Mobile CMS Platform for Android

A. Jalali, A. Nalawade, K. Kulkarni, S. Mishra

Abstract—Android is playing a vital role in today's world. Everybody is more interactive with android applications rather than using the Websites. For any enterprise the explosive growth in mobile devices is impossible to ignore. But while many companies would love to extend their e-commerce website to a mobile audience, they're often uncertain about how to proceed. We provide a solution to this problem by providing a platform .Our system focuses particularly on the E-commerce websites which are built with the help of Magento [1] Framework. The web Interface
Which we are building will be converting any E- commerce website based on magento framework into an android application. All third party payments will be handled by the system admin and also customer website's database security is kept in mind.

Index Terms—Android, CMS, Magento, Web Interface.

I. INTRODUCTION

A. What is CMS?

A content management system [9] is a computer application that allows publishing, editing and modifying content, organizing, deleting as well as maintenance from a central interface. The function and use of content management systems is to store and organize files, and provide version controlled access to their data.

B. What is Magento?

We deal with E-commerce websites but only those which are made using Magento [1].So what is basically Magento? Magento is an open-source content management system for e-commerce web sites. It provides multiple functionalities for creating an E-commerce website. Sites which are made using magento have secure transaction functionality as it is provided by magento. The website owner can easily maintain their website design's, different sections and also can add new offers easily.

C. What is Android?

Android is a mobile operating system OS based on the Linux kernel that is currently developed by Google. With a user interface based on direct manipulation, Android is designed primarily for touchscreen mobile devices such as smart-phones and tablet computers. The OS uses touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard.

II. WHY MAGENTO?

The main question is why we choose only those websites which are based on Magento framework when there are websites made using other frameworks?

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The clear advantage you get with Magento (over, for example, WordPress) is that it's a mature platform. No matter what your specific sales platform requirement, there's every chance that an add-on exists to tackle your situation. For other platforms, a little custom work is required. Magento is an out of the box solution that gives you advanced modules that work straight off the bat. They are all tried and tested, ensuring you won't run into any teething problems you may get from younger alternatives.

A. Magento Pros

1. **Multi-site**: One of the strongest pros of Magento is that it's relatively easy to set up multiple stores in multiple languages offering different (or the same) products. You are in control [2].

2. **Product catalog management**: Magento offers extended possibilities to set up and manage your online product catalog [3]. From simple products to complete sets including options and customer variables anything seems to be possible. Magento also supports selling digital (downloadable) products.

3. **Theming**: If you want to change the look and feel of your store, you have to change your Magento theme or install a completely different one. The number of themes available is huge nowadays, and of course it is also possible to use a custom design for your store [2].

4. **Extensions**: Magento is already pretty complete out of the box. But there's always room for improvement or maybe you need to change the functionality because of local requirements. The Magento Community offers a lot of extensions that you can install and use to change the behavior of your store [2].

5. **Scalability**: The Magento solution is not only versatile; it is very scalable as well. You do not need a very large budget to start and once your company is growing, Magento still offers you lots of possibilities. Magento can therefore be a very good choice for small companies with high ambition levels [3].
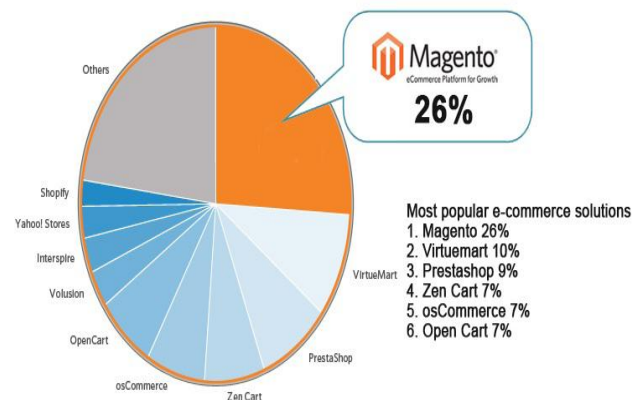

Fig. 1: Share of magento in market

III. COMPARISON BETWEEN EXISTING OPTIONS

Table. Comparison of different options present in market

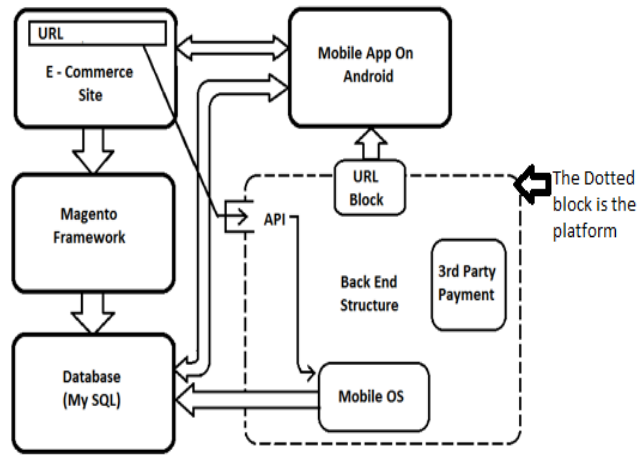| Features	Magento	osCommerce	OpenCart
Framework	Zend	PHP	pseudo MVC
Mobile	YES	YES	NO
Multi-Store	YES	NO	YES
Cross Selling	YES	YES	YES
Product comparison	YES	YES	YES
Wish List	YES	YES	YES
Product reviews	YES	YES	YES
HTML5 Image Uploader	YES	NO	NO
Import/Export	YES	NO	YES
Coupons	YES	NO	YES
Discounts	YES	NO	YES
NewsLetters	YES	YES	YES
Email Templates	YES	NO	YES
Statistics	NO	YES	NO
Multi-Currencies	YES	YES	YES
Product Image zoom-in capability	YES	NO	NO

IV. SYSTEM ARCHITECTURE

Fig. 2: Mobile CMS platform

We are going to develop a web Interface/platform for Customers who own a E-commerce website which is made using Magento framework and they wish to convert their website into an Android [5] App without hiring extra staff, money and coding. As Android apps have advantage over website, the owners of website require to having an App of their site which can attract different customers.

A. Steps for Converting

- Input URL of the e-commerce site to be converted.
- Check whether the URL entered is a Magento based website using APIs [3] of the magento framework.
- If yes then, Structure of magento is retrieved from Magento framework using PHP [3].
- Once the structure is retrieved, different Digital Assets (DB of Images, Documents, Videos etc.) references is pulled out.
- Identification of different data structure and database is done using web services such as SOAP [6].
- All the Database Interface is created.
- Digital assets are data mined and modified to be compatible with the android platform [5].
- Business Logic is built for Android compatibility of various segments like inventory management, order management, price management, stock management.
- Android UI [6] Rendering is done using the concept of Custom Layout Definition.
- Once the UI is rendered, the final application of the user is created, which can be packaged and distributed through Google play-store [6] with a minimum efforts.

V. ADVANTAGES AND LIMITATIONS

A. Advantages

1. Provide android application to the user without any coding on client side.
2. Simple UI [10] is provided which provides faster tools for designing the looks of the android app, which the customer can use easily.
3. Most of the websites (26% of market share) are built using magento; so many users can easily get their android application without much investment.
4. This web interface will be cost efficient for customers who want their websites Android Application as he does not have to pay to the programmers.

B. Limitations

1. Our project focuses only CMS [7] e-commerce websites and not an IMS based sites.
2. Our project targets only those e-commerce websites that are made using Magneto.

VI. EXPECTED RESULT

The expected result of this project is that the client will get Android application of his e-commerce website which is based on magento framework using web interface provided by us.

VII. ACKNOWLEDGMENT

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