

Clubs and Organizations News Casting Thru Wi-Fi using Android Apps



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Recommendation for Oral Defense

In partial fulfillment of the requirements for the degree of BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY, this UNDERGRADUATE SENIOR PROJECT entitled:

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ABSTRACT

This thesis is about Clubs and Organizations News Casting thru Wi-Fi using Android App – a mobile application with a web application counterpart. This mobile and web application serves as a tool to: keep the students posted on the daily news related to their clubs and organizations, keep the students aware to the present news and events and serve as an advantage among the clubs and organizations inside the campus where they can easily disseminate their news to the students. The language for the mobile application is PHP while the web application uses Java. The mobile application uses Eclipse as its IDE and SQLite for database management while the web application uses Adobe Dreamweaver and MySQL.

Keywords: Android, Java, PHP, Eclipse, Adobe Dreamweaver, MySQL, SQLite, Mobile, Web, Wi-Fi

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

As a well-known university, Ateneo de Davao has a lot of clubs and organizations to cater to the different interests of its student body. A regular student is allowed to have a maximum of only 3 clubs while to those who belong to the dean's list can join as many clubs they want. Due to the large number of students, there are some who are not updated on the current news and events of the clubs/organizations. Because of this, only a few number students are able to participate in clubs/organizations events due to the current ineffective means of announcement. Currently, news is posted on bulletin boards and sent through text messages. Because of these condition students will then need to push through crowds just so they can be informed and some will be just relying to someone else just to get information, therefore news dissemination will be at a slow pace and time consuming. Instead of using those bulletin boards, the proponents decided to make use of the Wi-Fi environment of the campus in creating a Clubs and Organizations News Casting Thru Wi-Fi using Android Apps. In order to make it possible the proponents will be using Android Operating System and implement it on Android devices.

1.2 Technology Application Context

The study was able to answer the general problem: How do we develop an application software of the school clubs and organizations using Android SDK?

The study was also able to answer the following sub problems:

- What is an Android?
- How to send messages from a web application to an android mobile device?
- How to use Android SDK to develop a news casting application?
- What Android platform to be used?
- What programming language to be used for the mobile application?
- What programming language to be used for the web application?
- What software development to be used for the design of the mobile application?
- What software development to be used for the design of the web application?

1.3 Objectives of the Study

The general objective of the study was to develop a software application in Android that will send messages from a student clubs and organizations using Android SDK.

The specific objectives are:

- To create a convenient message newscaster to be used in University clubs and organizations.
- To use different classes, libraries, Android SDK and different API levels.

- To find out what particular Android Platform to be use.
- To use XML to arrange the GUI of the application.
- To use PHP script and JSON format for connecting the mobile and the web app.
- To use Java as the programming language for the mobile application.
- To use PHP as the programming language for the web application.
- To use Eclipse as the software development for the mobile application.
- To use Adobe Dreamweaver as the software development for the mobile application.

1.4. Significance of the Study

- This project-research will keep the students posted on the daily news related to their Clubs and Organizations.
- This project-research will keep the students aware to the present news and events of their Clubs and Organizations.
- It will serve as an advantage among the clubs and organization inside the campus where they can easily disseminate their news to the students.
- The students will no longer exert too much effort to go downstairs and look for announcements from the bulletin board of their respective Clubs.

1.5. Scope and Limitations of the Study

Scope

The study will generally focus on the connectivity of mobile app and web app. The users must be a current student in Ateneo de Davao University. To fully access the application, the users must beforehand create an account for the application and needs to login. However, there are some clubs, which does not require you to become its member, but still you can view some of their messages by just subscribing. After having an account and still connected to the internet, you can now view the posted messages. The application is not only limited to the school's Wi-Fi environment, as long as you already have installed the mobile application on your device and are connected to the internet you can make used of the application.

Limitations

The study is limited to an Android mobile device (Froyo to Ice Cream Sandwich Version) and the news will be limited to the University clubs and organizations. The application needs to be downloaded and installed first before the users would be able to receive the clubs and organizations news. The application needs internet connection to be able to receive the messages. The application also cannot be used to send images, video and other multimedia messages.

1.6. Definition of Terms

- **Android** - is a Linux-based operating system for mobile devices such as smartphones and tablet computers, developed by Google in conjunction with the Open Handset Alliance.
- **Android SDK** – is a software development kit that enables developers to create applications for the Android platform.
- **Android API** – API means **Application Programming Interface**. An API is the interface implemented by an application, which allows other applications to communicate with it.
- **Android APK** – is an Android Package file is a file format which is created by Google. This format is one of the group members of Executable Files. APK files are a variant of the JAR file format, which are built on the ZIP file format, with an .apk file extension.
- **Eclipse** - is an open source community whose projects are focused on providing an extensible development platform and application frameworks for building software.
- **Adobe Dreamweaver** - is a complex product suitable for everything from simple page design to development of dynamic pages written with ColdFusion, PHP, ASP, CSS, XML, XSLT, and JavaScript.
- **Ice Cream Sandwich** - is the dessert-themed Android codename for an upcoming version 4.0 update of the open source Android mobile operating system.
- **Java** - is a computer programming language. It enables programmers to write computer instructions using English based commands, instead of having to write in numeric codes.

It's known as a "high-level" language because it can be read and written easily by humans.

- **Java Script** - is a programming language used to make web pages interactive. It is the standard language used in web pages, but it is also widely used by desktop apps, mobile phone apps, and internet servers.
- **JSON** – also known as JavaScript Object Notation is a text-based open standard designed for human-readable data interchange. It is derived from the JavaScript scripting language for representing simple data structures and associative arrays, called objects. Despite its relationship to JavaScript, it is language-independent, with parsers available for many languages.
- **Mobile Application** - Also called mobile apps, it is a term used to describe Internet applications that run on smartphones and other mobile devices.
- **MySQL Database** - is an open source Relational Database Management System. MySQL is very fast reliable and flexible Database Management System. It provides a very high performance and it is multi-threaded and multi user Relational Database management system.
- **PHP** - is a general-purpose server-side scripting language originally designed for Web development to produce dynamic Web pages. It is one of the first developed server-side scripting languages to be embedded into an HTML source document rather than calling an external file to process data.

- **PHP Script** - can be created using any basic text editor or HTML editing software tool. Each PHP file must be saved with a .php file extension in order to be recognized as a functioning PHP script.
- **SQLite Database** - is a small, compact, and self-contained database available on multiple platforms and available to the public. It has a small footprint and is easy to install and administer. In addition, many devices have the SQLite database already installed, including Android and Blackberry devices.
- **Wamp** - is a Windows web development environment. It allows you to create web applications with Apache2, PHP and a MySQL database. Alongside, PhpMyAdmin allows you to manage easily your databases.
- **Web Application** - is any application that uses a web browser as a client. The application can be as simple as a message board or a guest sign-in book on a website, or as complex as a word processor or a spreadsheet.
- **Web Host** - is in the business of providing server space, Web services and file maintenance for Web sites controlled by individuals or companies that do not have their own Web servers.
- **Web Server** - is a program that, using the client/server model and the World Wide Web's Hypertext Transfer Protocol (HTTP), serves the files that form Web pages to Web users.
- **Wi-Fi** - is the name of a popular wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections.