BEST PRACTICES FOR DEVELOPING MOBILE APPLICATIONS FOR EDUCATIONAL SYSTEMS

D.R.Norqulova
O‘.J.Suyunova
E.I.Suyunov
Karshi branch of the Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, students

Abstract: *In this article, online platforms that teach mobile application creation are very important in today's world. These platforms facilitate the process of creating and using mobile applications. Through these services, people will be able to modify and update their mobile applications. This article provides information about online platforms that provide virtual training for creating a mobile application.*

Keywords: *mobile application, technology, programming languages, information systems, platforms, multimedia technologies, virtual laboratories, innovation, presentation, result.*

INTRODUCTION

Mobile applications are a part of our lives today. We use mobile applications for various reasons, education, business and more. Many processes hinder the realization of the potential of mobile applications.

Having determined the purpose of the educational system. This is important to understand how students should learn and how they can benefit. Facilitates targeting, application structure, and debugging. Online learning platforms are great resources for learning how to build a mobile app. Through these platforms, you can easily and effectively see how to create a mobile app. Dozens of online portals and websites offer you textbooks, video lessons, practical exercises and other materials. Here are some virtual tutoring online platforms: Online app tutoring platforms are one of the most modern concepts in the field of programming today. It provides platforms, operating systems, application creation and building tools, programming languages, and tutorials. These platforms provide users with multiple options, with many programming tools available to help them learn how to build their apps. Define content: Define information content that students will enjoy, understand well in education, and learn. This makes your app interesting and useful for readers.

Build a learner-centric app: It's important to start your mobile app development by getting to know your learners, learn about them, and engage them. For this purpose, it is necessary to use a database to store the information of the students, conduct classes at fixed time intervals and support other functions related to education.

Platform Choice: Plan to develop a mobile app for Android, iOS or both. If your readers use both Android and iOS devices on average, it is recommended that you develop an app for both platforms.

User-friendly interface and design: It is very important to create a user-friendly interface and design so that readers can use your app easily and comfortably. The app design should be simple and easy to understand, with good use of colors, graphics, and interactivity.

Increase interactivity and engagement: Provide interactivity and engagement through a mobile app so students can express themselves and absorb what they've learned in supplemental materials. Use game elements, chat groups, forums, tab data, online survey and other tools.

Testing and evaluation: Before adding new features, test your app and try to establish an evaluation process. This helps you understand how readers interact with your app and how they rate it. The results of the evaluation will give you the opportunity to improve your app and make it more effective for your students.

Use technology: It's important to use new technology to keep readers engaged with your app. You can use virtual learning tools, interactive video lessons, online tests, and other technologies to make your app more engaging and easy for students.

Support your education system with data: Don't forget to set up a secure database to store and manage access to data for your students. It is important to keep users' personal information safe and ensure that they are not given only the rights they need.

Collaborate with others: It's important that you collaborate with other students, teachers, or technology professionals to engage students and facilitate learning.

When developing an educational system through mobile applications, you can create a meaningful and effective learning experience for students.

Mobile applications help students create user-friendly and useful interfaces. For example, by learning and understanding the user's words, a mobile application is able to provide functions that are important to manage the user's needs.

The use of mobile applications in the education system is important to provide students with the best and most active learning opportunities. This serves to create an opportunity to provide education in an individualized and most inclusive manner, according to the individual needs of each student.

Individualization of learning materials: used to create and present learning materials individually for students. This allows students to learn through lessons, activities, and tests that work best for them.

The programming languages available for creating apps for Android and iOS platforms may differ. The most popular programming languages for these platforms are:

For the Android platform: Java: Android applications are largely created using the Java programming language. The Android SDK (Software Development Kit) is based on the Java language, and Android Studio uses the Java programming language.

Kotlin: Kotlin is a programming language developed from Uzbekistan. Kotlin is used on the Android platform in accordance with the principles of OOP (Object-Oriented Programming) and can be used by the Android Studio program.

For the iOS platform: Swift: One of the most popular choices for creating iOS apps using the Swift language. This language has a simple and straightforward syntax and provides a high

level of security. Objective-C: Along with Swift, it's also possible to build iOS apps using the Objective-C language. This language also works well for creating smaller applications.

Additional methods:

React Native: This is a good choice for creating Android and iOS apps using the JavaScript programming language. React Native has the ability to create a running application from a single piece of code, resulting in easier refactoring.

Flutter: Using the Dart programming language, Flutter is a very powerful tool for building Android and iOS apps. Apps built with Flutter behave like "native" apps, and its design is well-known for that.

Xamarin: Xamarin, which uses C#, is used to build Android and iOS apps. Xamarin allows you to create "cross-platform" apps, but has a bit of a language for native Android and iOS apps.

Pay attention to the following:

Other Platform Basics: Each platform has its own features and requirements that a developer should understand.

Learn programming languages: Choose the programming language you feel most comfortable understanding.

Choose the right language for your theme or purpose: The most important thing to make your app fit the purpose is to choose the language. It's easy for your learners or developers to learn a popular language.

Collaboration and community: Collaborate and support community work to get better results when learning a platform or programming language.

Each programming language and platform has its own advantages and disadvantages. Choose the programming language that best suits you or your company based on your goals, experience, and preferences.

Individual study directions are study plans and directions formed on the basis of each student's personal requirements, characteristics, and learning methods. It is one of the most inclusive methodologies to provide learning tailored to the individuality and abilities of the learner. We will consider the following individual study directions:

Identifying Individual Learning Paths: Identifying learning pathways begins with the individual needs and goals of each student. It is important in foreign institutions to talk with the student and make a questionnaire to find out what knowledge and skills the student wants to get, as well as in what areas he wants to develop, what he expects from his studies.

Follow the steps below to create a mobile app autostarter:

Define Functions: Before creating an automation part, determine what functions you don't want to automate in your application. This includes identifying automatic tasks that need to be performed at a specific time.

Create a calendar: Before starting automatic operation, determine which day and time it will work. This includes creating a tailored calendar, such as sending messages from your app to readers at specific times or updating your database on specific days.

Send messages and applications automatically: Define how to send messages to students. This can be done through a calendar, alarms, push notifications, or other methods.

Automatic data update: It is very important to design for automatic data update. It's easy to automatically update information when additional information appears in the database or when a certain period of time has passed.

Create an interface for participating in bow: It is very important to create an easy and bright interface for students to manage automatic tasks. This means creating a custom program to manage a specific part of the application or allowing automatic management.

Ensuring safety: The safety of automatic operation is very important. Identifying users over their data is important for data that includes security codes and encryption.

Monitoring and follow-up: After launching automatic tasks, develop manuals to monitor them and detect errors. Important for monitoring, automatic tasks, and gathering statistics about the application.

Testing: After implementing automated tasks in your application, it is important to test them through manuals. This is important for detecting errors and ensuring that automatic tasks work well.

Existing programming languages, security principles, and monitoring and testing practices are critical to creating an automated workflow. With these steps, you can create an automated workflow that is efficient and useful.

Analysis and Independent Learning: Learners should be exposed to educational processes that allow them to experiment with opportunities to analyze their own learning methods and analysis, make mistakes, and analyze their failures. This allows students to change the learning process and increase its effectiveness.

Conclusion: It can be said here that scientific and public information is being updated day by day, we need the help of mobile applications to understand and interpret this rapidly growing and accelerating information. Many integrated platforms, especially in the educational system, are having their positive results today.

REFERENCES:

1. Pardayeva G.A. Methodology of teaching the science of creating mobile applications through an integrated distance learning environment. “Formation of psychology and pedagogy as interdisciplinary sciences” international scientific-online conference. 2022. Italia. 28-32-p.

2. Rakhmonov Z.R., Pardaeva G.A. Mobile application development education methodology with integrated distance learning environment. Central Asian Journal of Education and Computer Sciences VOLUME 1, ISSUE 2, APRIL 2022 (CAJECS), ISSN: 2181-3213

3. Rakhmonov Z.R., Pardaeva G.A. Steps Of Organizing The Methodology Of Improvement Of Methods Of Distance Learning Of Students. 2021 International Conference on Information Science and Communications Technologies (ICISCT). 3-5 Nov. 2021. Tashkent, Uzbekistan. DOI:10.1109/ICISCT52966.2021.9670205 (SCOPUS). (№525, 30.10.2021)