AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER – 422608

DEPARTMENT OF COMPUTER ENGINEERING

Seminar Synopsis on

"Analysis of Cross - Platform App Development Tools"

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Area/Domain :- App Development

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Abstract

With the emergence of different cross-platform alternatives, there is a need to explore the various approaches the developer must take. We perform this study in the hopes of shedding lighter on their differences and highlighting the critical aspects which make them unique. The examination of these WORA (Write Once, Run Anywhere) mobile App tools is done on the basis of different approaches, i.e., Native apps, Web apps, Hybrid apps, Interpreted apps and Widget-based apps. The study performed shall enable us to illustrate the results on the basis of these categories.

Introduction

From past few years people knows that how it become important to build mobile applications for various types of needs of people and the result seen in year 2020 that the total number of mobile applications downloads was over 2.7 billion but the

problem arise in these applications that smartphone operating system has its own platform hence, the problem is creating that developers have to develop separate applications for each platform to solve this problem cross – platform helps to make an application for different platforms means one app can run on android, iOS and Windows also. There are many types of frameworks to make an app for many platforms for example the frameworks are React Native, Flutter, Cordova, Ionic, Xamarin, etc. these Frameworks are made by companies. React Native framework made by Facebook company, Flutter is made by Google, Xamarin framework made by Microsoft and these frameworks based on their own languages for example to make an app with React Native JavaScript is used, similarly to make an app with flutter dart programming language is used, to make an app with Cordova framework HTML, CSS and JavaScript languages are used. After this "look and feel" of the app is also important means the design of the app basically. Then there are two things are coming into mind that is their mobile application is best or web application they both having their advantages and disadvantages. Most of the people prefer mobile application because, some mobile app doesn't require internet connection but web application needs internet connection. The speed is also faster in mobile app as compared to web application. There are mainly two types of technologies one is Native and second one Hybrid app technology. In Native technology mobile application development refers to the traditional way of developing applications, using the platforms, for android the native programming language used is Java, C++, Kotlin and for iOS the programming language used is Obj. C and Swift which is made by apple company. For iOS the recommended architecture is model view model and for android is model view-view model. The Hybrid frameworks are a collection of web-based development technologies the Cordova, ionic frameworks are web-based frameworks these frameworks based on HTML, CSS and JavaScript.

Motivation

- By the time user develop a native app for either iOS or Android, the cross-platform development provides user with an   app that can seamlessly run across different devices and platforms. Such a faster and swifter app development can easily enable you to obtain the advantage of reduced Time to Market readily.

Objective

- Cross-platform development aims at creating a single application that runs identically on several platforms.

- It uses platform-agnostic technologies such as HTML and CSS and helps businesses cover many end devices at lower costs.

Application

- The cross-platform must give the possibility to maintain and improve the application

- For example, if new options need to be implemented in an application, the modifications have to always be in the cross-platform level and thereafter deployed in deferent platforms.

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