

An App based Solution for News-Paper and Magazine Subscription Management using Android Studio

Srikrishna S¹, Valancio Mendonca², Puneeth R P³, Krishna Prasad N Rao⁴

^{1,2,3,4} Department of Computer Science and Engineering, NMAM Institute of Technology, NITTE

Abstract: Newspapers are one of the main media through which people will get information about various activities that take place around the world. In this regard, newspaper agents will play an important role in delivering news-papers at the right time. To deliver a newspaper, an agent may appoint a number of workers under him for the timely delivery of the newspaper and to increase the work efficiency. In this case, a mechanism is needed to control and manage workers and users who are subscribed with the agent. On another hand, Magazines are also preferred by people. It is also the responsibility of the agent to deliver the correct magazines to which customers are subscribed at right time. The Agent may face difficulties in managing the number of customers and their subscriptions. This paper explains the working and provides the solution for newspaper agents.

Keywords: Subscription, Newspaper, Magazine, Agent, User, Android Studio.

I. INTRODUCTION

Papers are available on day-to-day basis. News- papers are issued on a daily, weekly, bi-weekly (every two weeks), or monthly basis and magazines are issued weekly, bi-weekly, monthly, or quarterly. Both newspapers and magazines are purchased by an individual, often at stores, or by making subscriptions. There is no proper way of separating newspapers and magazines since they have many features in common.

Generally, the key purpose of a newspaper or magazine is to spread the current information or “news” efficiently to a selected audience. Newspapers that are aimed at a common audience will have news about economics, crime, wars etc. which is interesting to a common reader. A farm newspaper, on another hand, might have news about crop price, and so forth. A magazine is written in a more elaborative style which gives more details of the news [3,8]. Based on a survey [6],

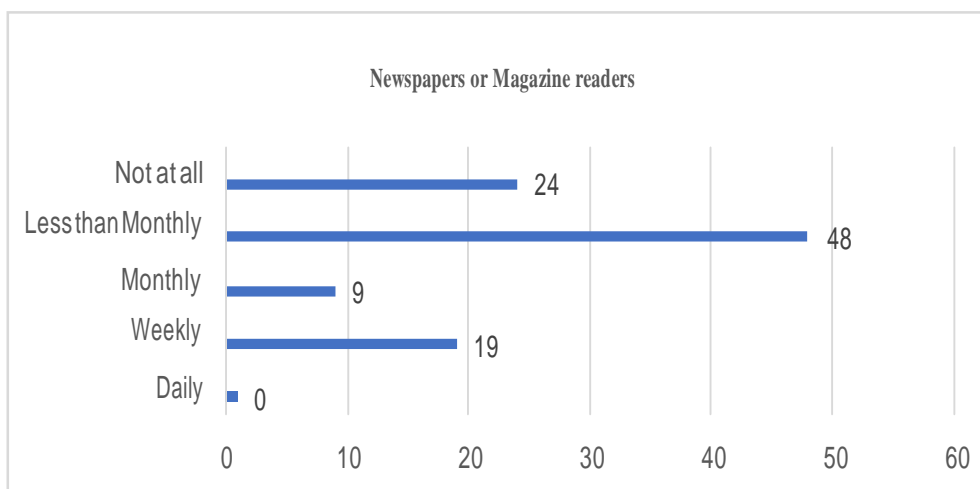


Fig. 1 Newspapers or Magazine readers

These features of newspapers and magazines are clubbed together and presented in the form of an application which is named as “Paper Agent Android Application”. “Paper Agent Android Application” is a user-friendly android application that can be used by both the newspaper agent and the customer to communicate with each other.

II. LITERATURE REVIEW

A. Survey on news reading habits

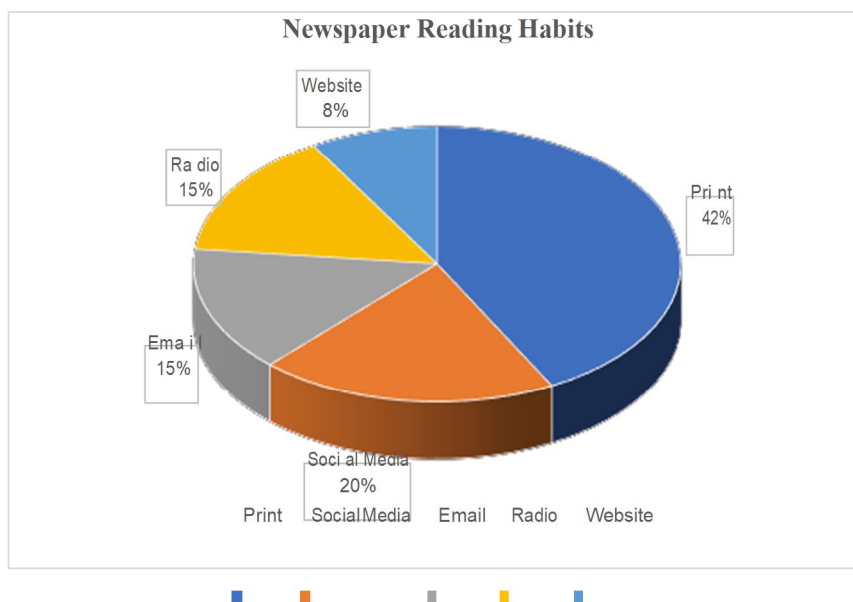


Fig. 2 News-paper Reading Habits

As the survey (Fig. 2) says that there is a good percentage of printed newspaper readers compared to any other mode of reading. The below pie-chart shows that there is 42% of them reading via the printed newspapers. So, by comparing to other modes of reading such as websites, radio, email, social media the printed media is about 22% higher from all the other modes [7].

B. Survey On Smartphone Sales By Operating System

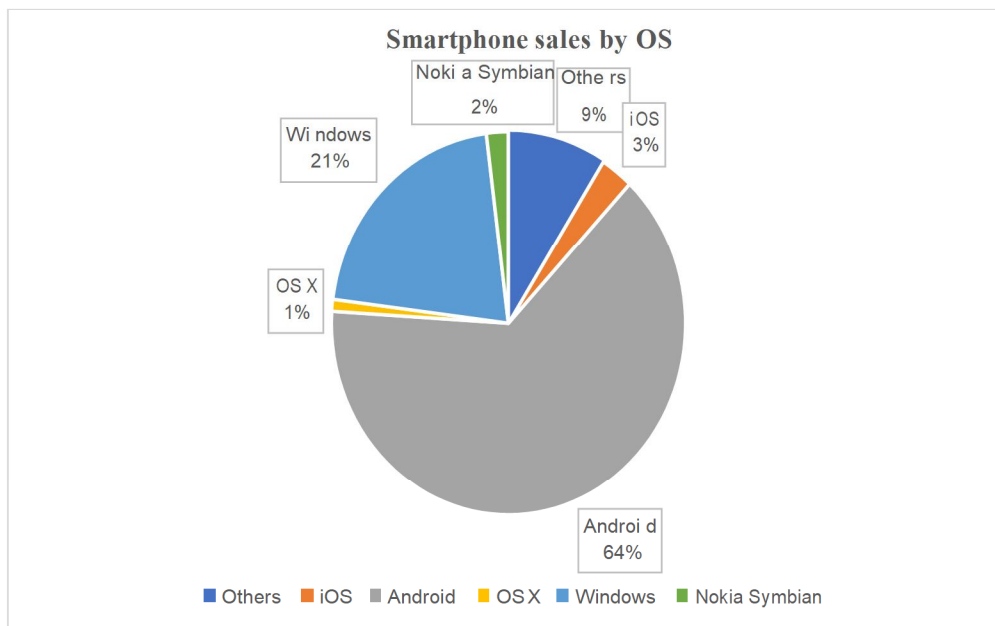


Fig. 3 Smartphone sales by OS

Based on the survey (Fig. 3), we selected Android since Android is an open-source platform which supports multifunction and provides rich tools to make interactive application. As the survey indicates that the number of Android operating system users are comparatively high [4,5].

III. ENVIRONMENT DEVELOPMENT TOOLS

A. Android studio IDE

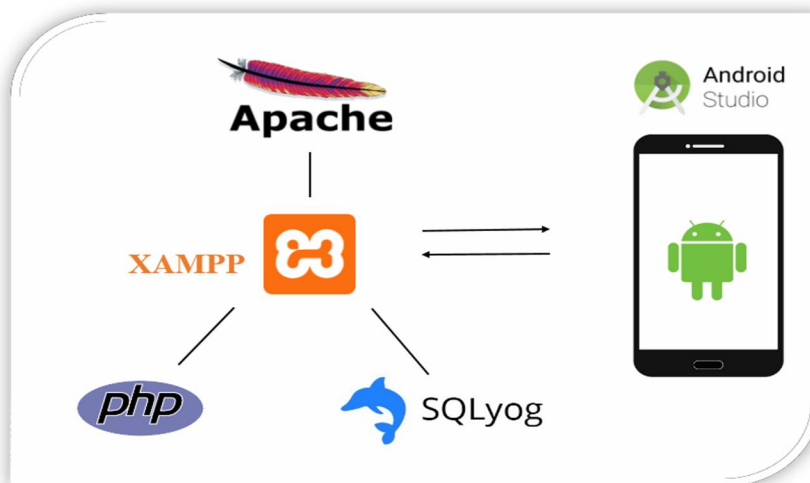


Fig. 4 Environment development tools

Android Studio is Android's official IDE (Integrated Development Environment). It is used to develop high-quality applications for Android devices. It provides tools for Android developers such as debugging, profiling tools, code editing and testing. It also provides the feature such as instant run, Intelligent code editor, Fast and feature-rich emulator, Robust and flexible build system, Optimized for all Android devices.

B. Xampp

XAMPP- Cross-Platform (X), Apache (A), MySQL (M), PHP (P) and Perl (P). A lightweight Apache distribution makes it easy to create a local web server. We require the following components for creating a web server-server application (Apache), database (MySQL), and scripting language (PHP). XAMPP is also beginner friendly and platform independent.

C. Components

- 1) *Apache*: Apache is a web server application that does processing and delivery of the web content to a computer screen. Apache is a well-known web server online.54% of the web servers are powered by Apache.
- 2) *Php*: PHP is also known as the Hypertext Pre-processor. It is an HTML-embedded, server-side scripting language. It is open source and works well with databases, these features make PHP a better choice for web developers. PHP is used by some of the popular websites in the world (Facebook and Word Press). Apache is a well-known web server online.54% of the web servers are powered by Apache.
- 3) *MySQL*: MySQL is a relational database management system. SQL stands for Structured Query Language. It is one of the most efficient ways to create web-based software applications. To create, delete or update databases Php My Admin can be used. MySQL queries can be used to insert or retrieve any information [2].

D. Libraries

- 1) *Retrofit*: Retrofit is a library used to make the HTTP calls. This is the better than volley in terms of ease of use, and performance. The tool makes android developer all networking much easier
- 2) *Picasso*: Android Picasso is a library used for loading/processing images. Android Picasso has some great features such as Centre Cropping, Resizing, and Scaling, Setting the Placeholder and Error images, Rotation and Transformation, andFading.

IV. ARCHITECTURE AND WORKING

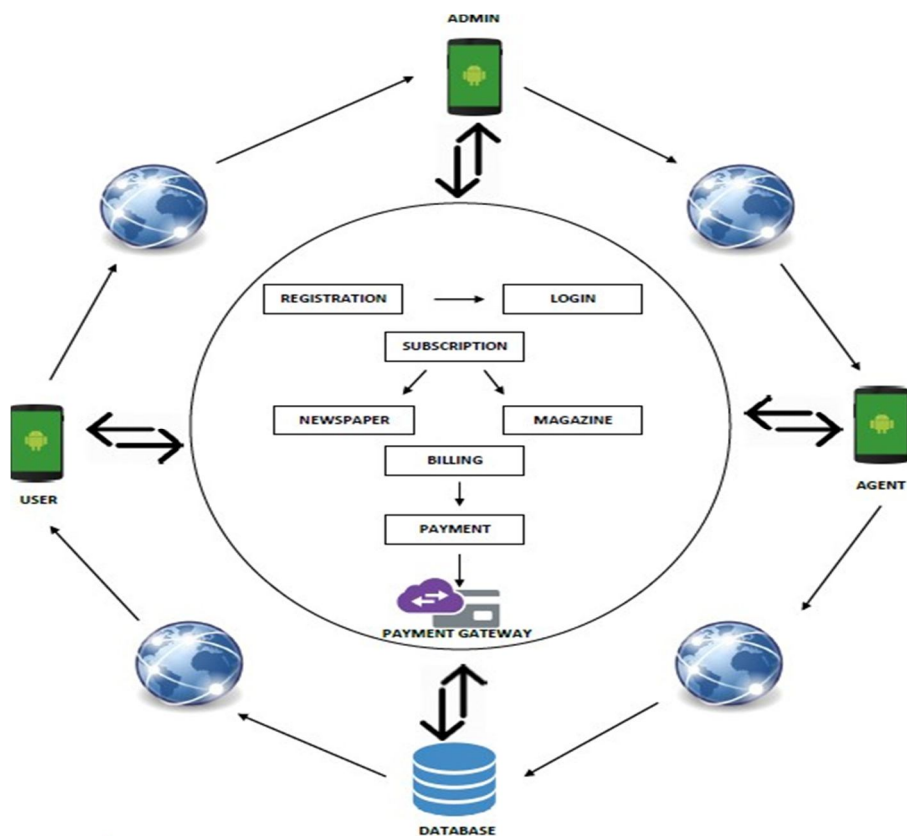


Fig. 5 Newspaper agent subscription architecture

The application consists of three main blocks those are the Admin, Agent, Customer. The application is connected to the database where all the data is stored in the form of tables for faster process. The registration should be done by the customer and the agent. The login is done using the contact number and the password to have a secured account. After the login by an Admin, he has some features listed in his dashboard the admin needs to select anyone to do a process. There's a list of activities for the admin there. Admin can add or remove newspapers or magazines and he gets a list of users and agents where admin can manage the database removing the user or agent. These actions performed by the admin are directly changed in the tables of the database.

The Agent after the login gets a list of activities on his dashboard such as the add or delete newspapers or magazines, generate the bill and view his customers. An agent gets notified when a new customer subscribes his newspapers or when a bill payment is done.

The Customer when he logs in he gets a list of agents based on his pin-code given during the registration. The activities in his dashboard are view agents by selecting this activity customer gets a list of agents sorted based on his locality. He is given an option to choose the agent. The agent's information is displayed where the customer can contact him in case of any clarification. After selecting the agent, he gets a list of agents provided newspapers. To view the magazines, the customer should select from the dashboard. He can subscribe the newspapers and magazines by selecting the checkboxes. A customer has an added advantage of looking at his past history and even gets to see which are the subscribed newspapers and magazines. There are notifications given to the customer when there is a bill generated by the agent. The customer can also manage his payments directly.

A. Modules

The User, Agent has to register through the application (the registration activity) to log in. Even the Admin have to log in to get into the application. The Admin module is given with features such as add or removes users, agent. The admin adds or deletes the newspaper or the magazines from the list as per the availability in the market. Then we have the agent module where he needs to login to access the features give to him. The activities which agent can handle are the agent can add or delete papers and

magazines from his list. He can generate the bill to customers by generating bill module. The customer complaints are also shown to the agent which is accessed through a dashboard [1]. The User module was the user after logging in has to select the agent then comes to the newspapers and magazines to be subscribed. The Notification module which works when there is a new user(customer) to the agent and when bill generated and payment is done. The SMS and call module which is used by a user for contacting the agent. The complaint module used by a user to a complaint the agent directly. Then the history module which shows the history to the user. Admin's End is concerned with,

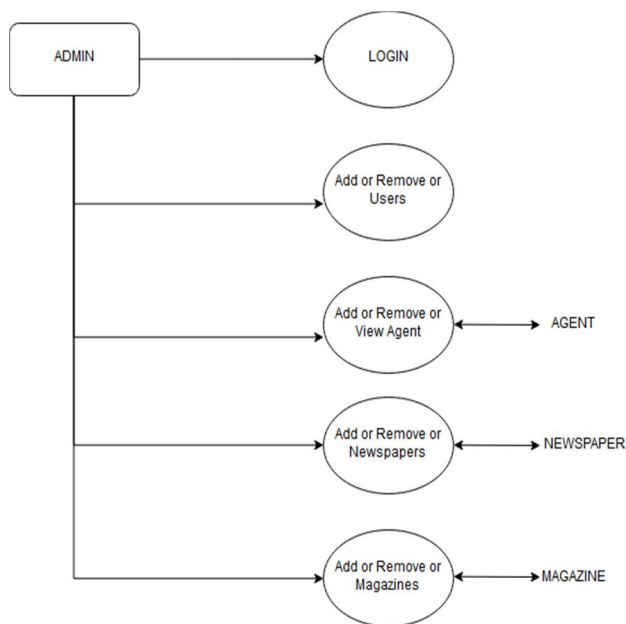


Fig. 6 Admin end module

Agent's End is concerned with,

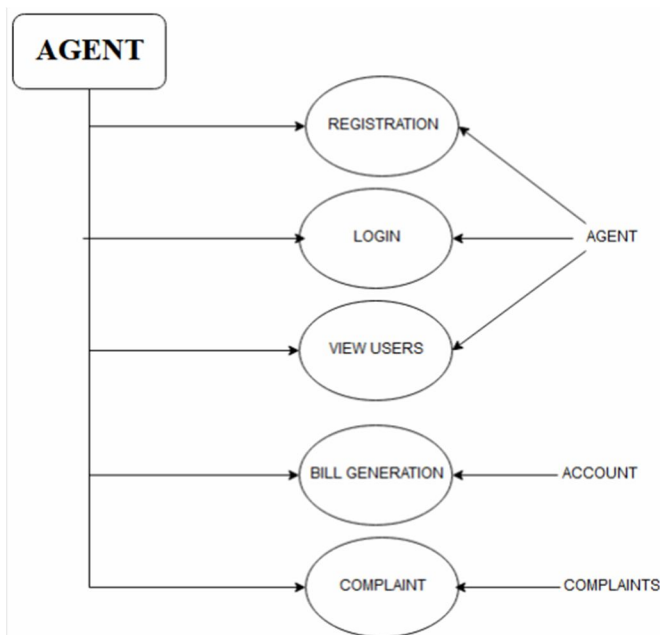


Fig. 7 Agent end module

Customer's End is concerned with,

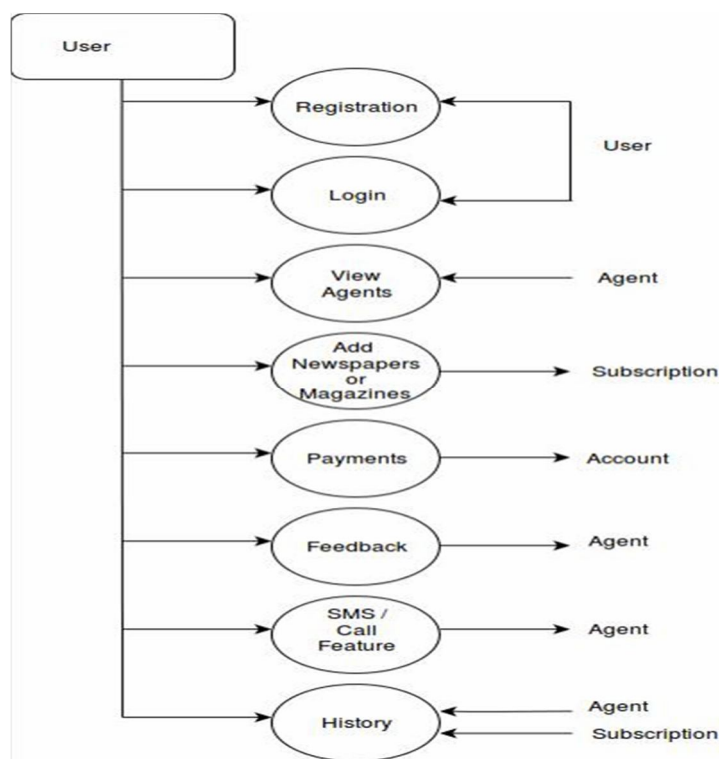


Fig. 8 Customer end module

V. CONCLUSIONS

This is a software system for facilitating the work of newspaper distributors, providing monitoring and control tools for distribution managers. The system can be extended with several further features. This application provides a solution to the Distributor/Agent as well as the customer by its focus on making everything Digitalized.

VI. FUTURE SCOPE

The proposed system does not have the procedure to verify the authenticity of the customer. This can be done by OTP generation mechanism. Also, the proposed system does not support different payment modes such as net banking, Debit card, credit card etc. In future, this application can be extended to support different payment modes.

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