Platform Independent Mobile Application Development

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Abstract

In today's world, technology making things easier and potable. As people still facing problem in carrying and handling laptops along with them. For solving this problem, Mobile application developer developing application to solve this problem. So mobile application developer developing plication as per user requirement. But due to various platform, it become a great problem for the application develop to deploy same application on every platform.so this has been solved by cross platform mobile application development kit which helps a lot in solving this problem.

Keywords: Single Code, "Code Once, Deploy Many", platform independent.

1. Introduction

The mobile phone are not just used for calling purpose these days. These days people using mobile phone application according to their requirement for making work easier.But people are not able to get all application one platform as there are different application on different platform. To use those application people have to use all the platform but it is very difficult.

So mobile application developer start developing application cross platform mobile application by using HTML5 with JavaScript and CSS3.

This problem is solved by Cross platform mobile application development kit "intel XDK". This kit will help to develop Cross platform mobile application means by using this software simultaneously we can deploy application for all platform at a time by using HTML5 with JavaScript and CSS3.

Our main aim is to create a mobile application which we can deploy on every platform of mobile application by installing same application on mobile devices of every platform : Android, I-Phone and Windows.

Our main target is to have just single course code of application for all the platform of mobile application. So with the help of this cross platform application development kit we can make this possible " develop once, deploy for many ".

Languages used to make mobile application :

1.1 I-phone : objective C/C++, HTML5

1.2 Android: Java, C/C++, HTML5

1.3 Windows Phone : C/C++, Silverlight, HTML5

So as you can see that every platform above have different language in which code is written. I-phone use Objective C/C++ language to code application, Android uses Java/C/C++ language, Window phone uses C/C++/Silverlight/ language but something that is common between all three is HTML 5. So we can use HTML 5 and jquery with collaboration with intelxdk. So with the help this software we will code once and deploy for many platform.

Apps for I-Phone- This module will target I-phone operating system. We will make application with the help of this software which can be installed on every I-phone device. Devices of company like Apple etc.

Apps for Android- This module will target Android operating system. We will make application with the help of this software which can be installed on every Android device. Devices of any company like LG, Sony ,Sumsung etc.

Apps for Windows phone- This module will target window's operating system. We will make application with the help of this software which can be installed on every Window phone device. Devices of company like Nokia, HTC etc.

2. Literature Survey

Our main aim is to develop an application can be supported by various mobile operating system. This can be possible by using the "Intel XDK". This software helps to create deploying file of various different operating system.

In this project we are developing tool for CAT mobile application. This will provide user complete information about CAT examination for MBA. This application having practice paper for students so that they can prepare and practice through these papers for their CAT exam.

This application also provides last 10 year papers of CAT exam so that students can go through those paper and even prepare with the help of those 10 year papers. These papers are very useful for students.

This application also provides tips and trick to crack CAT exam so that they can score very good marks in this exam and also provide results of various IIM college which helps them to know cutoff of different IIM colleges.

3. Module Detail

3.1 Preparation material

This module contain preparation material of CAT exam. In this module there are there different sectors like Quant, Reasoning , Logical and on each every sectors there is proper practice material for students for exam. This practice material keep on update weekly bases. Students can even upload this material in their phone and then prepare of it.

3.2 Last year paper

This module contain last 10 year paper of CAT exam . So that students can go through these paper and get idea of CAT exam. Even they can practice through paper.
   Same as practice paper students can even download paper in their phone device.

3.3 Results of IIM

This module contain results of different IIM colleges. This contain cutoff of various college and selection criteria. So that student get to know how much they still need to work hard to get admission in IIM college.

3.4 Tips and Tricks

This module contain tips and trick to how to crack CAT exam to get IIM college. This will help a lot student in cracking the Exam.

3.5 About us

This module contain information about the developer and copyright written in this module .
   As this is the Web application so we need datapacks in our phone device. But this is required for very less time because once you download material in this application you can work on it without internet.

4. Cross Platform Software Language and Algorithms

4.1 HTML5

HTML5, is the latest web technology with multimedia features for smartphones and tablets. HTML5 web application can be accessed on mobile browsers and run on different mobile platform just like native application.

4.2 JAVASCRIPT

JavaScript is used in lots of web pages to improve design, detect browsers and many more and works in all major browsers such as Internet Explorer, Mozilla etc.

4.3 CSS3

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation semantics (the look and formatting) of a document written in a markup language. Its common application is to style web pages written in HTML5 and

XHTML, but the language can also be applied to any kind of XML document including XMLanguage, Scalable Vector Graphics and XML-based User interface Language.

4.4 JQuery
Mobile JQuery is a fast & concise JavaScript Library that simplifies HTML document traversing, animating , event handling and Ajax interactions for rapid development. JQuery is designed to change the way that you write Javascript.

5. Responsive Web Design
Our mobile app basically aim is to different devices with different screen size and aim is to run it on different desktop use r in the form web application So for this we have to make our application responsive so that it can work on every platform properly. So we will use responsive web design to solve this problem.

5.1 WCF JSON Service
This module help client use mobile application and web application of desktop to fetch data from database. So basically this service is the bridge between the client application and database server. We have created JSON services because the data transferred over the HTTP is light weight so the performance of the application will be faster.

5.2 Algorithm
1. First client will click on start screen.
2. Client will select from option which he/ she wants to select.
3. Client select Practice paper then WCF services receives request and processing.
4. WCF service logic will run the injected stored procedure.
5. Stored procedure will search the practice paper related to particular topic in SQL server database.
6. Result Stored procedure is catched by the WCF services and then it return to the client .
7. Result (practice paper displayed on screen).

6. GUI and Snapshots

Fig. 1: First Screen and Option page.

Fig. 2: Practice paper and last year paper.

Fig. 3: Shortlisting.

Fig. 4: About us.

7. Conclusions

Therefore, we conclude from this paper that we can develop once , Deploy many . If we write code once then we deploy it for different platforms. User experience is good with different platform is good. It is very to mention its advantage as this is very useful time and money system to develop mobile application. We can also implement this for operating system like – mobile OS Symbian and Web application.

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