

Consumer mobile community

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Introduction

Whole population in the world can be identified as a group of consumers. The consumer protection is one of the important issues in this global village. Most countries use different methods and concepts to protect the consumer. Empowering the consumer with knowledge is one of the effective methods to protect consumer from market frauds. The consumer community, society, and consumer education programs are used to improve consumer knowledge in worldwide.

The Consumer Affairs Authority Act, No 09 of 2003 provides provision for consumer protection in Sri Lanka (Consumer Affairs Authority-2014). The consumer watch android mobile application and the Consumer Affairs Authority official web system have been published by the Consumer Affairs Authority in order to improve the knowledge of Sri Lankan consumer. The consumer watch android application provides facilities to search market prices, search consumer prices, search wholesale prices and search shopping lists in Sri Lanka. Using existing android application, consumer can only update the knowledge regarding the price list (Zmessenger - The Consumer Watch).

Though these improvements are introduced and established, still many market frauds and violence are reported in Sri Lanka. Therefore this project was carried out by the consumer mobile community android application to protect the Sri Lankan consumer from specific market violence, to empower customer with knowledge, make consumer mobile community application and to improve consumer's social awareness.

Methodology

The project was carried out at Uva Wellassa University using its computer facilities. Relevant consumer protection process, regulation and the technologies were collected. Android version 4.0.4, PHP, HTML, Java script, Json, SQLITE and MySQL were used as development languages. Android developer tools eclipse (Juno), Notepad++, and XAMPP Control Panel 3.1.0 were used as development tools (Android Training API Guides; JSON Tutorial & AJAX Tutorial; Stack Overflow). The Use case diagram, Data Flow Diagram and the Entity Relationship Diagram were done under the logical design of the system. Android and the web development interface and the databases were developed under the physical design. Supportive admin panel web system was developed in the first stage of the project. The web system front end was developed using HTML and CSS. Ajax and the JavaScript function were used for the validation and PHP function call. Android web services and the web back end function were developed using PHP language.

Android mobile application was developed in the second stage of the project. APP interfaces were designed based on responsive Xml design. Therefore the mobile application is compatible with the different screen sizes of the mobile devices. Mobile application used HTTP request and response to communicates with the web system. Json array Format was used to send and received the information between mobile application and the web site. All back end functions in the website were developed using the PHP scripts. Both PHP and the android language were provided by Json encode and the decode function. Therefore it was great technical advantage to share large amount of information between server and the mobile application.

The main functions flow of the system is explained by Figure: 01 Data Flow Diagram .The consumer and the web admin are the main two users who interacted with the system. A consumer's mobile phone is registered automatically when the application icon is clicked, after which the consumer's profile information will be updated with the system. The login could be done after the profile is updated. After login process, consumer is able to perform functions such as make a call, search a profile and price list, share or read market frauds, make comments on share market frauds, browse web, and search GPS location etc.

The web administrator can directly login to the system via web admin panel. He has permission to manage the consumer registering profile and the consumer shared market frauds. Also he can enter, update and delete data used by the consumer via mobile application .Also market fraud’s analytical reports can also be generated via web system.

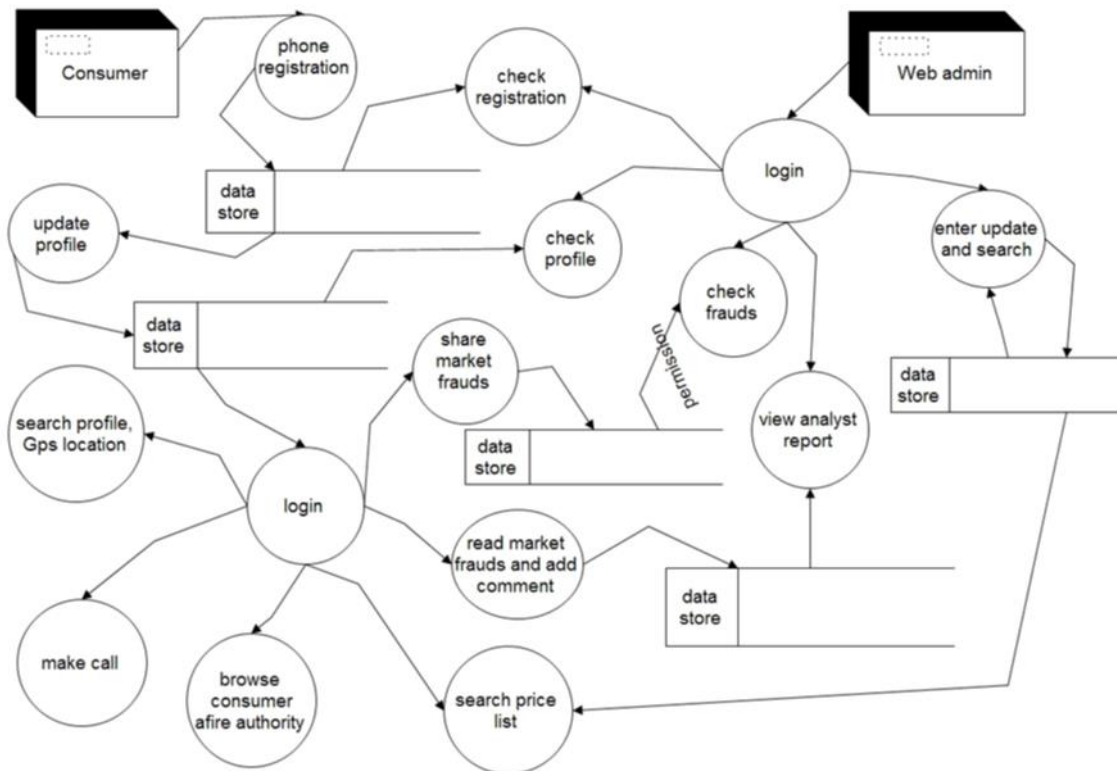


Figure 01: Data Flow Diagram

Result and Discussion

The Android mobile application with the Admin web system was the final outcome of the project. The mobile device is automatically registered with the web system when the user logged into the mobile application. Then all relevant basic information is downloaded and the stored inside the SQLite database in Android application. Mobile application uses the stored information, when user performs function using mobile application. Application provides facilities to upload and update the web system at real time. Search, complain, news, price list, ask help, consumer affair authority and your location are the main features of mobile application. Internet connection is essential requirement for the use of this app.

Web system provides facilities to perform delete, update, insert, observe, view and to get the analytical report. Web admin can access the web site after login the website. District price levels, Regulate products, Register business, Island price level page icon contain the update section on the main page. Sri Lanka Postal code, web links Update, Change Admin User and Add Contact Number List are on the preference section. Consumer Share news, Comment Analyst Reports, consumer profile search and Frequently News Share Shops icons contain the consumer section on the page. These entire icons are linked with web pages.

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