Mobile Application of Pet Adoption System

Akanksha Magdum, Aniket Magdum, Gayatri Chavan, Shreya Jadhav

Department of Information technology
College name- Dr. J. J. Magdum College of Engineering , Jaysingpur
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Abstract - During the pandemic, adoption of stray animals from the animal shelters has increased. Even though many people still opt for buying pets from the pet shops, through this applicationwe encourage them to adopt instead of shop. In India Mostly is done by buying dogs/cats and many other animals from pet shops or buying from the people whose pets have had babies.Today most adoption processes are time consuming and exhausting. The main purpose of the project is to develop a platform to make those processes easier and give a new life to the strays. We chose this application to be a mobile app because since the pandemic, everyone has come to know the importance of smartphones and its usage has increased many more times than before. Thus it makes it easy for the user and animal rescue shelter to commute with each other fast and efficiently. The project is developed using flutter technology. It involves flutter for front-end work and firebase for back-end work. The purpose of this app is to facilitate the adoption of stray animals. The application provides a user-friendly interface to help automate the process of serving pets' welfare. To develop the app, we are using flutter for the application and firebase as the database because Flutter is Google's free, open-source software development kit (SDK)for cross-platform mobile application development. It develops high-performance, scalable applications with attractive and functional user interfaces.

I. INTRODUCTION

During the pandemic, adoption of stray animals from the animal shelters has increased. Even though many people still opt for buying pets from the pet shops, through this application we encourage them to adopt instead of shop. In India Mostly is done by buying dogs/cats and many other animals from pet shops or buying from the people whose pets have had babies. Today most adoption processes are time consuming and exhausting. The main goal of the project is develop a platform to make those processes easier and give a new life to the strays. We chose this application to be a mobile app because since the pandemic, everyone has come to know the importance of smartphones and its usage has increased many more times than before. Thus it makes it easy for the user and animal rescue shelter to commute with each other fast and efficiently. The project is developed using flutter technology. It involves flutter for front-end work and firebase for back-end work. The purpose of this app is to facilitate the adoption of stray animals. The application provides a user-friendly interface to help automate the process of serving pets' welfare. To develop the app, we are using flutter for the application and firebase as the database because Flutter is Google's free, open-source software development kit (SDK)for cross-platform mobile application development. It develops high-performance, scalable applications with attractive and functional user interfaces.The main goal of the project is developing a platform to make those processes easier and give a new life to the strays. We chose this application to be a mobile app because since the pandemic, everyone has come to know the importance of smartphones and its usage has increased many more times than before. Thus it makes it

easy for the user and animal rescue shelter to commute with each other fast and efficiently. The purpose of this app is to facilitate the adoption of stray animals. The application provides a user-friendly interface to help automate the process of serving pets' welfare. People don't have a common digital platform for pet adoption. Either they're going to animal shelters or they depend upon social media which isn't reliable enough. Most of the apps available on play store are available for the USA region. Purpose of this app is to encourage "adopt don't shop" and to provide a healthy welfare system for stray or rescued animals.

II. PROBLEM STATEMENT

People don't have a common digital platform for pet adoption. Either they're going to animal shelters or they depend upon social media which isn't reliable enough. Most of the apps available on play store are available for the USA region and have bugs in application. The purpose of this app is to facilitate the adoption of stray animals. The application provides a user-friendly interface to help automate the process of serving pets' welfare.

III. LITERATURE SURVEY

Santy, Santy & Karuna, Ryan & Budiman, Alvin. (2018). E-dopt: A Mobile Application for Pet Adoption in Indonesia.TELKOMNIKA (Telecommunication Computing Electronics and Control). 16. 2137. 10.12928/telkomnika. v16i5.8074.

Organizations that are willing to take in stray animals do exist, but these organizations commonly have been having issues with lack of space and funding. Because of the

increasingly large numbers of homeless animals, animal shelters are often stretched on resources and are only able to provide basic necessities for the animals. Individuals may then adopt any of the stray animals Most shelters require adopters to complete an application. In addition to basic contact information, applications may include questions in the following areas:

a. Housing situation (renting vs owning)

b. Number and type of other pets that adopters own

c. Adopter experience with pets.

H. Liu and X. Meng, "JSP-Based Pet Adoption System," 2019 International Conferenceon Virtual Reality and Intelligent Systems (ICVRIS), 2019, pp.231234,doi:10.1109/ICVRIS.2019.00064.

The system is substantially separated into four modules: user handling module, pet handling module, pet adoption module and pet statistics module. Through Eclipse, MySQL, etc., utilizing SSM frame, bootstrap frame, and related JSP technology. Among them, the modal 6 box in the bootstrap frame to reduce the number of JSP pages When viewing pets, I chose a plugin written in pure CSS to complete the user-visible layout of the waterfall flow. In the adoption of the pet statistics module, the plug-in provided by Echarts is used to complete the production of the chart, making the data look more vivid and more intuitive. It also provides the ability to upload images to a local server for administrators to download and use. When the user logs in, the user name of the user is determined according to the username that is logged in, and the identity of the user is an General member or administrator checks the permission and moves to the page corresponding to the permission. When logging in, you have the option to remember your password. Two functions can be entered to make the design more user-friendly.

R. Herdika & E. K. Budiardjo,"Variabilit &Commonality Requirement Specification on Agile Software Development: Scrum, XP, Lean, & Kanban," 2020 3ʳᵈ International Conference on Computer and Informatics Engineering (IC2IE), 2020,pp.323-329,doi: 10.1109/IC2IE50715.2020.9274564.

This research succeeds in discovering the commonality and variability practices between the agile method. We found eight similar practices and eight variability practices among the agile method. In section IV each method uses the same requirement specification, user story. Each method writes the user story with requirement mapping to establish the user requirement, splitting the user story into a specific one, prioritizing and estimating the effort as it is easier for the team to negotiate the iteration goal. Another agile practice related to getting the right user story is to do continuous feedback by verification and validation with testing and stakeholder's review. Last, each method does continuous planning according to the feedback. Each method also used artifacts to keep the feature list and manage the requirement. All methods utilize Kanban board to get a better picture in managing the user stories.

Payne, Rap. (2019). Using Firebase with Flutter. Doi:10.1007/978-1-4842-5181-2_12

The number of people using these open-source software is steadily expanding. In the areas of development environment preparation, online application development, editor diversity, 7 the ability to use the platform, diversity for ready-to-use components, and accessible resources. Flutter's three-stage test system is clearly more useful in terms of the program size taking up less space, being faster at the first launching of the app, and enhancing the developers' usage patterns. These platforms can be used to construct mobile applications for Android and IOS. Using the "Hot Reload" capability while developing applications on both sides saves time and adds functionality for the developer. The utilities are compatible with all current operating systems. On this platform, the dimensions of the applications built using native technologies are larger. The Dart programming language used in Flutter is fairly simple to learn (for someone who understands at least one object-oriented programming language such as C #, C ++, or Java). Flutter is an open-source UI software development kit created by Google in 2017.

IV. PROPOSED SYSTEM

The system contains 1 major modules with their sub-modules as follows:

1.User: The user can be an organization or a person who is interested in adopting Stray animal.

2.Log In/Register: Users can register and create an account by entering email ID or mobile number then OTP is sent to verify. After verification, users will be asked for permission for their location so that we can display the nearest animal shelter. The content will be displayed based on the user's location.

3.Homepage: The feed is displayed based on the user's location. Users can see available animals for the adoption from the animal shelter organization based on their location.

4.Search and filter: In this sub-module, users can search and filter organizations as well as pet types. Filter option has location option where user can enter specific location. User can also use filter option animal type such as cat, dog etc. Then user can apply these filters and get their desired output.

5.Schedule appointment: Users can fill an application form upon finding their potential pet and can schedule an appointment. Also, users can click on option "chat" to reach out to the organization if they have any queries.

6.User profile: In this sub-module, users can edit their profile. In this, user can update their name, password and can update his/her contact information. After saving their profile, it gets updated in the database and user can explore the application or features.

V. SYSTEM ARCHITECTURE

The system is designed using system activity diagram.

System Activity diagram:

Given is system activity diagram; it shows the flow of the application. First registered user log into system by entering correct credentials. After log in, user can see homepage feed where user can find animal, also user can find animal by using search and filter option. User has option of updating profile where he/she can update their name, password etc. The homepage The feed is displayed based on the user's location. Users can see available animals for the adoption from the animal shelter organization based on their location.Users can fill an application form upon finding their potential pet and can schedule an appointment. Also, users can click on option "chat" to reach out to the organization if they have any queries.
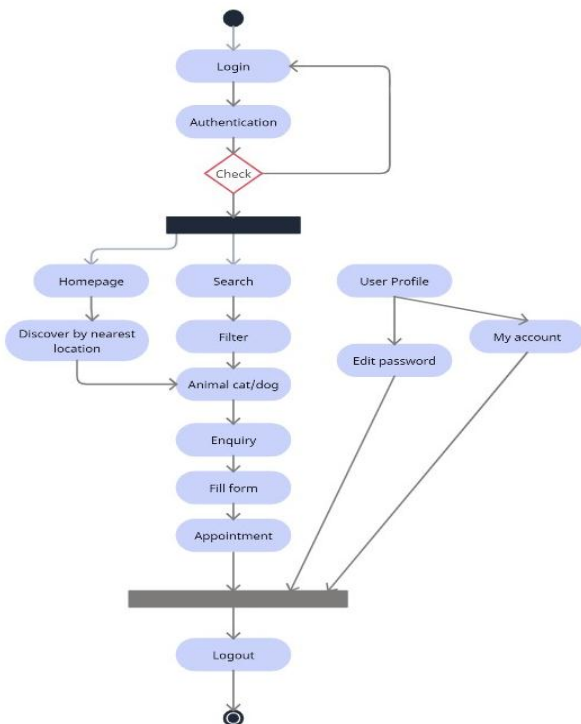
Fig.1 System architeture

VI. RESULTS

The proposed system contains log in, sign up, forgot password page. If the user is new then user need to register first(*fig.3*) then the user can log into system(*fig.2*) using email and the password. If user has forgot login credentials user can reset the password. The homepage shows animals available for adoption(*fig.5*).   The description page(*fig.6*) contains information about animal's name, age and location. In description box is brief information is available. The user page(*fig.7*) has options to edit email and password.
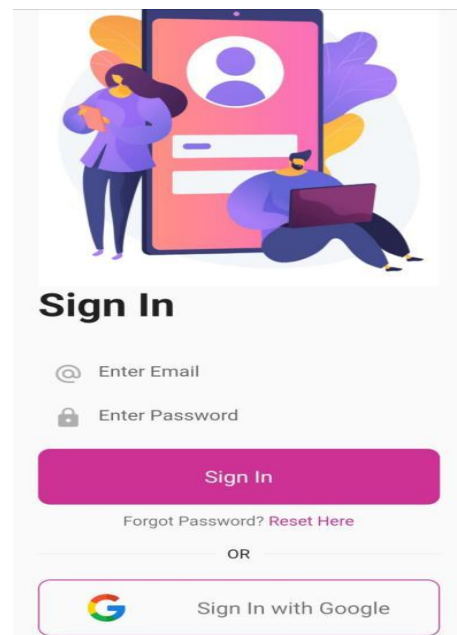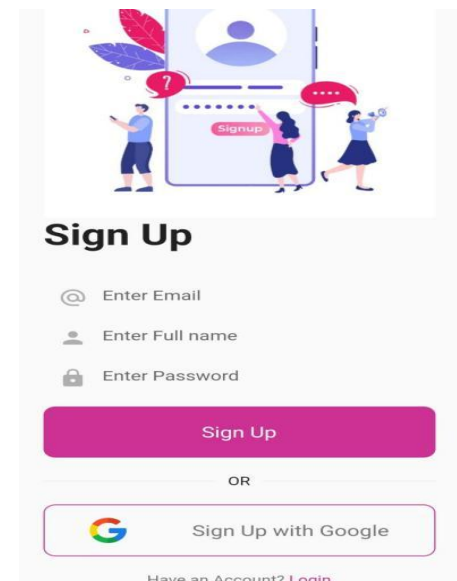

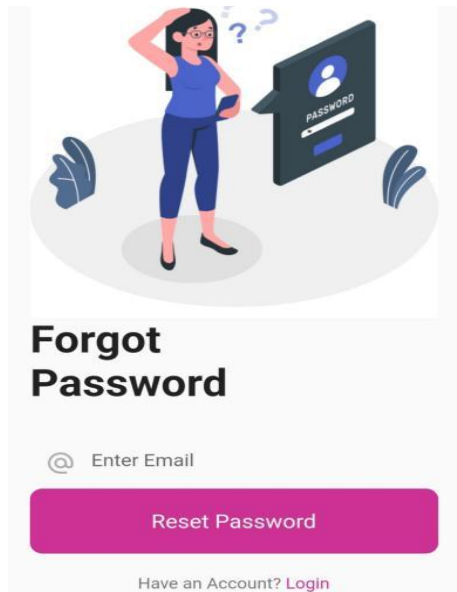Fig.2 SignIn Page

Fig.3 Register page
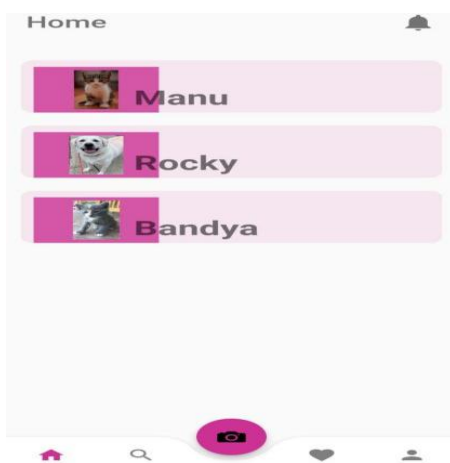
Fig.4 Forgot password page
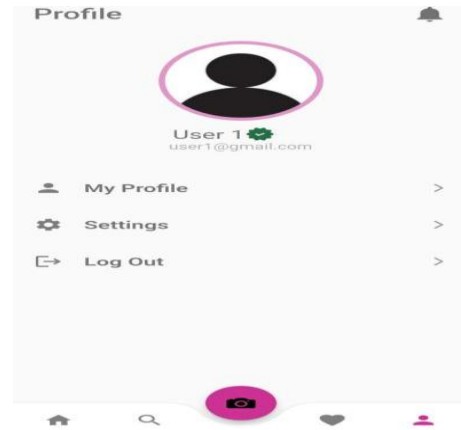

Fig.5 Homepage

Fig.6 Description page

Fig.7 User page

VII. CONCLUSION

The purpose of this project is to connect a society with the technology to build the rich and healthy animal welfare system. For the adoption or buying the pets mostly websites are seen everywhere but the mobile application is more suitable as well as comfortable for the users as well as the organizations. Through this application Adoption process will be easier than the other websites. In this application user can log in, then discover potential pet. After that user can enquire by filling scheduling appointment form. Also User has option of updating profile where he/she can update their name, password etc.

VIII. REFERENCES

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