for communicating software design information, assessed for quality, improved before code is generated. Many graphical representations and verbal explanations were added to this document to achieve the goal of CANMS.

This document is divided into subsections to make it more understandable. Those are:

- Section 2 contains general description about the system components.

- Section 3 contains the assumptions made during the design process, dependencies and other constraints.
- Section 4 contains general data structures that CANMS used.
- Section 5 contains the most important diagrams of the document. Package diagram, class diagrams and sequence diagrams of components are stated in this section. Also a brief explanation about the classes is mentioned.

Those sections and subsections of them are mentioned in the table of contents more precisely.

#### **1.4. Definitions, Acronyms and Abbreviations**

<b>Term</b>	<b>Definition</b>
CANMS	College Announcement Notification Mobile System
SDD	Software Design Descriptions
SRS	Software Requirements specification
XML	Extensible Markup Language
Database	Collection of all the information monitored by this system
SMS	Short Messages Services
Eclipse	Is a multi-language software development environment
ADT	Android Development Tool
Android	An operating system that uses java, PHP and other programming language
AVD	Android Virtual Device
WAMP	Stands for Windows, Apache, MySQL, PHP. Its A server for building databases

APK	Application package file, it's the file format used to distribute and install android applications
PHP	Hypertext Preprocessor
IDE	Integrated Development Environment
Wi-Fi	Wireless Fidelity
Use case	Is a methodology used in system analysis to identify, clarify, and organize system requirements. It represents the users interaction with the system
UML	Unified Modeling Language. It includes a set of graphic notation techniques to create visual models of object-oriented software-intensive systems

Table 9 - Definition and Acronyms

## 1.5. References

- Williams, A. (2012). What is...Eclipse. Retrieved from <http://www.electronicweekly.com/eyes-on-android/what-is/what-iseclipse-2012-01/>

## 7. System Overview

CANMS is a new system, which is built on the android platform, that is based on notifying the students by any ads added to keep them being daily acknowledged by changes. The system at all is about the announcements, instead of sticking them to the walls or ads boards, the students will receive them on their mobiles. The system will function in the university, which is full of students and teachers.

In this context, we designed CANMS in a manner stated in section 5.

## **8. Design Consideration**

### **3.1. Design Assumptions, Dependencies and Constrains**

#### **3.1.1. Design Assumptions**

CANMS is a big project to design and implement. Since we have approximately four months to finish, we are requested to make some assumptions in order to narrow down project to a certain level.

Our design assumptions can be stated as:

- This project runs on an Android platform,
- All students and instructors have their own user name and password,
- The application is about sending announcements from instructors to the students, with the administration knowledge about all announcements sent or wanted to be send,
- Students can't send announcements to anyone, they can receive announcements and instructors can just send,
- Each student will receive just the announcements that are related to his courses that he takes in the current semester,
- We will use the ADT plug in for eclipse IDE to develop our mobile application and the AVD will be used for testing the application. Eclipse is an open source IDE for Java, android, PHP projects and more. Basically, the place where the application software is crafted, being supported through various stages of its lifecycle. Google officially supports it, and has created the ADT plug in for Eclipse and integrated its AVD Manager virtual device management into the tool as well. [1]

#### **3.1.2. Design Dependencies**

Our design dependencies can be stated as:

- The application should run on an android platform.
- We choose the android platform 2.3.3 gingerbread (API level 10) to be the target API for our application; because it is the most common and widely used around the world.

### **3.1.3. Design Constrains**

#### **1. Time**

Under the scope of our university, we have approximately four months to finish our project. In order to meet deadlines, as we plan in SPMP document, we have to follow the schedule strictly and according to the feedback we will take, we will improve the general design and process of our project.

#### **2. Performance**

For every software product, performance is an important criteria. Since our application is a client-server system, it will run on the two platforms, android platform and PHP platform, we expect that the operation will take much more time than the one user operation. So, we have to do our best in programming to make the operation take the fewer time can take.

## **3.2. Design Goals and Guidelines**

### **3.2.1. Portability**

There will be an APK for CANMS application that runs only on Android platform mentioned both in assumptions and dependencies.

### **3.2.2. Reliability**

Software Reliability is the probability of failure-free software operation for a specified period of time in a specified environment. Responses and the work done by the system should be consistent.

### **3.2.3. Correctness**

CANMS will work correctly if all the requirements and assumptions are met. It will give the same result regardless of time, or other college environment.

## **4. Data Design**

### **4.1. Data Description**

During the processes of our project, and when both users interact with the application by request ads from the server or when the instructor sends a new ad to the student, all data will be send as a string from the android platform to the server, which is built on PHP platform. When the server returns data for the user application (student or instructor), the android application receives data as xml files.

Our project needs database, the need for a database came from the environment of the university, which is changing and updating their database of the registration every semester. In our system we need a database that keep all information about the students and instructors in the current semester and update all information in the next semesters.

#### **4.1.1. Data Model**

The following nine tables represent the database. Each table contains the needed attributes to fit the requirements of our project. All relationships between the tables are clear in the following UML diagram.

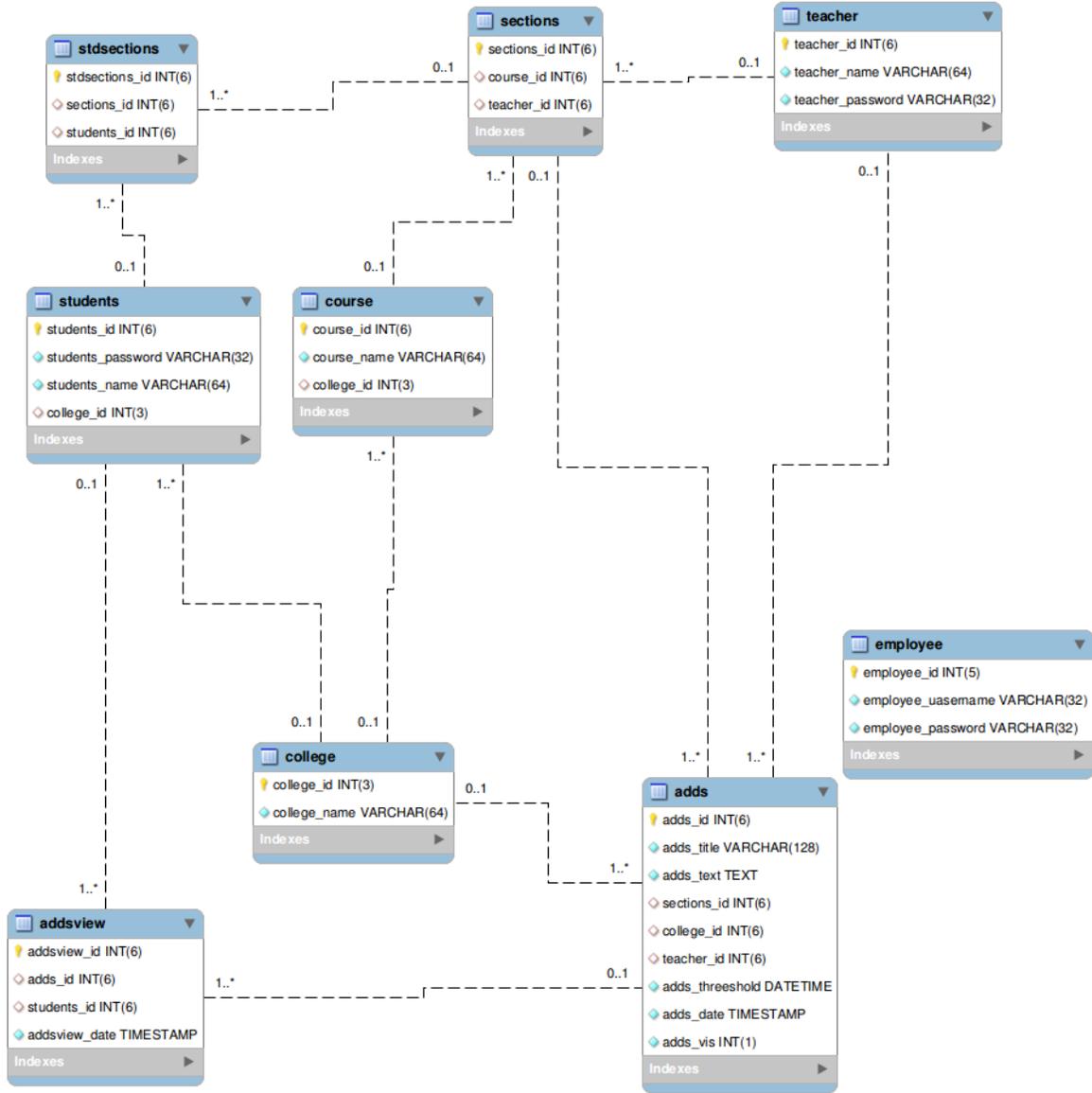


Figure 8- UML Diagram

#### 4.1.2. Data Dictionary

The database of our project is considered as a university database. University has more than one college, which means that we need a table to store the college information, which are the college id and the college name.

Each college has many courses. Course table has three attributes: course id, course name, and college id.

For each course, there are sections, these sections may be taught by more than one instructor, so we need a table to connect each instructor with his courses, this is the sections table, it contains the section id, the course id, and the teacher id, who is the instructor that teaches this course section. The instructor table contains his id, user name and password for login to his account on the mobile application.

The student table contains all information needed in our project, student id, student name, password for his account, and the college id that he/she belongs to. We will make the user name in our application is the student name.

The “stdsections” table connects the student table with the sections table to know what is the section of each course that the student registers it and who is the instructor of that section. This table contains the student section id, sections id and the student's id attributes.

The “adds” table stores all of ads that have been added by the teachers from all colleges, while the “addsviw” table is just for making a statistical process for the number of students that they read any sent ad and when they see them. This table is important to know how many hours should the server wait before sending that ad as SMS.

The following attributes are the “adds” table, with some details about each attribute:

- Ad id, ad title, ad text, teacher id, ad date, threshold and visibility attributes are required in all ads.
- Section id and college id attributes define that this ad is to be sent for a specific section or for the college, which means that this ad is for all courses in that college. To know that, if the section id is not null and the college id is null, this means that the teacher just intends to send this ad for a specific section. If the college id is not null, this means that the ad will be sent for all students in that college. Otherwise, if both attributes are null, that means the ad is for the whole university and will reach for all students in the university.
- The threshold attribute is to define the time that should the server wait before deciding to send the ad as SMS for each student that does not receive the ad.
- Visibility attribute is for the acceptance to send the ad, if its value is 1, this means that the ad is accepted by admin and will reach to students.

The employee table is the last table, it is just for the administrator of the system. In our system we candidate the secretary to be the admin on the server.

## 5. System Architecture

### 5.1. Dynamic behavior of the system

This subsection will describe how the activities and processes done by the users of the system. The following sequence diagrams show how each user interacts with the system by a sequence of operations.

#### 5.1.1. Instructor Sequence Diagram

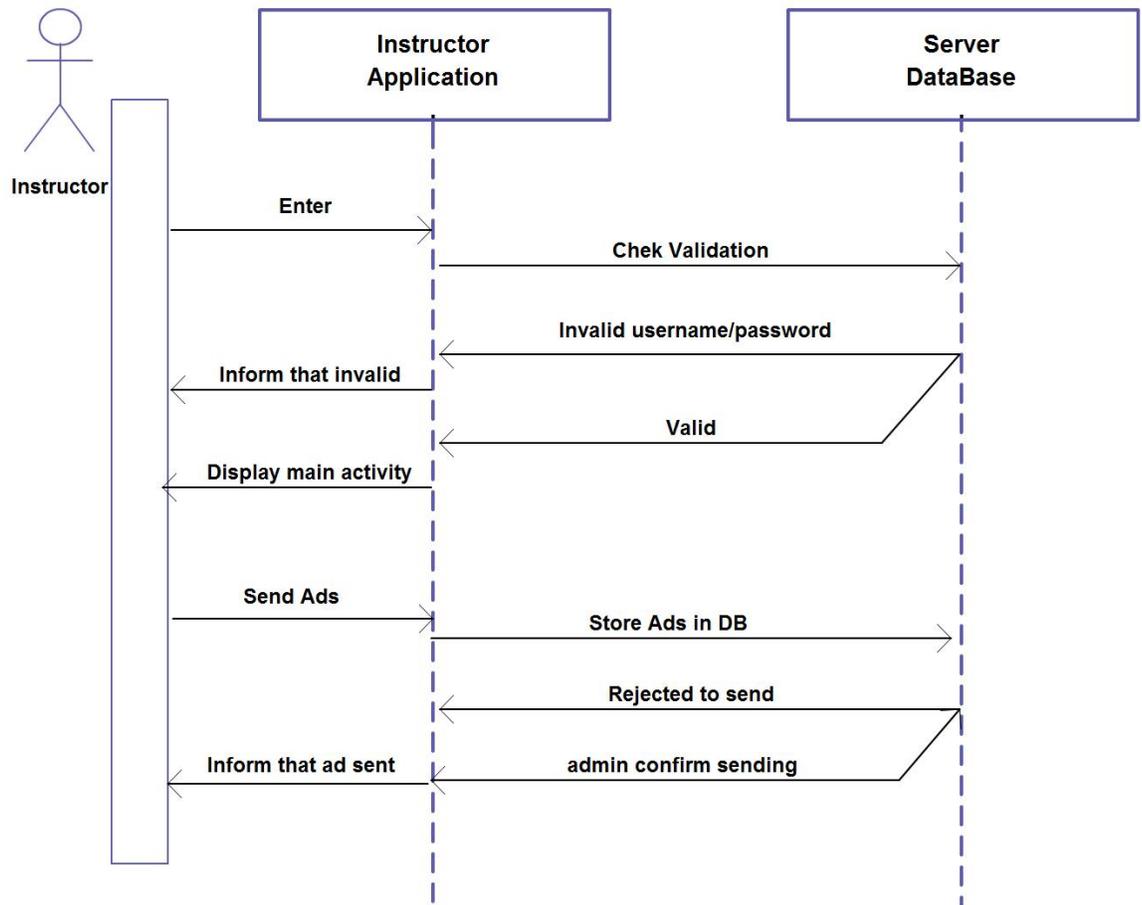


Figure 9 - Instructor Sequence Diagram

### 5.1.2. Admin Sequence Diagram

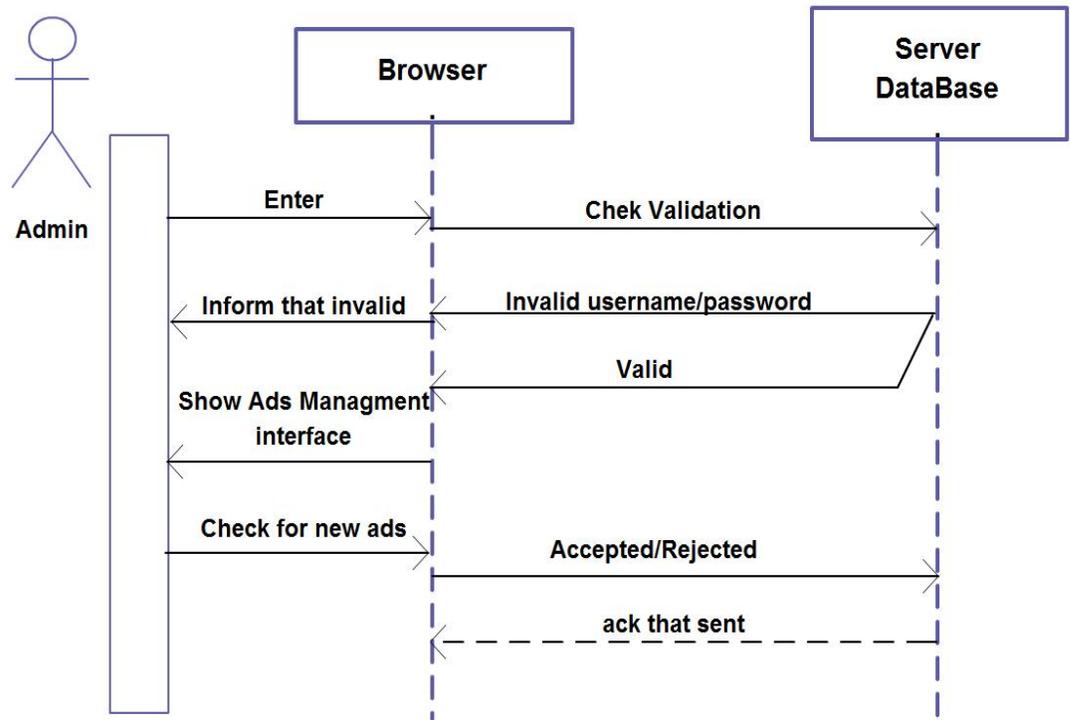


Figure 10 - Admin Sequence Diagram

Once sending operation starts by the instructor, other related things done by the system. Storing ad in the database on the server and wait for sending confirmation form the admin, if it confirmed, sending to the intended students on their applications.

### 5.1.3. Student Sequence Diagram

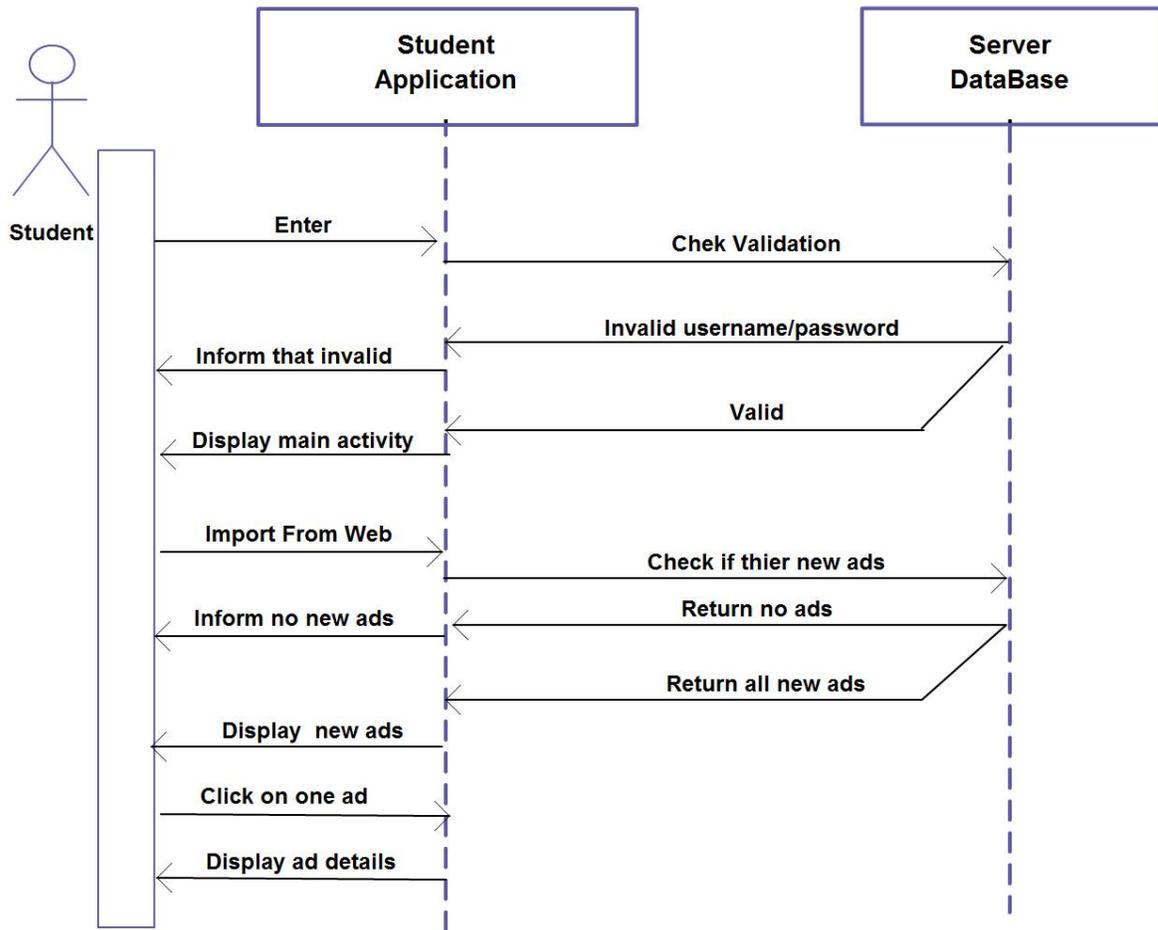


Figure 11 - Student Sequence Diagram

## 5.2. Description of Components

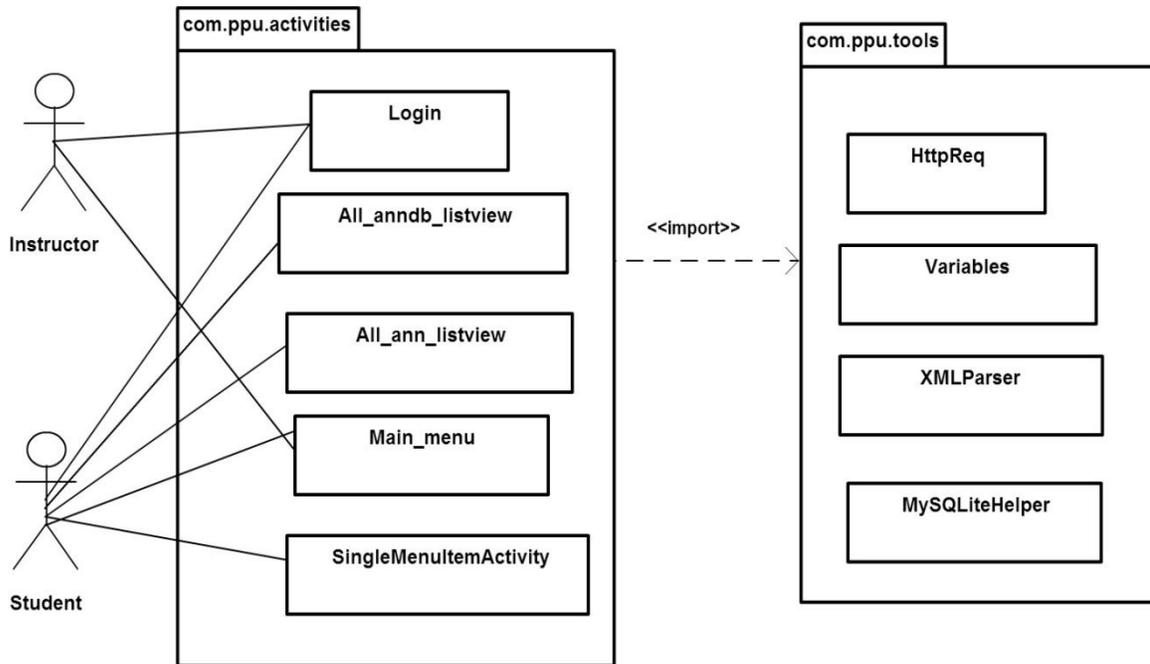


Figure 12 - Package Diagram

### 5.2.1 Activities Component

#### ➤ Processing Narrative for Activities Component

This is the component which interacts with user. Since our project does not require lots of user interactions, this component is not complex structured. It has simple interfaces. By this component, instructors and students will perform their processes to fit the requirements that the system needs.

At the beginning, “Login” class which has the main function initiates the system and shows the user login screen. Then, after user login the “Main\_menu” class will run and the main activity will pop up. All operations that the users can do is detailed in the sequence diagrams.

#### ➤ Processing Detail of Activities Component

Activities component consists of 5 different classes.

## 1. Login Class

This class has the main function of the project. It initiates run of the project and sets main screen.

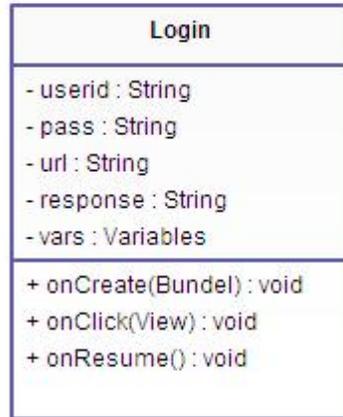


Figure 13 - Login Class Diagram

**Attributes:** all attributes in this class are string, except “vars” attribute, because it comes from Variables class in the other package.

### Methods:

- Protected void onCreate (Bundle savedInstanceState): This is the main function of the project. When the project runs, this function is called automatically. In this function, main activity (screen) will be created and system will be initiated.
- Public void onClick (View v): this function is called when the user click on the login button after he put his user name and password.
- Public void onResume(): This function is called automatically when the user resumes his activity from the paused state.

#### 4. All\_ann\_listview Class

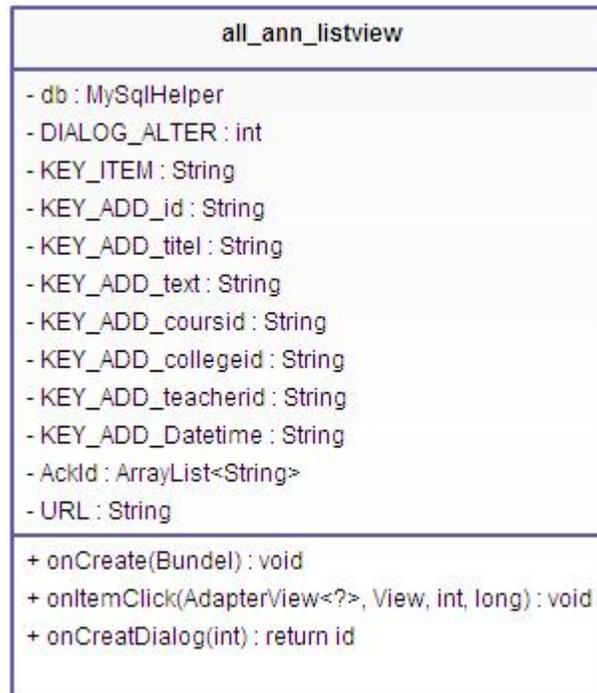


Figure 14 - all\_ann\_listview Class Diagram

**Attributes:** This class contains more than one type like string, integer, arraylist and MySQLHelper.

#### Methods:

- Protected void onCreate (Bundle savedInstanceState): This is the main function of the project. When the project runs, this function is called automatically. In this function, main activity (screen) will be created and system will be initiated.
- Public void onItemClick(AdapterView<?> parent, View view,int position, long id): this function is called when the user click on the one item in listview and then show the user new ads details.
- Protected Dialog onCreateDialog(int id):This function is called when there is no new ads to see.

## 5. All\_anndb\_listview Class

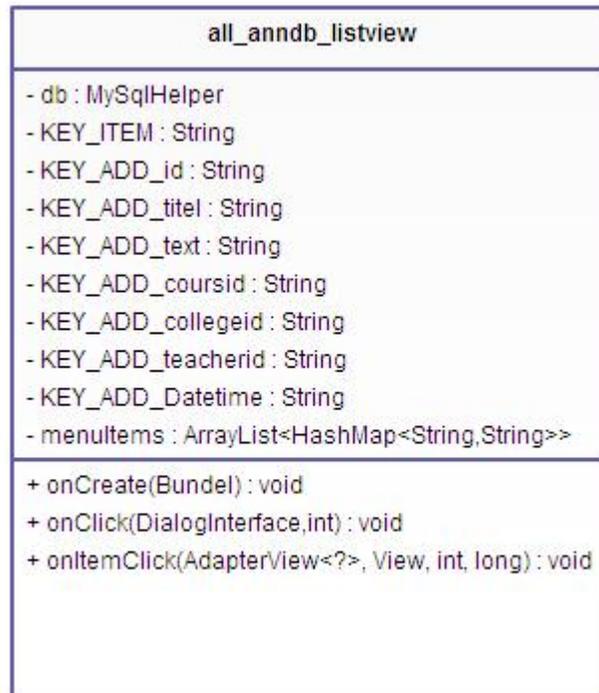


Figure 15 - all\_anndb\_listview ClassDiagram

**Attributes:** This class contains more than one type like string, arraylist and MySQLHelper.

### Methods:

- Protected void onCreate (Bundle savedInstanceState): This is the main function of the project. When the project runs, this function is called automatically. In this function, main activity (screen) will be created and system will be initiated.
- Public void onClick(DialogInterface dialog, int which): This function is called when there is no old ads to see in the database.
- Public void onItemClick(AdapterView<?> parent, View view, int position, long id): this function is called when the user click on the one item in listview and then show the user old ads details.

## 6. Main\_menu Class

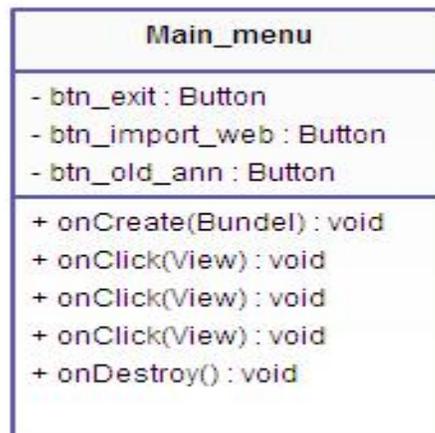


Figure 16 - main\_menu Class Diagram

**Attributes:** there are three attributes in this class, all of them are form the type Button.

### Methods:

- Protected void onCreate (Bundle savedInstanceState): This is the main function of the project. When the project runs, this function is called automatically. In this function, main activity (screen) will be created and system will be initiated.
- Public void onClick (View v): This function is called when the user click on the import from web button.
- Public void onClick (View v): This function is called when the user click on the old announcement button.
- Public void onClick (View v): This function is called when the user click on the exit or logout button.
- Protected void onDestroy(): The final call the user receive before his activity is destroyed.

## 5. SingleMenuItemActivity Class

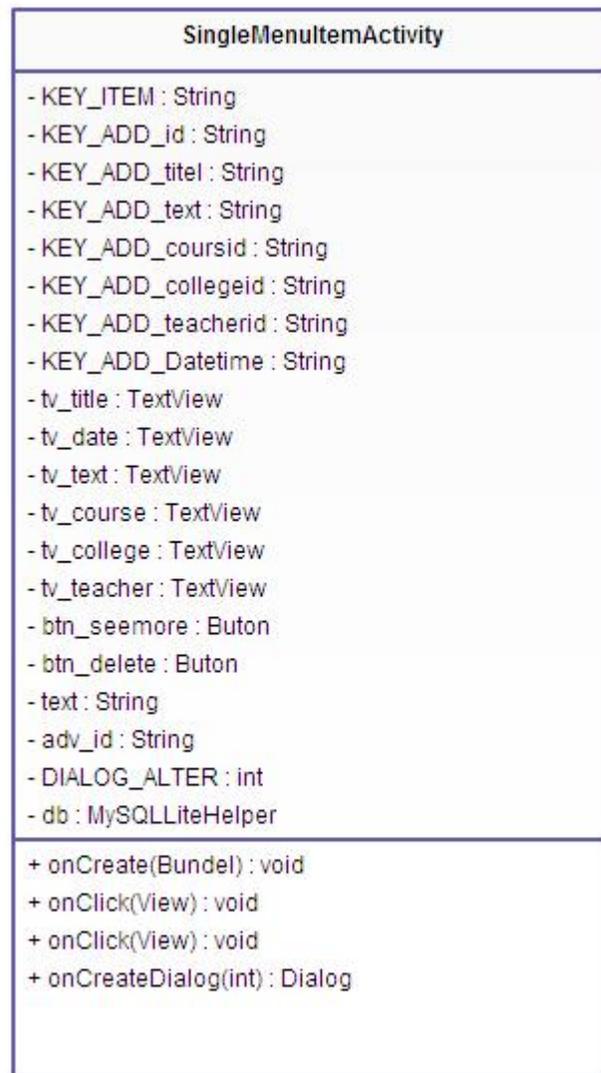


Figure 17 - singleMenuItem Class Diagram

**Attributes:** This class contains 20 attributes, with different types. The attribute type is either String, TextView, Button, Integer or MySQLLiteHelper.

### Methods:

- Protected void onCreate (Bundle savedInstanceState): This is the main function of the project. When the project runs, this function is called automatically. In this function, main activity (screen) will be created and system will be initiated.
- Public void onClick (View v): This function is called when the user click on the see more button.

- Public void onClick(View v): This function is called when the user click on the delete button.
- Public void onClick(View v): This function is called when the user click on the exit or logout button.

## 5.2.2 Tools Component

Tools component consists of 5 different classes:

### 1. HttpReq Class



Figure 18 - HttpRwq Class Diagram

This class make the http request from the application to the server, open the connection and create a new request and response as http response. The http sent to the server as string.

### 2. XMLParser Class

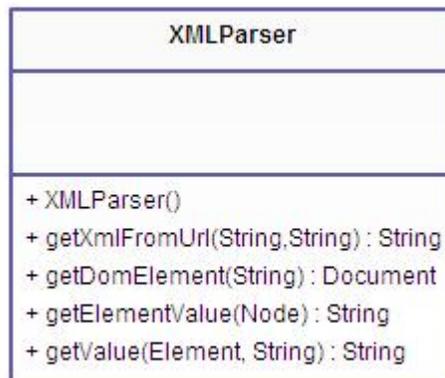


Figure 19 - XMLParser Class Diagram

This class receive the response from the server and make it as xml file, its take every node and separate every element from each other.

### 3. MySQLiteHelper Class



Figure 20 - MySQLiteHelper Class Diagram

This class initiates the database and upgrade it, also take every ads and save it in the database as a listview, and each ads but it in a hash map.

#### 4. Variables Class

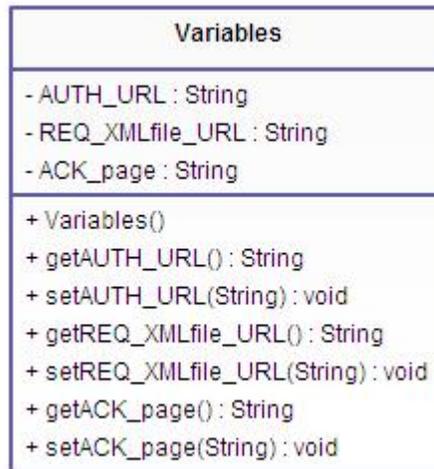


Figure 21 - Variables Class Diagram

In this class we define all URL that can redirect the application request to the correct place.

#### 6. Conclusion

In this document, design considerations for project CANMS were dealt with. How our system work, how our system was decomposed, how these components work, their design architecture and connections, data design and flows were stated both by UML diagrams and by explanations. Moreover, user interactions were determined through user interfaces design. Tools which will be used during system development and operation were presented.

# **College Announcement Notification Mobile System**

Software Testing Plan

Version 1.0

## **1. Introduction**

Software testing is considered one of the most important and essential part of a project development. Software testing aimed at making sure the software product meets its predefined goals and testing is playing a significant role, which helps to improve the quality, reliability & performance of the system with all check what all functions software supposed to do & also will check that Software is not doing what he not supposed to do.

### **1. Alpha Testing**

This type of testing is carried out and executed depending on what has been given and provided by the programmers, so it's completely independent of any of the users given observations and notes. The main purpose of this type of testing is to refine the software product not only by finding but also fixing the bugs that were discovered through previous tests.

### **2. Beta Testing**

This type of testing is done before the release of the product, a group of users testing the product, so any bugs, glitches or other issues discovered in beta testing will usually be addressed before the product's official release.

The programmers are not included in this type of testing.

## **2. Testing Process**

### **2.1 System Unit Testing**

During this process the units of the system have been tested in isolation of the rest of the operation, in order to ensure that these parts and units correctly operates and as its expected. The functional requirements for each part of this system were tested to make sure that the specified requirement were fulfilled and accomplished. In the following table, some of these operations that were tested by the project team.

## **2.2 System Integrity Testing**

It's very important to test the integrity of the system, to check that the previous parts that were tested separately, are able to operate and performs its intended functions without errors, and those parts can coexist with each other without conflicts as well as without affecting the functionality and reliability of each other. The testing process was executed through placing the application on a portable mobile phone, the cell phone is able to run android applications. Both, the application that is supposed to be used by the student and teacher was placed on the cell phones. That will be clarified in the system screens testing.

## **3. System Testing**

The system was tested in different situations and conditions, errors and bugs that were found was resolved and addressed.

## **4. Acceptance Testing**

At this level the requirements that were stated was fulfilled, the system was able to perform the functional requirements as well as process and functions that were assigned in this project.

#### 4. Test Cases

Testing Process	Expected Result	Actual Result
Menus will appear for the user.	When we click the run button the menus will appear for the users.	after the testing process completed, the result was as expected, the menus showed to the users.(completed)
The teacher will write an ad and send it to the students	The ad will be written by the teacher and sent to the student successfully	Done, the intended outcome was achieved, and the teacher has sent the ad successfully. (completed)
After a specific time "threshold", the system will notify the students who have not read the ad by sending them an SMS	The system should send the SMS as soon as possible, due to the threshold.	Not done, due to the assigned costs of the SMS packages.
Student view ads	Student can view ads online and can view old ads offline	Done , Completed



1. المستوى الأكاديمي: 2. التخصص:

3. هل تقرأ الاعلانات التي يتم تعليقها على لوحة الإعلانات في الجامعة؟

نعم لا

4. هل تقرأ الإعلانات بشكل متواصل؟

دائماً أحياناً أبداً

5. هل ازداد اهتمامك بلوحة الإعلانات بمرور الوقت؟

نعم لا

5. هل تعجبك طريقة عرض الإعلانات؟

نعم لا لا بأس بها

6. هل تفضل أن ترى الاعلانات معروضة بطريقة أخرى؟

نعم لا لا أهتم

7.أ. هل فاتك في يوم من الايام مشاهدة أحد الإعلانات؟

نعم لا

ب. إذا كان جوابك نعم، ما هي الأسباب؟

○ اجد هذه الطريقة في عرض الاعلانات مملة ولذلك لا أحب ان اقرأ

○ اجد صعوبة في متابعة القرارات المعن عنها حديثاً

○ الوقت لدي قصير لذلك لا استطيع قراءتها باستمرار

8. هل ترى هذا الوضع،الصعوبة في متابعة كل شيء معن جديد كمشكلة تحتاج الى حل؟

نعم لا

10.هل تفضل رؤية الإعلانات موزعة الكترونياً؟

نعم لا

11.هل تفضل وصول هذه الاعلانات الى هاتفك المحمول؟

نعم لا

## **Appendix 2**

### **Questioner Analysis**

The questioner was distributed among our colleges. A hundred of copies were delivered for each college in our university. We found that **21%** of students never read the ads, **59%** they sometimes read the announcement and just **20%** always read it. The students, who don't read the ads continuously they have some reasons, **27%** of them don't have enough time to follow the new ads daily, **19%** they found it difficult to read the recent ads and **17%** don't like reading at all and they feel it's boring and traditional way. **84%** of students prefer that the ads reach to their mobile phone. The proposed solution was to develop mobile application were the announced decisions can be received to the students via their mobile phone.

The following tables represent the analysis for each college, these tables are the reference to get the previous results:

## College of IT and Computer Engineering

Number	Question		Answer		
1	Major	Number of students	Information Technology	9	
			Computer Science	5	
			Computer Systems	6	
2	Academic Level	Number of Students	First Year	3	
			Second Year	4	
			Third Year	7	
			Fourth Year	6	
			Fifth Year	-	
3	Do you read the posted ads on the collage announcement board?		Yes	No	
			16	4	
4	Do you read ads in a continuous manner?		Always	Sometimes	Never
			4	11	5
5	Does your attention to the announcement board grew by time?		Yes	No	
			11	10	
6	Are you satisfied by the way in which the ads are presented?		Yes	No	it's ok
			3	13	4
7	Do you wish to see the ads presented in another way?		Yes	No	it doesn't make a difference to me
			15	1	4
8	a. have you ever missed reading one of the ads?		Yes	No	
			18	2	
	b. If yes, the reason behind it was:		1- I find this traditional way of presenting the ads so boring, so I don't like to read them.	1	
			2- I find it difficult to keep up the newly with the newly announced decisions.	7	
			3- My time is limited, so I can't read them continuously at the moment they are updated.	6	
			1 + 2	1	
			1 + 3	1	
			1 + 2 + 3	1	
2 + 3	1				
9	Do you see this situation , the difficulty of keeping up with everything new as a serious issue that need to be worked out?		Yes	No	
			18	2	
10	Do you prefer to see the ads electronically distributed?		Yes	No	
			19	1	
11	Do you wish to see ad coming to you on your cell phone?		Yes	No	
			20	-	

## College of Administrative Science and Informatics

Number	Question		Answer		
1	Major	Number of students	Information Systems	6	
			Business Administration	7	
			Accounting	3	
			Computer Graphics	4	
2	Academic Level	Number of Students	First Year	5	
			Second Year	5	
			Third Year	6	
			Fourth Year	4	
			Fifth Year	-	
3	Do you read the posted ads on the collage announcement board?		Yes	No	
			18	2	
4	Do you read ads in a continuous manner?		Always	Sometimes	Never
			7	10	3
5	Does your attention to the announcement board grew by time?		Yes	No	
			7	13	
6	Are you satisfied by the way in which the ads are presented?		Yes	No	it's ok
			4	9	7
7	Do you wish to see the ads presented in another way?		Yes	No	it doesn't make a difference to me
			11	4	5
8	a. have you ever missed reading one of the ads?		Yes	No	
			17	3	
	b. If yes, the reason behind it was:		1- I find this traditional way of presenting the ads so boring, so I don't like to read them.	2	
			2- I find it difficult to keep up the newly with the newly announced decisions.	3	
			3- My time is limited, so I can't read them continuously at the moment they are updated.	4	
			1 + 2	2	
			1 + 3	3	
			1 + 2 + 3	1	
2 + 3	2				
9	Do you see this situation , the difficulty of keeping up with everything new as a serious issue that need to be worked out?		Yes	No	
			12	8	
10	Do you prefer to see the ads electronically distributed?		Yes	No	
			18	2	
11	Do you wish to see ad coming to you on your cell phone?		Yes	No	
			17	3	

### College of Engineering and Technology

Number	Question		Answer		
1	Major	Number of students	Civil Engineering	6	
			Mechanical Engineering	4	
			Architectural Engineering	3	
			Geometrics	7	
			Electrical Engineering	2	
			Communication Engineering	3	
			Industrial automation	5	
2	Academic Level	Number of Students	First Year	8	
			Second Year	6	
			Third Year	5	
			Fourth Year	6	
			Fifth Year	5	
3	Do you read the posted ads on the collage announcement board?		Yes	No	
			21	9	
4	Do you read ads in a continuous manner?		Always	Sometimes	Never
			7	20	3
5	Does your attention to the announcement board grew by time?		Yes	No	
			19	11	
6	Are you satisfied by the way in which the ads are presented?		Yes	No	it's ok
			7	11	12
7	Do you wish to see the ads presented in another way?		Yes	No	it doesn't make a difference to me
			21	2	7
8	a. have you ever missed reading one of the ads?		Yes	No	
			23	7	
	b. If yes, the reason behind it was:		1- I find this traditional way of presenting the ads so boring, so I don't like to read them.	3	
			2- I find it difficult to keep up the newly with the newly announced decisions.	3	
			3- My time is limited, so I can't read them continuously at the moment they are updated.	10	
			1 + 2	-	
			1 + 3	-	
			1 + 2 + 3	4	
2 + 3	3				
9	Do you see this situation , the difficulty of keeping up with everything new as a serious issue that need to be worked out?		Yes	No	
			22	8	
10	Do you prefer to see the ads electronically distributed?		Yes	No	
			25	5	
11	Do you wish to see ad coming to you on your cell phone?		Yes	No	
			30	-	

## College of Applied Science

Number	Question		Answer		
1	Major	Number of students	Applied Physics	3	
			Applied Chemistry	5	
			Applied Math	4	
			Applied Electronics	3	
2	Academic Level	Number of Students	First Year	6	
			Second Year	9	
			Third Year	-	
			Fourth Year	-	
			Fifth Year	-	
3	Do you read the posted ads on the collage announcement board?		Yes	No	
			13	2	
4	Do you read ads in a continuous manner?		Always	Sometimes	Never
			3	10	2
5	Does your attention to the announcement board grew by time?		Yes	No	
			6	9	
6	Are you satisfied by the way in which the ads are presented?		Yes	No	it's ok
			3	7	5
7	Do you wish to see the ads presented in another way?		Yes	No	it doesn't make a difference to me
			13	1	1
8	a. have you ever missed reading one of the ads?		Yes	No	
			11	4	
	b. If yes, the reason behind it was:		1- I find this traditional way of presenting the ads so boring, so I don't like to read them.	2	
			2- I find it difficult to keep up the newly with the newly announced decisions.	-	
			3- My time is limited, so I can't read them continuously at the moment they are updated.	4	
			1 + 2	3	
			1 + 3	2	
			1 + 2 + 3	-	
2 + 3	-				
9	Do you see this situation , the difficulty of keeping up with everything new as a serious issue that need to be worked out?		Yes	No	
			15	-	
10	Do you prefer to see the ads electronically distributed?		Yes	No	
			13	2	
11	Do you wish to see ad coming to you on your cell phone?		Yes	No	
			10	5	

## College of Applied Professions

Number	Question	Answer		
1	Major	Number of students	Electronics	4
			IT	2
			Computer Networks and Internet	5
			Web Design	4
2	Academic Level	Number of Students	First Year	8
			Second Year	7
			Third Year	-
			Fourth Year	-
			Fifth Year	-
3	Do you read the posted ads on the collage announcement board?	Yes	No	
		11	4	
4	Do you read ads in a continuous manner?	Always	Sometimes	Never
		2	8	5
5	Does your attention to the announcement board grew by time?	Yes	No	
		6	9	
6	Are you satisfied by the way in which the ads are presented?	Yes	No	it's ok
		4	9	2
7	Do you wish to see the ads presented in another way?	Yes	No	it doesn't make a difference to me
		5	5	5
8	a. have you ever missed reading one of the ads?	Yes	No	
		13	2	
	b. If yes, the reason behind it was:	1- I find this traditional way of presenting the ads so boring, so I don't like to read them.		-
		2- I find it difficult to keep up the newly with the newly announced decisions.		-
		3- My time is limited, so I can't read them continuously at the moment they are updated.		-
		1 + 2		5
		1 + 3		3
		1 + 2 + 3		1
2 + 3		1		
9	Do you see this situation , the difficulty of keeping up with everything new as a serious issue that need to be worked out?	Yes	No	
		7	8	
10	Do you prefer to see the ads electronically distributed?	Yes	No	
		9	6	
11	Do you wish to see ad coming to you on your cell phone?	Yes	No	
		11	4	