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ijirset@gmail.com

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Quran Application

Aamir Rehman, Ijarul Haque Ansari, Sartaj Mansuri, Dr.Gowthul Alam MM

Department of Computer Science and Engineering, Jain (Deemed-To-Be) University, Bangalore, India

ABSTRACT: The Quran Companion App represents a revolutionary mobile application crafted to function as a daily spiritual guide, fostering a continuous connection with Allah while promoting enlightenment and tranquility. Employing state-of-the-art technologies, the app utilizes the Flutter framework to present a user-friendly interface and relies on the Dart programming language for efficient backend logical operations. Beyond its role as a conventional Quran reader, the app sets itself apart by encouraging users to partake in daily meditation on specific Quranic verses, thereby enhancing the spiritual experience. With its emphasis on seamless navigation and accessibility, the app guarantees a fluid and intuitive user interface. The strategic utilization of Flutter and Dart not only enhances the visual appeal but also facilitates robust backend operations, resulting in a comprehensive and high-performance Quran companion app. In essence, the Quran Companion App is meticulously designed to enhance users' spiritual journeys by providing a holistic and meaningful platform for daily Quranic engagement.

KEYWORDS: Flutter, Dart, Quran

I.INTRODUCTION

As technology advances so quickly, smartphones have emerged as a communication tool that practically everyone in society has. particularly in the production of an array of mobile applications, better based on the Android, Windows Phone, iPhone, and so forth; these programs range from games to Quran apps (Sampurna et al., 2019). Many people use their smartphones not just as communication tools but also as comforters. On the other side, according to (Althaf Husein,2020), the smartphone has a significant impact on people's waning interest in reading the Quran.Among all the programs available on smartphones, it would be good to use them as a reminder to God by downloading the Quran application in order to become more obedient to God. Thus, the smartphone can be used to read the Quran in addition to being used for phone calls and SMS (Sinaga et al., 2016). Islam's holy book, the Quran, serves as a set of rules for living one's life in the world. (Amin & Hidayat, 2019).

The comparison between desktop applications vs. mobile vs. the tablet market in January 2021 which shows the android master mobile operating system in the world with a percentage of 57,32% (GlobalStats, 2021). The development of this technology provides broad benefits to every field, especially in the field of religious education. One of them is to utilize android as a medium of learning so that we can read the Quran at any time.

The purpose of the Quran app is to increase our devotion by enabling us to read the Quran anytime, anywhere, as long as we have access to it through a smartphone. The Quran application offers a menu to assist users with reciting the Quran on a monthly basis. The programming language used for this application is Dart, together with the framework Flutter.

Application Letter Recognition and Makharijul Surah Hijaiyah With Augmented Reality Based Android (Fadli & Ishaq, 2019); Development Applications Iqro' Based On Android Using The Google Speech (Fauzan et al., 2018); The Design of The Qur'an Application Based On Android "Sahabat Nusa" (Adista& Izza, 2020); and the Dictionary Application of the Koran-Based Android Using Android Studio (Sampurna et al., 2019).The application, which was developed based on prior research on the use of the Quran, has several benefits. For example, it sets a goal for potential users to memorize the Quran in 30 days and offers audio that can be repeatedly played to facilitate this process. In addition to the apps developed with the Flutter framework, which is the source of the successful prototype frequently utilized at no cost by developers worldwide (Aminah & Bisma, 2020).

II. RESEARCH METHOD

This study makes use of a Fountain Model, in which the requirements at the time of app development allow for overlap in the application creation process (Dewanto, 2004). The Model Fountain's design can be seen in Figure 1.

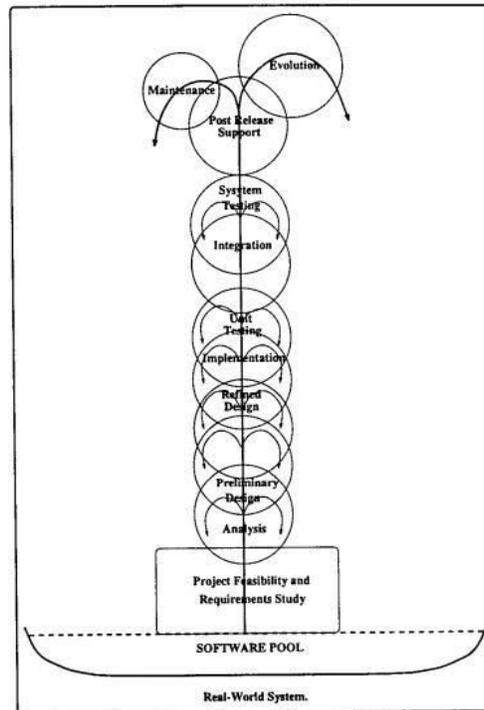


Figure 1. Architecture Model

Steps to build apps Fountain Model in the following:

1. User-Friendly Interface:

Administrators and users may easily traverse the system thanks to its user-friendly interface. It provides simple options for adding data and effortlessly maintaining the database.

2. User Requirements Analysis:

Examine a few user demands for the smartphone application, such as the Quran application, which allows the user to read the text whenever and wherever they want without carrying the Quran with them.

3. Requirements Specifications:

Examine the particulars of some of the requirements for the Quran application that needs to be developed, such as offering audio so that the user can hear the Quran read aloud correctly and repeatedly. By using this technique, the user can rapidly commit the Quran's verses to memory. In addition, this software features a menu to assist users in reciting the Quran throughout the month and audio translations of each verse. Users can also search the Quran by verse or surah based on specific requirements.

4. Software Requirements:

Create a Quran application with the Flutter framework. To construct or develop applications that can operate on the Android and iOS operating systems, Google developed the Flutter SDK and open-source framework (EnggarKrisnada & Tanone, 2020). In order for potential customers to install the Quran application on their devices, Android 5.0 Lollipop is the minimum version required.



5.System/Design(Logical Design):

According to Sampurna et al. (2019), a design system is a natural first step in creating a well-designed and user-friendly system. At this point, researchers created the use case diagram that explains how to view the interface of the system. The behaviour of the system information that will be made is the use case (Rifaldi et al., 2017). Utilizing activity diagrams to illustrate the workflow and sequence of steps in a process, the researchers created an intuitive user interface for the app (Sofyan et al., 2016).

6.Program Design(Physical Design):

Researchers use the mockup to obtain an overview of the program before creating it for Android. The application's user interface is then created by the researchers.

7.Implementation/Coding:

Using the framework flutter with the programming language using the language dart. Dart is object-oriented languages with syntax C-style that can be changed optionally into JavaScript, c++, swift etc (Syaputra & Ganda, 2019).

8.Program Testing(Units):

The working unit testing program for co-workers, co-design conforming equipment.

9.Program Testing(System):

Utilize the test to check whether the program has been operating as intended using black-box testing. Every accessible feature of the program is covered by the scenarios in this test approach (Wihidayat & Wihidayat, 2017). This test's objective is to get rid of any errors that may arise from using the application. Assisting the user with the app is a nice idea.

10.Program Use:

Test the app with potential customers by showing them how to install it on their cellphones and giving them instructions on how to use it. In order to examine the responses from potential users of the developed application, the researchers employed questionnaire. Efficiency, effectiveness, and satisfaction are three characteristics of usability that can be measured with the use of the questionnaire. Priyono and Yunandar (2018).

11.Software Maintenance:

Software maintenance is essential for an application to ensure that errors can be fixed quickly and that it may be utilized to improve the performance of programs that don't load when it is started.

III.RESULTS AND DISCUSION

1.User Requirements Analysis And Specifications:

The purpose of the Quran app is to deepen our loyalty to Allah SWT by enabling us to read it at any time and anywhere. This software makes it easy for users to memorize the entire Quran in thirty days by allowing them to read according to the surah and the number of days in a month. Moreover, visitors have the option to search by surah, verse, and verse meaning.

2.Software Requirements:

Specifications for manufacture of Quran Application:

language	Flutter,dart,c++,javascript
software	Vscode,android studio
database	Mysql,package,library
OS	Window10,64bit,>Android 5.0

3.System/design(Logical Design):

The logic design of the system will be made researchers design using UML in the form of use case diagram (figure 2), and class diagram (figure 3).

a. Usecase Diagram:

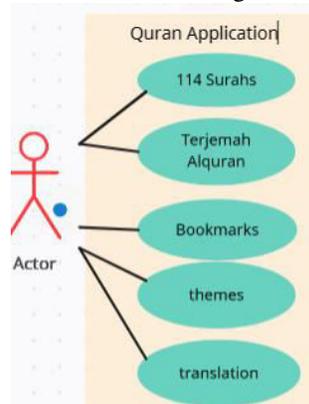


Figure 2. UseCase Diagram of Quran Application

b. Class Diagram:

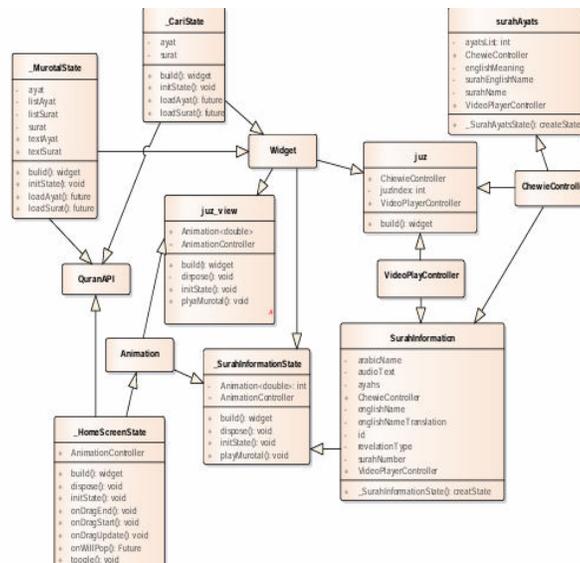


Figure 3. Class Diagram of Quran Application

TECHNOLOGY USED

Flutter:

Flutter is an open source framework by Google for building beautiful, natively compiled, multi-platform applications from a single codebase.

Dart:

Dart is an open-source general-purpose programming language developed by Google. It supports application development in both client and server-side. But it is widely used for the development of android apps, iOS apps, IoT(Internet of Things), and web applications using the Flutter Framework.



Web Technology:

Integrating web-based interfaces for database management and user interactions.

Authors and Affiliations

The template is designed for, but not limited to, four authors.

- 1) Ijarul Haque Ansari , Computer Science and Engineering,Jain University _186
- 2) Aamir Rehman, Computer Science and Engineering, Jain University_004
- 3) Sartaj Mansuri, Computer Science and Engineering, Jain University_193

IV.RESULT

Using Flutter and Dart to create a working Quran application gives users quick access to translations, recitations, Quranic text, and customisable features for a more engaging experience. The Quran's verses, chapters, and translations can be easily explored by users because of the design's straightforward layout and fluid navigation. In addition to offering audio recitations for aural engagement, the tool facilitates effective searches for particular topics. Furthermore, users can customize the settings to suit their tastes, changing the night mode, font sizes, and preferred translations, for example. A lot of work goes into creating an application like this, but the end product is a priceless tool that allows users to strengthen their relationship with the Quran via a well-designed, intuitive UI on their smartphones.

V.CONCLUSION

Quran app demonstrates its ability to enhance the user's spiritual experience by offering personal Quran lessons every day. Through user participation and testing, we determined the effectiveness of our Quran algorithm in creating a deep connection with the Quran. Positive feedback and integration further emphasize the importance of improving spiritual content for the individual's needs and circumstances. Compatibility testing also helps ensure user friendly experience by ensuring apps work well across multiple devices. Looking ahead, future work will include advanced machine learning to improve the user's input algorithm. Apps can continue to change and improve their recommendations over time using user input and preferences, creating a more personal and useful experience for users. Additionally, collaborative activities such as exploring community forums and discussion forum scan create a sense of community among users and create space for the spiritual side to grow. Continuous efforts to improve application performance on new technologies and platforms. Our commitment to customer design, continuous testing and technological advancement will continue as we strive to deepen the impact of the Quran App. Keep following us for our development. We imagine a future where Quran apps will become indispensable tools for people seeking daily education and spiritual health in their faith.

VI.SUGGESTION

Future plans for Quran application include adding user accounts for smooth cross-device syncing, social sharing capabilities, sophisticated search tools, accessibility enhancements, increased audio functionality, working with educational institutions, supporting more languages, improving offline functionality, and releasing updates on a regular basis to ensure ongoing development. With these improvements, the app's usability, inclusivity, and functionality will all be improved, enhancing its value as a tool for Quranic research and spiritual development.

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