

# University e-bulletin

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**Abstract:** The researcher has come up with an idea on focusing the study in developing an application entitled University e-bulletin that will allow the students to view the latest and upcoming events, gatherings, and activities in the College of Computer Studies through their android phones. The students can also make their own announcement through this application if they wish to. Documentation provided hereto are the methods of research and data gathering techniques used in the study to come up with reliable and useful data needed for the development of the study. A model is recommended as a theoretical framework for the development of the study. This model is called Rapid Application Development presented as a structure that can hold or support a theory of research study of a software development process. The software was evaluated using ISO 9126 Software Quality standard and based on the result the system is compliant to the ISO Software Quality Standard.

**Keywords:** College information; College website; College student; e-announcement; e-bulletin; University update.

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## I. INTRODUCTION

The idea of mobile computing has been around for quite some time in the global community but it is only recently that we are seeing a surge in its use in the country. In the next couple of years, as hardware prices go down, the number of users is sure to go up. This opens up new possibilities that institutions must take advantage of.

Communication, or rather miscommunication, has always played a leading part in conflict and frustrations. The school setting is no exception. Passing information from school officials to the students never has been easy. Word of mouth, though free, is usually unreliable. Bulletin boards, though official, are usually left unread.

An Android-based application will be free from these shortcomings. Android is the industry standard for mobile computing and network independent at the same time. Plus, its rich development environment extends the application's capabilities beyond mere communication. Content delivery and remote access to information are just some of the features possible in this platform of the future. According to Bernier et al. (1996), University websites are frequently visited by different stakeholders depending on the information or services they are interested into.

The researcher believes that an Android application that centralizes the information services will benefit the university. Although, it may be argued that the current system works, it does have its flaws.

We are living in the information age. Our lives are increasingly becoming online and mobile. This research takes advantage of this trend by developing on the leading platform for the mobile market. Sooner or later, such systems will no longer be mere luxuries but instead become crucial organizational needs. The system is a step towards this inevitable future.

## II. OBJECTIVES OF THE STUDY

The study sought to improve the College of Computer Studies (CCS) of Eastern Samar State University (ESSU) information services. In order to do this, the study aimed to achieve the following goals:

1. To develop a University e-bulletin to disseminate information to the students and other stakeholders and
2. To determine the viability of the developed application, in terms of the following:

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- 2.1.1 Functionality;
- 2.1.2 Reliability;
- 2.1.3 Usability;
- 2.1.4 Efficiency, and
- 2.1.5 Maintainability.

#### **Scope and Limitations:**

This study focuses on the development of an Android Application for the Eastern Samar State University - College of Computer Studies students and to their parents. The software will serve two main functions: information dissemination and communication. Internet connections, either via WAP or Wi-Fi are needed to download system updates. The application is designed mainly for both students in the College of Computer Studies and their parents as well. Administrators, faculty, personnel, and alumni of the university are also allowed access to the system with varying degrees of privileges.

### **III. METHODOLOGY**

#### **A. Software Development Model**

This part contains systematic theoretical analysis of the methods applied to the study and will also determine the planning, design and specifications together with the research design overview to the particular procedures employed in the study.



**Figure 1: Rapid Application Development**

The figure above serves as a guide in establishing the system. The phases always occur in this order and do not overlap. The figure shown in Figure 1 is a Rapid Application Development (RAD) Model. It is a framework used to structure different plans. RAD model refers to an alternative of conventional waterfall model and it emphasizes the necessity of adjusting requirements in reaction to knowledge gained as the project progresses.

#### **B. Instrumentation and Data Analysis:**

ISO 9126 Software Quality standard was used to evaluate the system. Parameters such as functionality, reliability, usability and maintainability were evaluated using the following measurement of variables scales:

**Table 1: Level of Agreement**

Scale	Interpretation
5	Strongly agree
4	Agree
3	Neutral
2	Disagree
1	Strongly disagree

**Table 2: Interpretation**

Scale	Interpretation
4.20 – 5.0	Excellent
3.40 – 4.19	Very good
2.60 – 3.39	Good
1.80 – 2.59	Fair
1.00 – 1.79	Poor

#### IV. SYSTEM TESTING

The system was evaluated using the ISO 9126 Software Quality standard which is comprises of mandatory and optional parameters. One of which is functionality which is a mandatory requirement to ensure that all the functional requirement of the system were given and complied and this was evaluated by computer experts in the University while other optional parameters such as reliability, usability, maintainability and efficiency were evaluated and tested by the client or the end-users such as the CCS students and parents. Evaluation was successfully done and they recommend it for deployment as its objectives were all complied.

**Table 3: System’s Mandatory Parameters (Functionality)**

ISO Software Metrics	Requirements complied?	
	Yes	No
Mandatory Parameters		
Functionality. The system disseminate college information to the students and other important stakeholders .	95.33%	4.67%
<b>Weighted Mean</b>	<b>4.4</b>	<b>Excellent</b>

**Table 4: Summary of Evaluation on the System’s Optional Parameters**

Software Quality Criteria	Weighted Mean	Interpretation
1. Reliability	4.3	<b>Excellent</b>
2. Usability	4.2	<b>Excellent</b>
3. Maintainability	4.3	<b>Excellent</b>
4. Efficiency	4.3	<b>Excellent</b>
<b>Over-all rating</b>	4.3	<b>Excellent</b>

V. GRAPHICAL USER INTERFACE

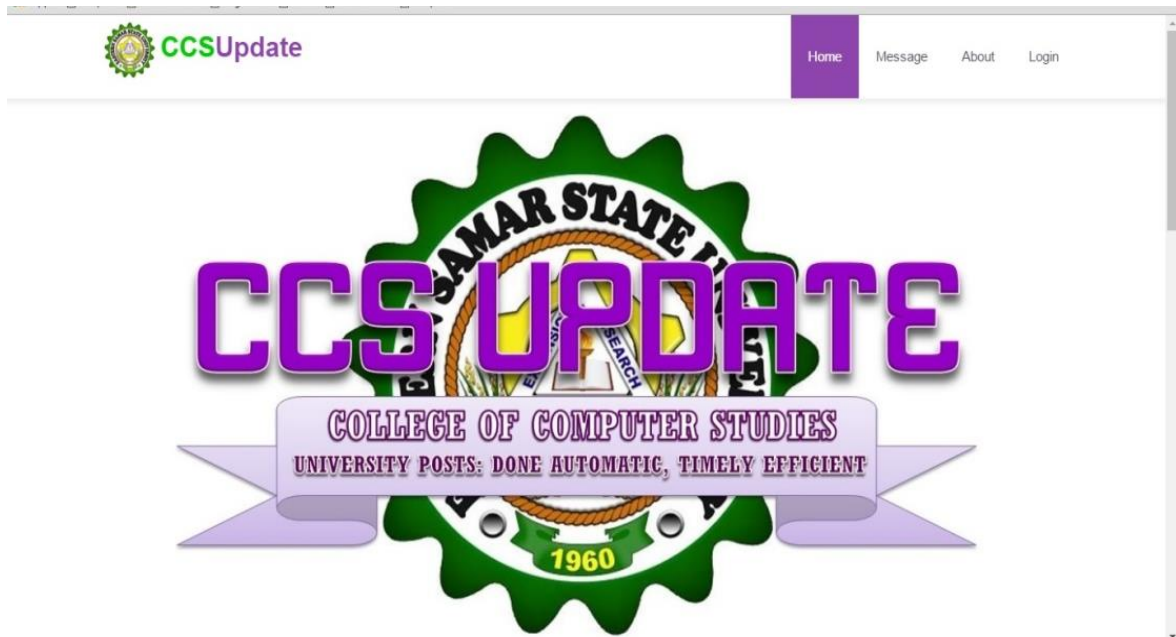


Figure 2: Home Page

The Home page is first to appear in the system. The home page has four (4) buttons on the top-right portion which includes Home, Message, About, and Login.

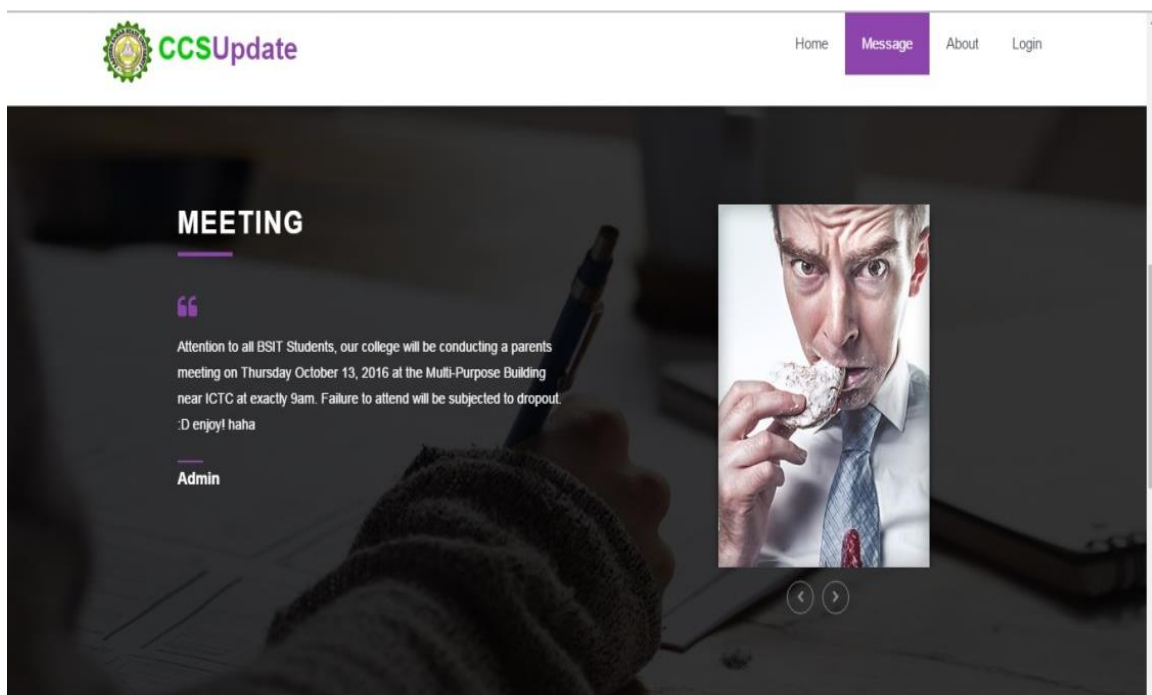


Figure 3: Announcement

The Announcement Page shows the latest and the previous announcements posted. This includes the type of message classified into three (3), 1: Announcement, 2: Event, 3: Meeting. This page will also display the author or the person who posted.

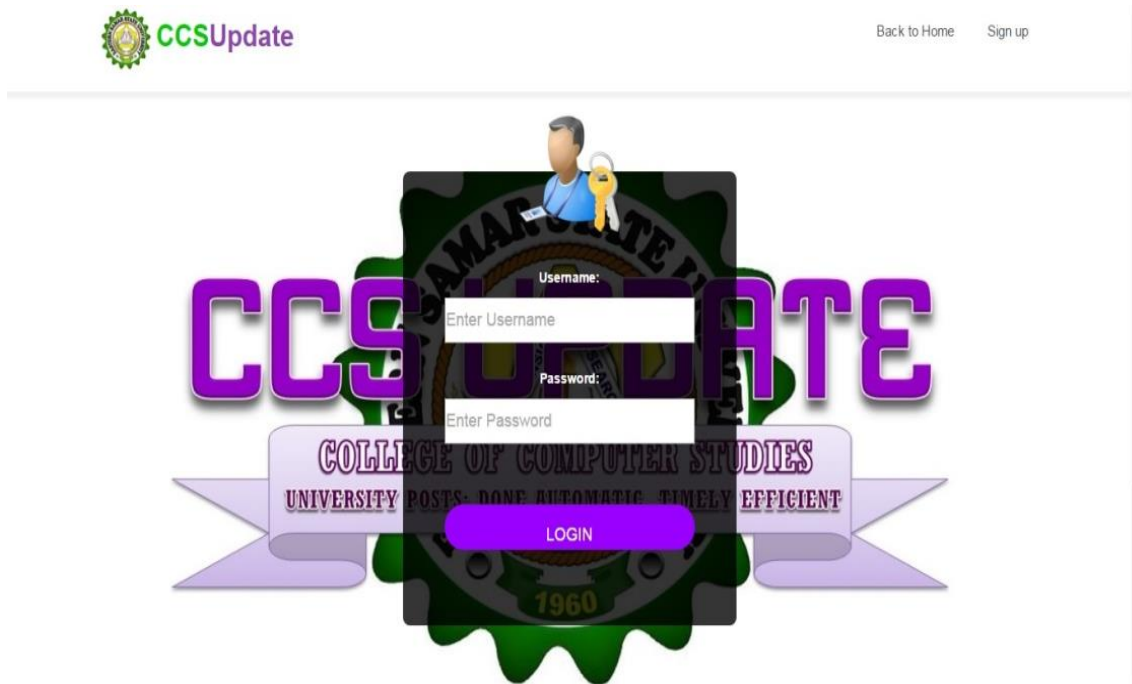


Figure 4: Login

On this page, the systems ask for a Username and a Password. One needs to have an account to access the system.

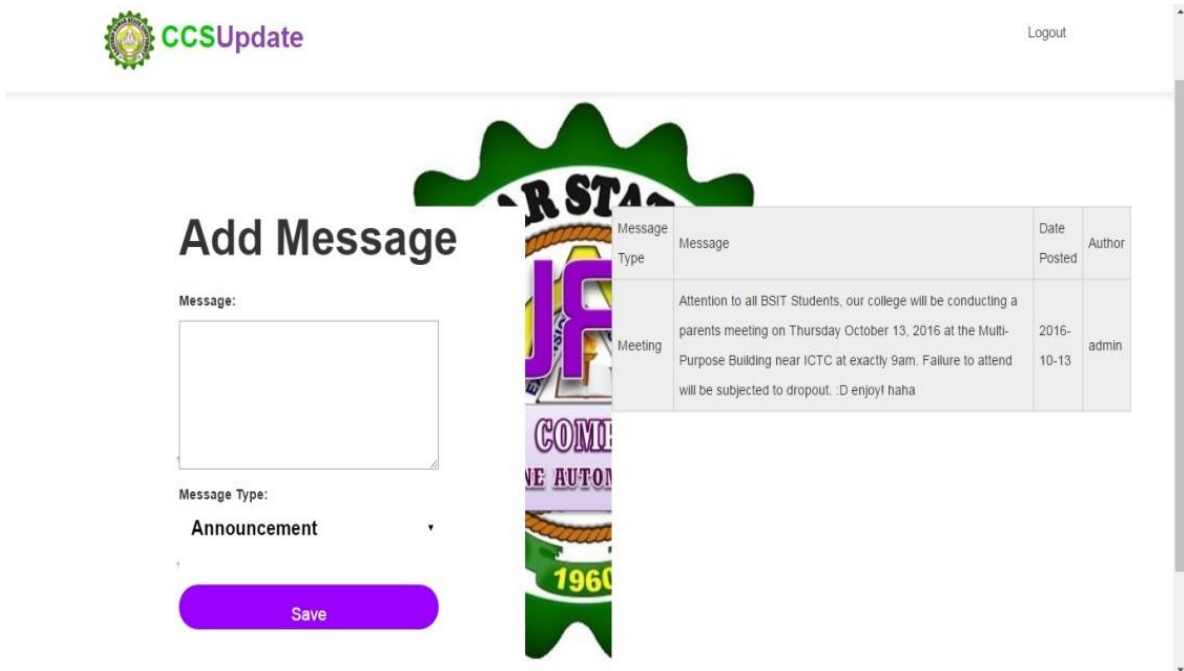


Figure 5: Create Message

This page allows the admin to create a message or announcement to post. One can see at the top-right portion a button labeled Logout, which means an account is running or logged-in. The admin can also see the previous messages including the content, the type and the date it was posted.



The image shows a web browser window displaying a sign-up form for 'CCS Update'. The form is overlaid on a background image of a smartphone. The form fields are as follows:

- Username: Enter Username
- Password: Enter Password
- Firstname: Enter Firstname
- Middlename: Enter Middlename
- Lastname: Enter Lastname
- Course: BSIT (dropdown menu)
- Year: 1 (dropdown menu)

A purple 'SIGN UP' button is located at the bottom of the form. The background image features the text 'CCS UPDATE' in large purple letters and 'COLLEGE OF COMPUTER STUDIES' in smaller purple letters. A banner below the text reads 'UNIVERSITY POSTS DONE EFFICIENTLY. TIMELY EFFICIENT'. The top of the browser window shows the 'CCSUpdate' logo and 'Back to Home' and 'Sign up' links.

**Figure 6: Sign up**

In this page, the system allows the user to create an account in order for them to post messages if they want to. The sign up form asks for a Username, Password, First name, Middle name, last name, Course, and year level.

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