

Implementation of News App Based on Cordova Cross-Platform

Abstract— Cordova is an open-source mobile application development framework. It allows you to develop mobile applications with web technologies-HTML5, CSS3 and JavaScript. Cordova cross platform target multiple platform with one code base (Code once and Run Everywhere). In this paper we implement simple News Application by using Cordova development framework, to create local Newspaper agency. This Application serves peoples of a small community with timely updates and all the events going on around them.

The challenges is to prepare such solution that can be run in different platforms with single SDK without changing the performance.

Keywords: - cross-platforms, Cordova, native applications.

I. INTRODUCTION

The use of mobile devices is nothing but need of human being instead of necessity. As population increases day by day, use of smart devices also increased. There are lot of functions can be found in mobile devices and can be extend by using various applications. Operating systems such as android, iOS, blackberry, windows, Web OS supports their own native plug-in and applications [1]. To develop android application it needs android developer and same for other operating systems. It increases development cost, time as well.

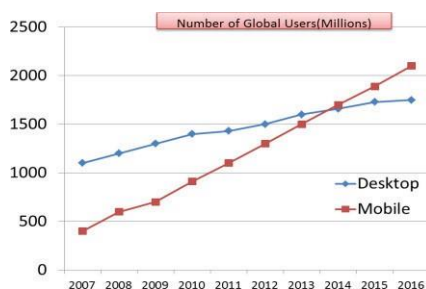


Fig1. Increasing use of mobile devices

The standard solution for this issue is to create such application which will be able to run on any kind of platforms.

Such applications can be built by using cross-platform mobile development framework. It provides “Code Once And Run Everywhere”[8] approach to the developer. It reduces maintenance cost as well as time.

In this paper we are implementing a simple News Application Based on Cordova which will be platform independent. It provides additional feature to share their own news in the form of text, pictures and videos. This will applicable for small community peoples like (Municipal Corporations, Societies and Colleges).

II. CROSS-PLATFORM DESIGN NEWS APP BASED ON CORDOVA FRAMEWORK

Cordova is cross-platform mobile application development framework which enables programmers to develop mobile applications by using standard web technologies like HTML, CSS and JavaScript instead of using platform-dependent APIs like Android, iOS, or Windows Phone [1,2,8].

The Architecture of Cordova framework mainly divided into two sections-Basic frameworks of Cordova and Mobile OS. The basic framework of Cordova consists of Web App, Cordova plug-in and Web view [1]. Web App is nothing but the application develop by using Cordova, it is collection of all web pages created using HTML, CSS, JavaScript [1,2]. Web App is connected with Web view using HTML or Cordova API [2,3]. Web view is a HTML Rendering Engine which is the core of Cordova framework. Web view is actually a built-in browser but there is no user interface so we can't see border of page, address bar, navigation bar and other interfacing elements [1].

Plugins are the core part of Cordova system which acts as a standard interface between Cordova and native components to communicate with each other. These plugins allows user to access various components like camera, battery, widgets and other media. We can develop our own plugins too. Whenever we are starting work on new Cordova project

there are no plugins available by default. We need to add them explicitly as per the requirement of the project [8,9].

Web App, Cordova Plugins and Web view are finally connected with Mobile OS. The Graphical User Interface (GUI) of different operating systems may be different. The code will be able to run on different Mobile OS when created using Cordova.

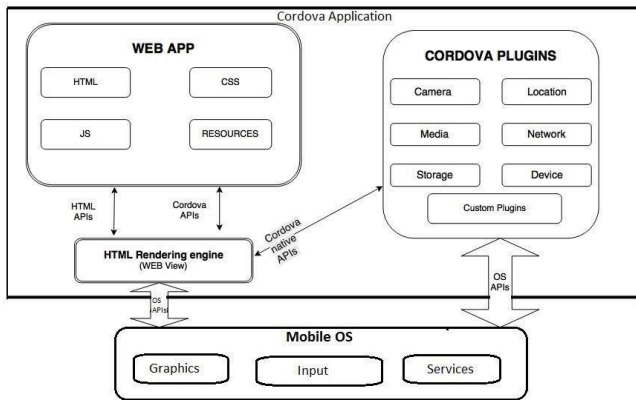


Fig2. Architecture of Cordova framework[8].

III. ARCHITECTURE & WORKING OF NEWS APP

The architecture of News App system mainly consists of Application, Server and Database. The front end of the system is application which includes various types of users like Android, iOS, Windows users. The main purpose of application is to act as an interface between clients and server. And server presents in between applications and the database. The server works in two parts as Controller and Model.

The controller is a PHP file that is used for every request made by the application and determines where in the model to send request. It is also the controller that returns the results from the model. The model is a collection of functionalities that perform specialized tasks such as authentication, news submitter, search etc.

Database is used to store user profile and News related data which is uploaded by the users and allows them to retrieve it.

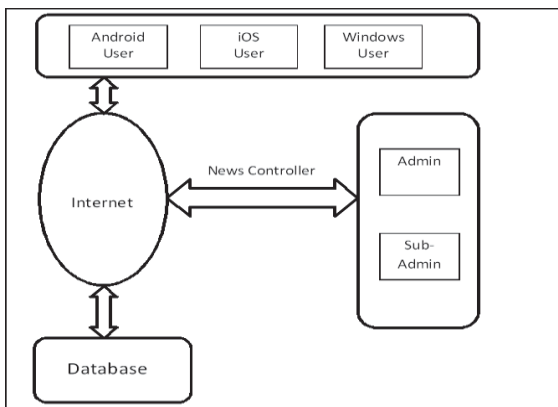


Fig3. Architecture of News App

There are three categories of users- User, Sub-admin, and Admin. **Users** may be registered or unregistered. Unregistered users will be able to read the news approved by admin or sub admin. To share their own news they need to register. Register users can login and upload their own news in the form of text, images, videos, etc.

Sub-admins are allocated according the various categories of the news. User will upload news according to the category and same will be assigning to sub-admin of particular section. Sub-admin checks the validity of news and decides to approve particular news or reject it.

Admin is the main authority who controls the whole system along with sub-admin and users as well as he can post his own news. He will able to make normal user as a sub-admin or sub-admin as a normal user. Admin can keep track of system and user list.

IV. ENVIRONMENT DEVELOPMENT TOOLS

A. NODE JS

NodeJs is an open source cross-platform JavaScript runtime environment for development of various tools and server side web applications. Developers can create their own new modules in JavaScript though it is not a JavaScript framework. It also enables us to create web servers and networking tools with help of JavaScript. For more convenience of developers to share source code of NodeJs, the package manager is introduced named as “npm”.

B. CORDOVA

Apache Cordova is one of the most popular mobile application development frameworks. Cross-platform development can be done by using various web technologies like HTML5, CSS3 and JavaScript. It finds more useful when developer wants to execute same application on different platforms without changing the code [7].

C. ANGULAR JS

For creating a static web document HTML can be used but it fails when to create dynamic web pages. AngularJs is nothing but the extension to HTML. AngularJs allows us to develop web pages quickly in more attractive and readable format. AngularJs is mainly used to design the front end of web applications [9].

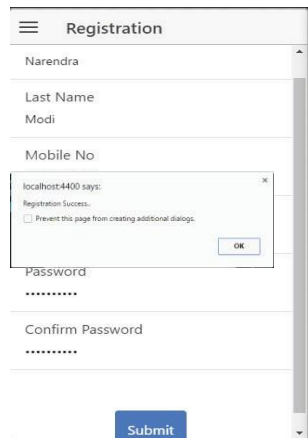
D. IONIC

Ionic is a complete open-source SDK for cross-platform development. Ionic provides drag and drop approach. Mobile development SDK found in ionic is similar to SDK in other native platforms. Users can develop their own applications, and deploy them in various platforms like Android, iOS. It also provides the command line interface (CLI), so users can use can create a project by using simple commands. Also users can develop their own plugins and publish them [10].

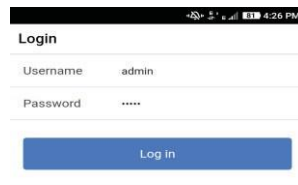
E. MYSQL

MySQL is an open-source relational database management system. SQL is the abbreviation used for Structured Query Language. It is one of the most efficient ways to create web based software applications. PhpMyAdmin can be used to create, delete or update databases. The information can be inserted or retrieve by using simple MySQL queries [11].

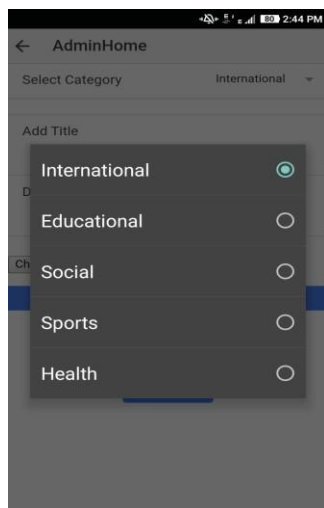
V. TESTING



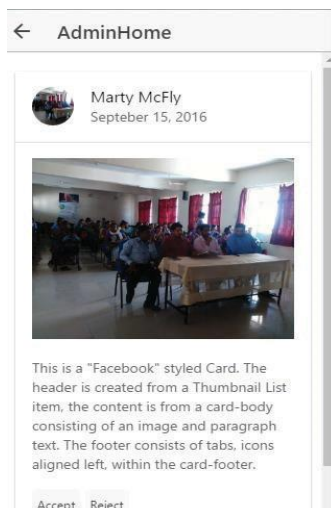
(a)



(b)



(c)



(d)

VI. FUTURE SCOPE

Connectivity with the YouTube and Social Media is one of the important feature can be added in future. For interacting with peoples of different regions, language translation facility can be added. So the peoples belonging to all class of society can be use it very efficiently. Different notification sounds can be added. The news in the form of audio can be added in future.

VII. CONCLUSION

In this paper we develop a cross-platform News Application. It is an application that implements the policy of “for the people, by the people”. It enables common users to post news on the application instead of journalists, and other users can view this news to stay updated about the events happening around them.

According the above sections we can say that cross-platform is one of the best ways to implement mobile applications. It is efficient way to implement app within least time and cost.

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