Deployment of an Enhanced Web-based Really Simple Syndication (RSS) Aggregator

Alhassan Abdul-Barik
Department of Computer
Science, University for
Development Studies,
Tamale, Northern Region, Ghana

Farudeen Yussif
Department of Computer
Science, University for
Development Studies,
Tamale, Northern Region, Ghana

Malik Sumaila Bipembi
Department of Computer
Science, University for
Development Studies,
Tamale, Northern Region, Ghana

ABSTRACT

There is too much information for consumption in the world, hence a struggle to keep ourselves up todate with new publications in our various fields of discipline and research interest. Information overload can be very frustrating, this can be prevented by utilizing tools/technologies that provide effective information management, of which Really Simple Syndication (RSS) software is an example. The system is developed with the use of Bootsratps (JavaScript (JS), Hypertext Mark-up Language (HTML), Cascading Style Sheet (CSS) for the system interface, php (a script language for coding the functionalities), and wamp server (apache, mysql, Hypertext Pre-processor (PHP)) as a development environment for apache, mysql and php databases.The proposed system allows users to subscribe to websites from which they can be frequently updated with information including audio and video, blog entries, news headlines, etc. The proposed system is designed to eliminate the user's requirement to manually monitor the website for new contents. Instead, the system continuously monitors the site and notifies users of any changes. The administrator portal is incorporated for the purposes of managing the content available in the system. The system manages all the contents that the user subscribes to and the user receives updates as and when they sign-in. This saves time and helps with quick access to published or available information.

Keywords

RSS (Really Simple Syndication), Hypertext Pre-processor (PHP), Hypertext Mark-up Language (HTML), Cascading Style Sheet (CSS), MySQL (for database), JavaScript (JS), Extensible Markup Language (XML)

1. INTRODUCTION

Really Simple Syndication (RSS) is an XML based system which uses standard web format to allow users to subscribe to websites from which they get frequently updated information: audio, news headlines, video, blog entries, etc. An RSS document called feed/web feed contains full or summarised text, and metadata, like publishing date and author's name. The feeds of RSS are presented in standard XML file format, it is intended to ensure many different programmes/machines are compatible. It also allows for automatic data syndication. Users who want to receive updates from their favorite websites or data aggregation from multiple sites can use RSS feeds on time. Subscribing to RSS websites eliminates the need to manually check for material updates. Instead, their browser watches the site in real time and notifies the user of any changes. The browser can also be told to download new data for the user automatically. 'RSS readers', 'Feed readers', or 'aggregators' are terms used to describe softwares that displays RSS data to users and can be web-base, desktop-base, or mobile-device-base. Users can subscribe to feeds by typing the URI of the feed into the reader or clicking the feed icon in the browser. The RSS program is always on the lookout for new content on the websites that the user has subscribed to, and it can also download it automatically if that feature is available and enabled.

2. RELATED WORKS

Users can subscribe to websites and receive constantly updated content from any Internet-connected computer including blog posts, audio, news headlines, and video [1, 2]. A feed/web feed is an RSS document that includes full or summarised text as well as metadata such as the date of publishing and the author's identity. RSS feeds are given in standard XML file format to ensure compatibility with a wide range of devices and programs, as well as to enable automatic data syndication.

To log in and receive personalised feeds, most RSS users must first create an account [3].

RSS feeds are useful for users who want to receive latest update from their favorite websites based on their interests [4] or integrate data [5] from various sites. Subscribing to websites and through RSS eliminates the need to manually check for material updates. Instead, their browser watches the site in real time and notifies the user of any changes. The browser can also be instructed to automatically download new data for the user. Users can sign up for feeds by entering the URI into their browser or clicking the icon of feed [6]. The RSS program is constantly checking for updates to any website's content.

3. MATERIALS AND METHODS

Software engineer(s) always aim to produce a dependable software which should be delivered on the agreed time and meet every objective that has been set for it. In developing a software system, software engineer(s) must identify a suitable software life cycle model and adhere to it. This is to sure that the software is developed in a systematic and disciplined manner. It also answers the questions of what to do and When to do it, which prevents chaos and project failure. Many software life cycle models have been proved, to have their advantages as well as their disadvantages. For the purpose of this project, the improved version of the classical waterfall model which is the iterative waterfall model was be utilised.

3.1 Iterative Waterfall Model

Iterative development starts with a rudimentary

implementation of a limited set of software requirements and gradually improves the emerging versions until the entire system is completed and ready to be deployed. Starting with a full set of requirements is avoided in an iterative life cycle approach. Rather, development begins with the definition and implementation of a small piece of software, which is then examined to identify more requirements. This technique is then repeated, resulting in a new software version for each iteration of the model. The Hypertext Pre-processor (PHP), Hypertext Mark-up Language (HTML), Cascading Style Sheet (CSS) and the JavaScript (JS) are to be used for coding purposes, MySQL, for the design of the database and the Internet for research for information and literature review.

3.2 Development of the System
The complete development of the system is realised in a three-phase system.

The user interface is designed with the use of HTML and

CSS for accessing the database is considered the first end of the system. Any browser can be used to display the HTML document. HTML was used to develop the graphical user interface (GUI). PHP was used to process queries and commands, as well as to integrate into the interface and create a model that fits all of the system's requirements.

The system's intermediate layer is a collection of PHP scripts that allow links to be sent to the database from text entered in the built graphical user interface.

The database, which is the back end of the system, is where the information that the system collects and operates on is maintained. MySQL is the database tool used to create the database. It's a simple, low-cost database language that can run on a variety of operating systems including Linux, Windows, and others. It's safe, with technical assistance readily available on the internet, and it can handle big databases.

4. RESULTS AND DISCUSSIONS
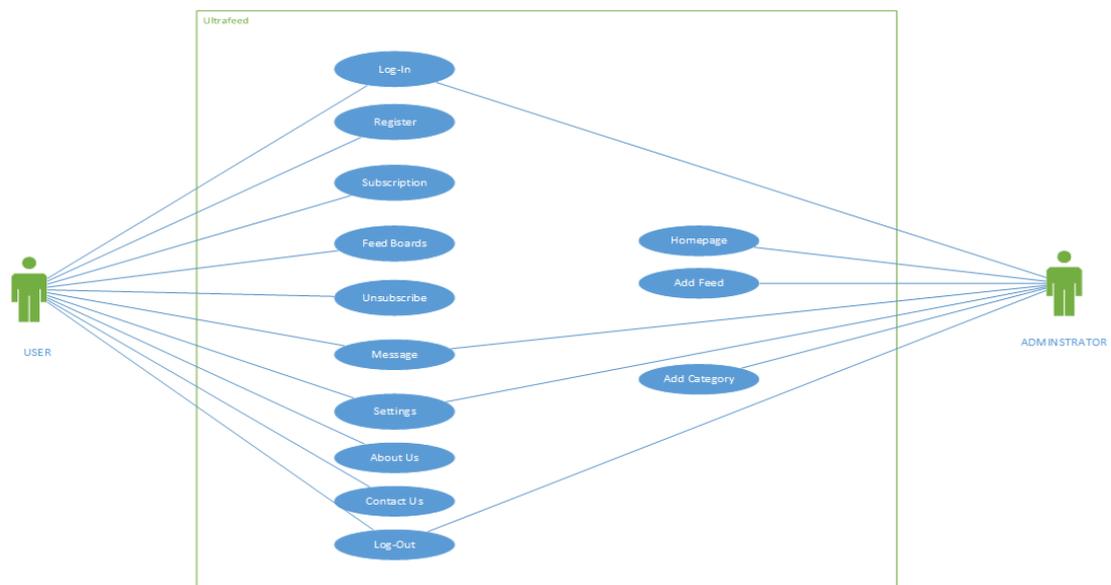
Figure 1-Use Case Diagram for Users and Administrator System Interfaces

Figure 2-Login Interface

Figure 2 is the login interface which requires the user to have already signed up before been able to login with their details.
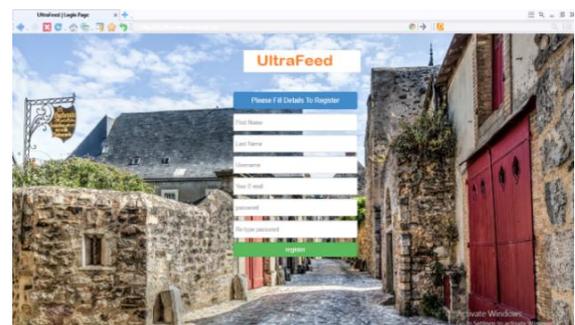
Figure 3-Registration Interface

Figure 3 is the registration page that allows the user to sign up. The form takes the following details including input; username, first name, last name, email and password to be able to register onto the system
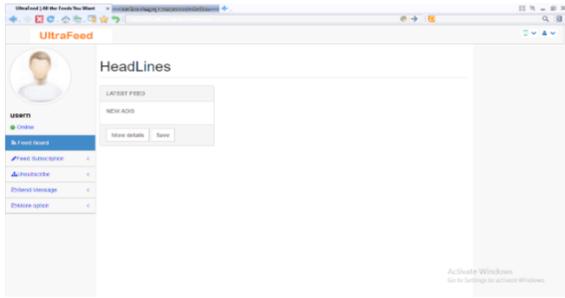
Figure 4-User Homepage

The home shows all the feed that the user has subscribed to in figure 4, after successfully logging onto the system.
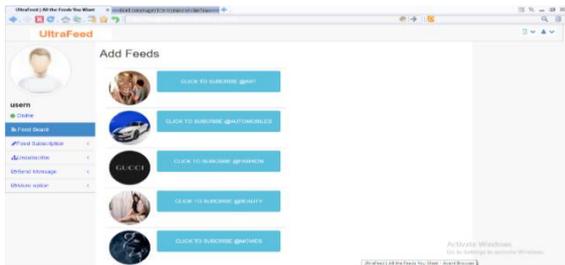

Figure 5-Subscription Interface

Figure 5 is the subscription interface which shows all the feed available for subscription which is just a click of a button away.
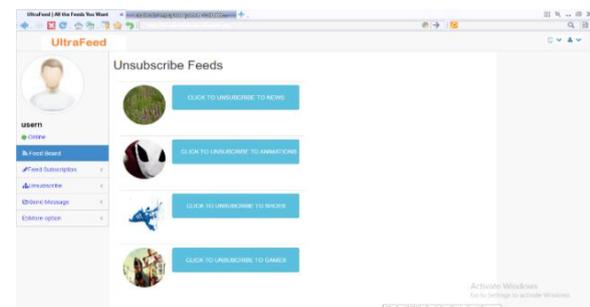

Figure 6-Unsubscribe Interface

Figure 6, shows all feeds the user has subscribed to and also a tab to unsubscribe.
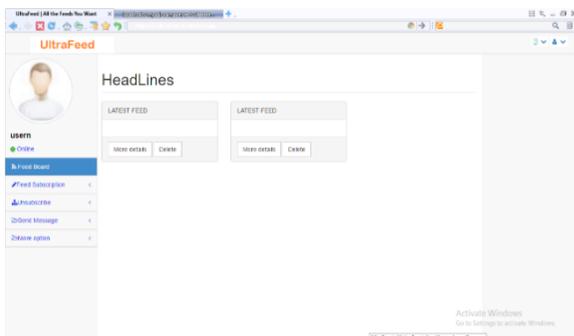
Figure 7-Saved Feed Interface

Figure 7 shows all the feeds that have been saved by the user, it can be viewed and later deleted if its not need any longer.
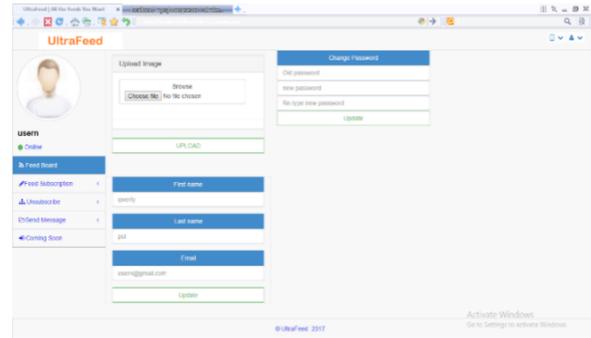

Figure 8-User Settings Interface

The user can change details about themselves or their profiles in this page, including; user profile, first name, last name, email and password.
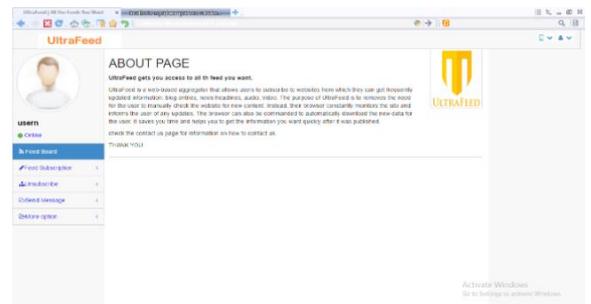
Figure 9-About Interface

The About Interface displays the information about the creators of the system as depicted in figure 9.
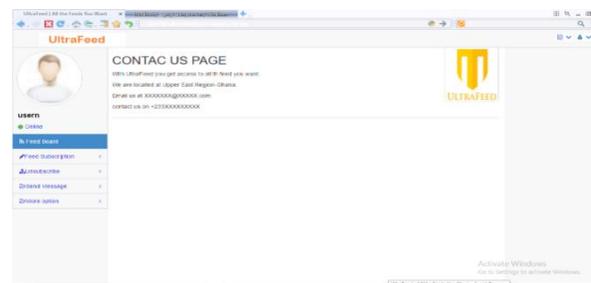
Figure 10-Contact Us Interface

Figure 10, displays information on how to contact the creators of the system.
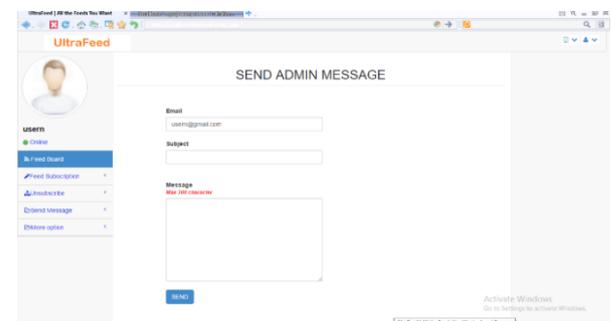
Figure 11-Message Interface

Figure 11 allows the user to send messages to the administrator, it takes input for message subject and message itself.

Figure 12-Adminstrator Homepage
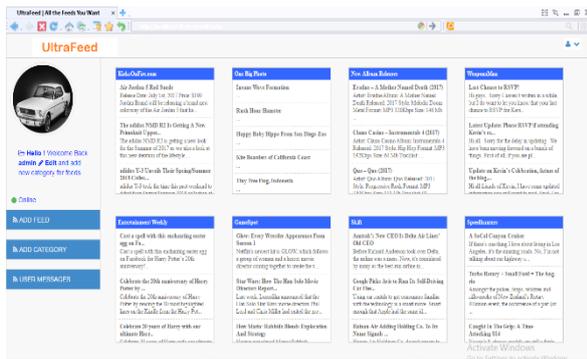
Figure 12, is the administrator homepage which shows all the feeds the administrator gets information from.
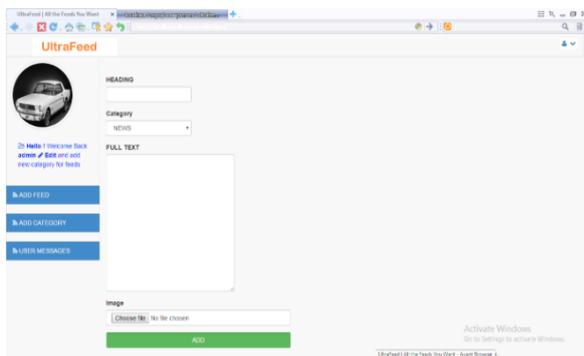
Figure 13-Admin Add Feed Interface

In figure 13, the admin inputs the feeds and details including the heading, the category, text and an image.
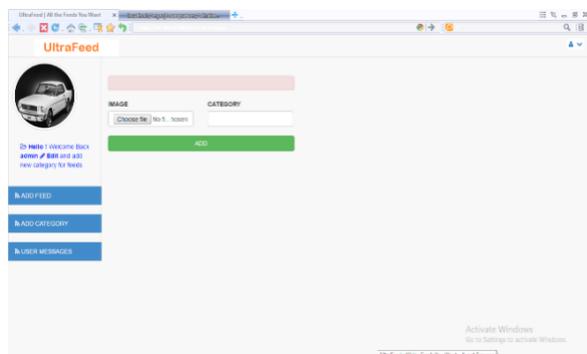
Figure 14-Admin Add Category Interface

In figure 14, the admin can add new category of feeds to offer to the users.
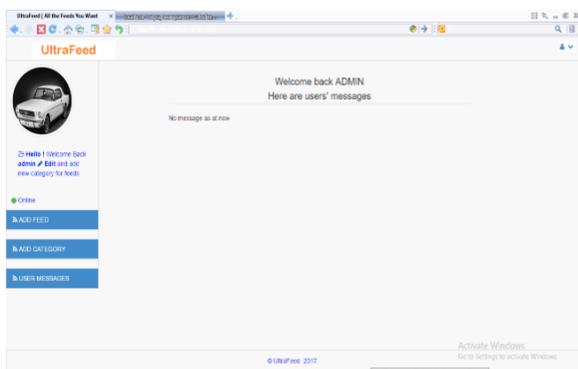
Figure 15-Admin Show Message Interface

In figure 15, the admin can change details about themselves including; user profile, first name, last name, email and password.
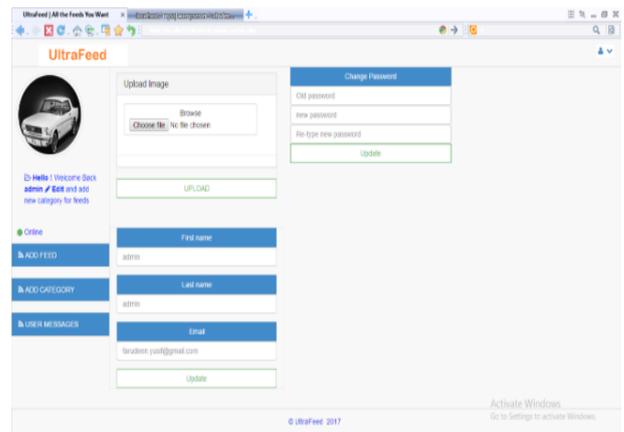

Figure 16-Admin settings Interface

Figure 16 shows the message received from the users. It includes the email of the sender, subject of the message and the message.

5. CONCLUSION

New users most of the time face challenges on their first contact with RSS readers. The purpose for this research is to develop a system to help with the declining patronage of RSS readers. The system is to make the utilisation of RSS readers easier and welcoming to new users.

The system utilizes an administrator side that takes the workload off the user. The administrator is responsible for checking the feeds from their side and updating whatever feed subscription the user has. This allows the user to be able to slowly have a good feel of what RSS readers have to offer.

The following are a few extensions for future research work:

- The system should be available in a mobile application version.
- The system can be linked to the user's social accounts to allow them share their feeds with friends and family which will further facilitate the awareness of RSS readers and their services.
- Websites administrators who provide RSS services should make its symbol more prominent so that users know of it's availability.

6. REFERENCES

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