



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Digital Business Card Project

Akuthota Shivakumar

Computer Science and Engineering S.V.S Group of Institutions Warangal, India.

Thoutam Saicharan

Computer Science and Engineering
S.V.S Group of Institutions Warangal, India.

Lyadalla Harry Suraj Bhanu
Computer Science and Engineering
CVSR College of Engineering
Ghatkeser, India.

Kulla Vivek

Computer Science and Engineering
Lovely Professional University
Phagwara, India.

Madugonda Nidhi

Electronics & Communication Engineering
Nitte Meenakshi Institute of Technology
Yelahanka, India.

Abstract

In this project you will have your Business card/Personal recognition Card where you can give it to strangers when required so that you don't need to always maintain a physical card in your Wallets/Purse so that He/Her can give the Business Card of theirs whenever or wherever required. This helps in saving trees and nature such that we do not waste paper by submitting each card when we meet with our fellow mates. This Business Card defines His/her position of work at their organization and it has various Contact's where he or she can easily approach His/her like Phone number,Email,Position at particular organization, Name etc... So, this saves us time and it does not need any physical space in His/her Wallet. So, these were the main benefits of building a Business Card application. Hope, everyone will

feel glad about this project.

Keywords: User, Card, Business, Design, Developer

Paper Type: Research Work.

Introduction

In the world of software development there lots of developments in the area of Application development and principles. The philosophies and implementation details are changing as the people guiding the buildout of the application. In this tremendous and yet sometimes compound world of software development there are some tried and true architecture patterns and software development guidelines employed by most architects. Also, your design must have an ability to turn towards innovation instead of lending itself to common practices.

Application development are one such sector where designer must depend on their gifted creative side and hope that their solutions are still triumphant. In this report, we will explain an exciting journey down the road of Android application development. From needs to use cases, to Flutter to user interfaces, we will cover each and every detail of system design required to build an Android application by using Flutter. The reason why we choose Digital Business card Application is everybody who is a professional has an idea of Business cards.

The objective of this project is to build a Digital Business card where fellow employees and other business man don't need to maintain the physical business card always and we can save trees by this manner. A Digital Business Card Application is a platform where he/her would have their business card stored virtually where don't always need to hold one physical card. The Owner of this business card can only access their business card as it has a login page at the beginning where he/she needs to enter the username & password where after a successful login there can view their business card this is the safest way possible as this business card can't be changed it is only possible when he/she owner of business card want to change it through our teams' members so there is very limited issue as the text, image on this application can't be changed.

Methodology

The system be composed of 2 major modules with their sub-modules as follows:

1. User:

- a. **Registration:** User need to register first with their basic registration details and need to create a valid login id and password.
- b. **Login:** Using valid login credentials, user need to login into the system in order to access the system.
- c. **Forgot Password:** If, the user forgets his/her password then he can reset his/her password
- d. **View Business card:** Once user is logged into the, he/she can see their business card
- e. **Orders:** All the purchase history of user will be displayed with details.
- f. **View Buyer:** If any buyer is interested in buying a book or anyone buys a book from the user then buyer's details will be displayed.

2. Admin:

- a. **Login:** Using valid login credentials, admin need to login into the application in order to access the Business card.
- b. **View Business card:** Admin can view the Business card of his/her.

View User: All the registered details of the user will be displayed to the user.

Go back:

When there use with the business card phase is completed then there can just go back by pressing the back option or if there are in the use with business card then there can share it by taking a screenshot from different sharing applications.

Proposed System

- There is some where a charm in physical business so that the customer Rembers it better than a digital business card
- There don't have various designs to choose with once printed can't be changed.
- The web application is developed using Flutter with Dart language and Android Studio.
- Proposed system is accessed by two entities namely, Admin and Employee.
- Admin need to login with their valid login credentials first in order to access the application.

- After successful login, admin can access all the modules and perform/manage each task accurately.
- User need to register with their basic registration details along with their valid login id and password details.
- Once a user is registered, he/she need to login using valid credentials and access the application.
- User can view the business card after login.
- In order to change name or logo or details user needs to consult an android developer.
- System allows user to only view the business card.
- User can change unlimited times the details on the business card without any waste of money.

Project Design

- **Activity Design**

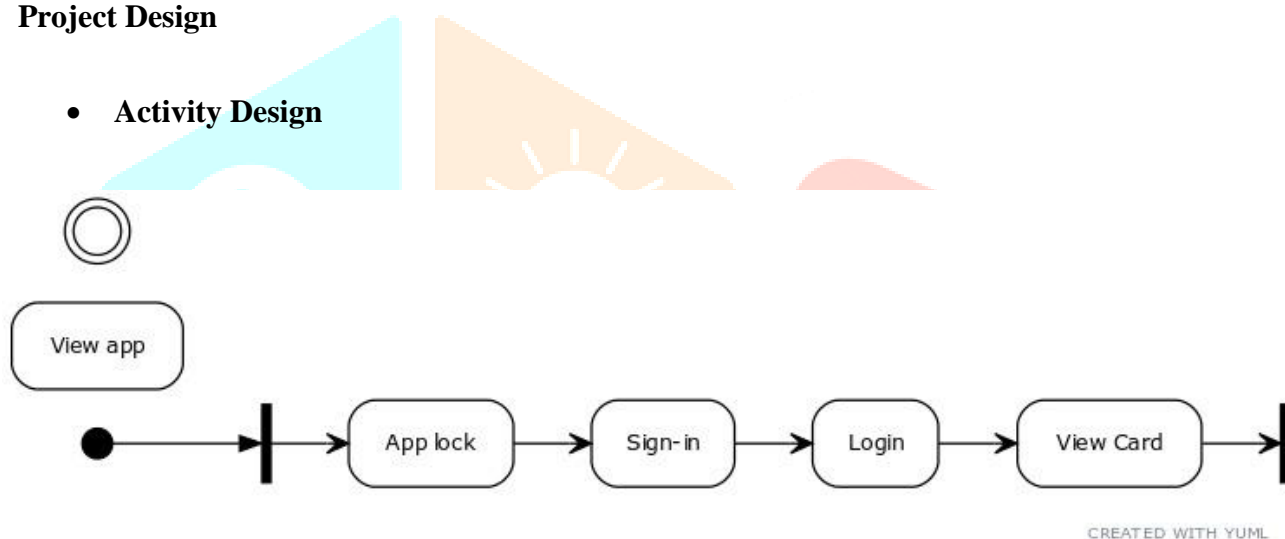
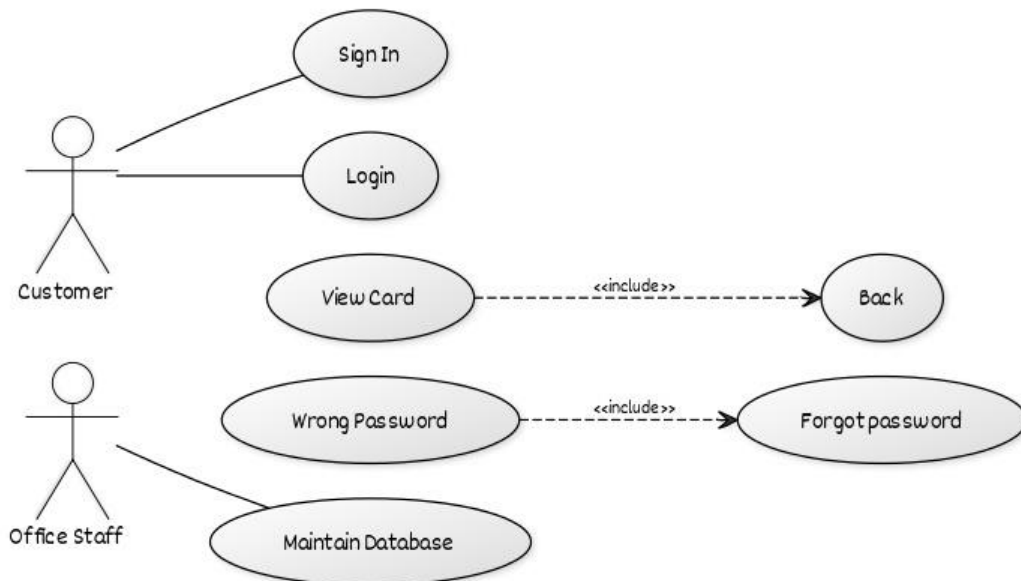


Fig.1.Activity Design



CREATED WITH YUML

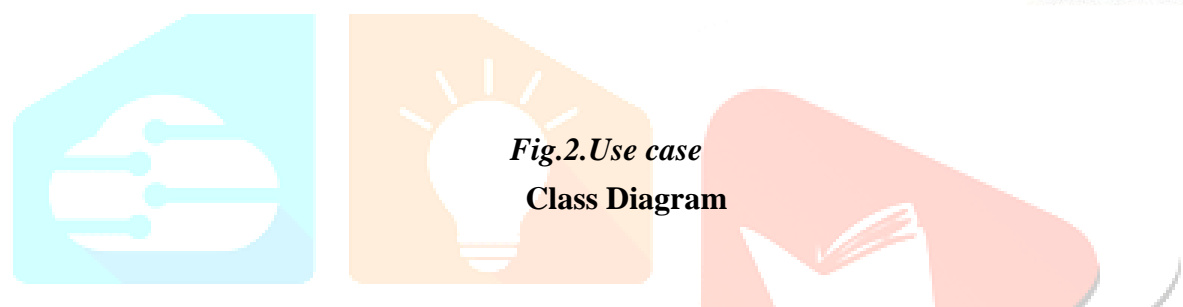
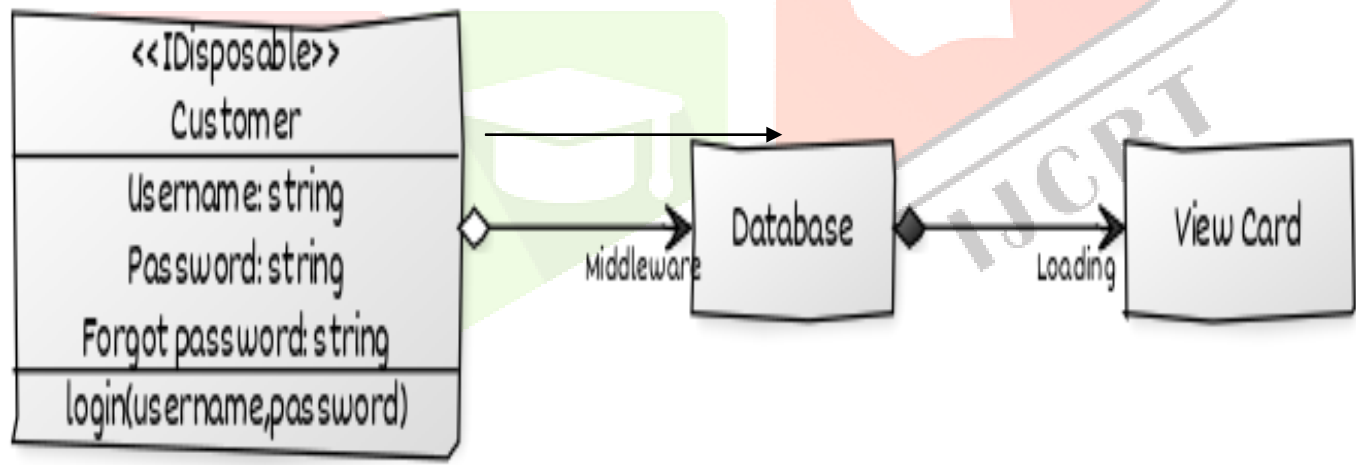


Fig.2. Use case Class Diagram



CREATED WITH YUML

Fig.3. Class Diagram

Implementation

• Technology Used

The Project is loaded in Android Studio. We used Android Studio for Design and coding of project. We even used the help of GIT code.

- **Hardware Requirement:**
 - i5 Processor Based Computer or higher
 - Memory: 8 GB RAM
 - Hard Drive: 50 GB
 - Monitor
 - Internet Connection
 - Graphic card of at least 2gb or higher

- **Software Requirement:**
 - Windows 8 or higher
 - Android studio.
 - Flutter plugin.
 - GIT GUI.
 - Mobile/Virtual Emulator.

Front End Technology

UI/UX of Application:

First, step finished by means of UX developer is to transform the layout to the code such that it suits the design that is just like the designer. while the designs are created and the property are geared up then it's miles a whole lot less difficult and more bendy to the developer. understanding performs an important function among designer and Developer in software development.

In, trendy phrases the extra the ratio information among the clothier & developer would provide high rate of fulfillment. This below article will specify the UX improvement.

Understanding key technical constraints for UX development

“Must designers discover ways to code?” That question has been asked many, many times within the layout discipline. in relation to the front-cease development, it’s always amazing when designers understand the abilities of the improvement language that developers are using. understanding what’s under the hood facilitates them make extra informed layout choices and offers designers a capability to assess some decisions in line with feasibility—whether it’s even feasible to broaden something, and what sort of it will take to broaden it. however, at the same time as advantages abound, this doesn’t imply that designers want to learn to write production-gearred up code.

Minimize design implementation efforts

To reduce the implementations efforts, you’ll need to design with development aspects in thoughts.

Understand data types and data structures

Even though facts sorts and records systems are a part of the returned-give up good judgment, they have a direct impact at the front-quit. when designers have these statistics, they can create better facts-dealing with regulations. as an instance, it's feasible to design a higher mistakes-validation strategy while you understand what statistics kinds are supported for each enter area in a shape (e.g., most textual content lengths or particular formatting). UX designers and the front-give up developers ought to work collectively to identify all such areas.

Use reusable components

Buttons, input fields, and links are components that designers use to create pages or displays. Designers strive to create consistent design due to the fact consistency allows limit efforts required to lay out a solution. but there's every other benefit: Consistency additionally minimizes the effort required from developers to construct the solution. one of the great ways to achieve consistency in layout is the use of reusable additives. as an instance, when your paintings on a website, in preference to the use of unique visual styles for buttons on exclusive pages, you could use the equal styling that is provided as a factor to developers.

Evaluate services and libraries available on the market

In relation to product layout, it's constantly tempting to create your very own specific answer from scratch. but in case you forestall for a second and behavior research, you may possibly note that the hassle you're dealing with for your layout has already been solved by using different teams who faced the equal problem earlier than you. for many projects, it's viable to integrate current services or libraries to be had on the market into your design, as opposed to spending the time creating your personal. It's up to the clothier to conduct an initial assessment of product necessities and try to find the provider or library that satisfies the wishes of the assignment.

Design for different screen sizes and devices

in case your product might be used on multiple kind of device, you want to ensure that the design appears and works properly on any display. discover the resolutions of target viewports and optimize your design in keeping with the one's viewports earlier than the engineering team starts off evolved front-end development. It's possible to attain this intention with the aid of creating prototypes and checking out them on real devices. if you're operating on an internet-based totally answer, it's recommended to create responsive prototypes the use of HTML and CSS.

Consider the security aspects of your design

A number of layout decisions have to be evaluated from the attitude of protection. It's mainly essential to embed safety rules in the technique of authorization, get entry to manipulate, and data transfer operations. Designers should work with UX writers and developers to provide clear instructions for blunders-dealing with and decrease the danger of dropping personal records.

Back End Technology:

Simple app state management

Now that you knew about declarative UI programming and the difference between ephemeral and app state, you are ready to learn about simple app state management.

On this page, we are going to be using the provider package. If you are new to Flutter and you don't have a strong reason to choose another approach (Redux, Rx, hooks, etc.), this is probably the approach you should start with the provider package is easy to understand and it doesn't use much code.. It also uses concepts that are applicable in every other approach.

Client/Server:

The server program and client program play a major role in application development. Once you run the programs in both different devices. You need to start the server when there is a first request from the client the server retrieves the information to the application which is requested by the client. This process is done when the client and server are inter connected there are interconnected when a client send a request to the server if the server accepts the request, then there are connected.

Middleware Technology

C & C++:

C++ is an enhancement of C where it is developed with lots of scalability and other suitable conditions. The properties of C++ are encapsulation, abstraction, Data binding, Inheritance, polymorphism where this makes the application more productive.

The main difference between C++ and the previous versions like C, C# there aren't that flexible as C++ an there are lot more features added to this new version. There are lots of things that C++ do in the application so that it doesn't fail as a middleware.

Testing

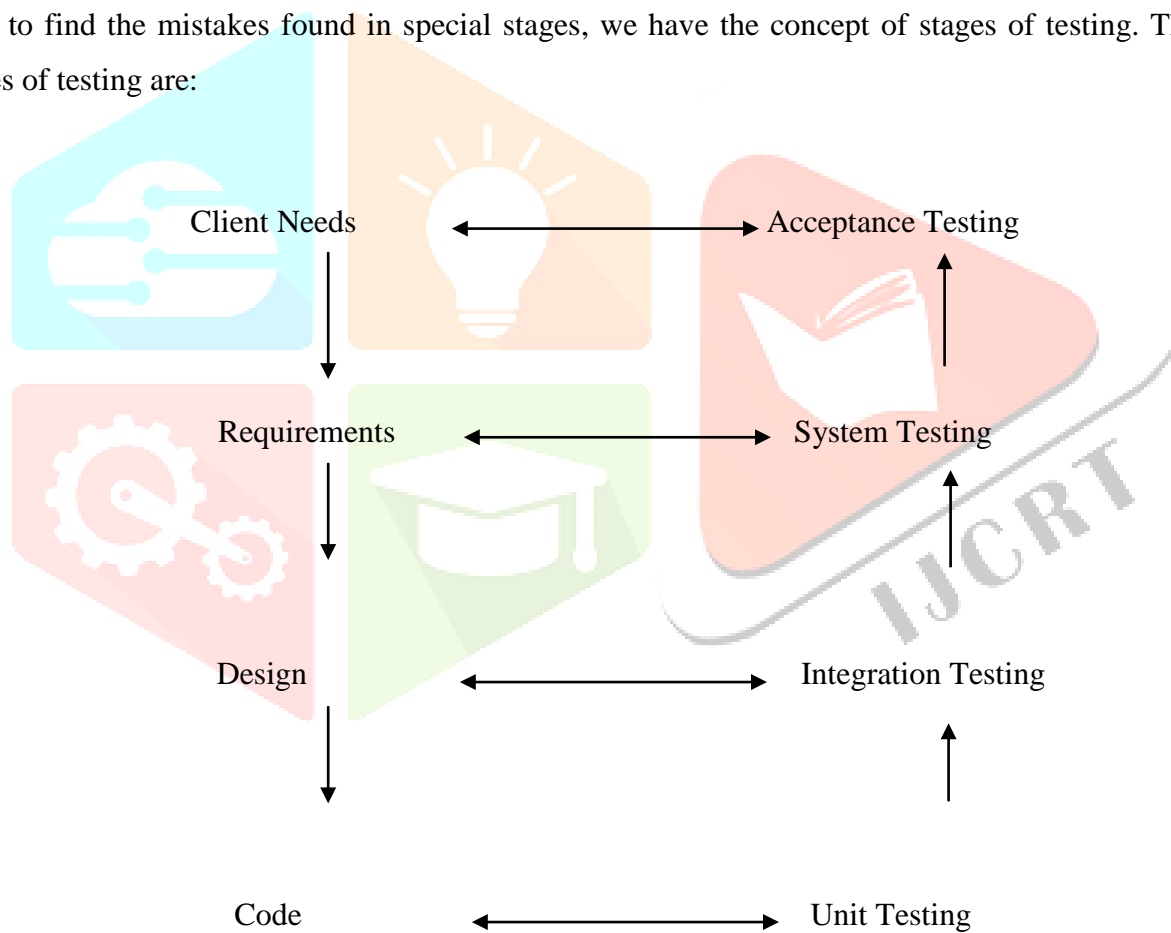
Because the venture is on bit big scale, we continually want checking out to make it a success. If every additive painting nicely in all appreciate and gives preferred output for all sort of inputs then venture is stated to achieve success. So, the conclusion is-to make the project a hit, it wishes to be tested.

The trying out completed here changed into device trying out checking whether the user requirements were happy. The code for the brand-new gadget has been written absolutely the usage of Android Studio with dart as the coding language, UI as the interface for the front-end designing. the new machine has been tested properly with the assist of the users and all the applications were demonstrated from each nook and corner of the user.

Even though a few packages had been observed to be faulty those programs have been corrected before being applied. The waft of the bureaucracy has been found to be very a great deal in accordance with the actual flow of records.

Levels of testing

so as to find the mistakes found in special stages, we have the concept of stages of testing. The basic ranges of testing are:



A series of testing is done for the proposed system before the system is ready for the user acceptance testing.

The steps involved in Testing are:

- **Unit Testing**

Unit testing focuses verification efforts on the smallest unit of the software design, the module. This is additionally called “Module testing”. The modules are tested one at a time. This checking out finished in the course of programming level itself. On this checking out each module is found to be working satisfactorily on the subject of the expected output from the module.

- **Integration Testing**

Data may be grossed throughout an interface; one module may have unfavorable effects on another. Integration checking out is systematic checking out for construction the program structure even as on the equal time conducting checks to find mistakes associated with within the interface. The goal is to take unit examined modules and build a program structure. All of the modules are blended and tested as a whole. Here correction is hard due to the fact the isolation of purpose is complicated with the aid of the sizable expense of the complete program. Hence within the integration testing prevent, all of the mistakes exposed are corrected for the text trying out steps.

- **System testing**

System checking out is the level of implementation that is geared toward ensuring that the system works as it should be and efficiently for live operation commences. Testing is essential to the fulfillment of the machine. System testing makes a logical assumption that if all the parts of the system are correct, then intention could be effectively done.

- **Validation Testing**

At the realization of integration testing software program is completely assembled as a package deal, interfacing errors were uncovered and corrected and a very last series of software program checks begins, validation test begins. Validation check can be defined in many approaches. But the easy definition is that validation succeeds whilst the software feature in a manner which can moderately predicted through the patron. After validation take a look at has been conducted considered one of viable situations exists.

One is the function or overall performance traits verify to specs and are every day and the alternative is deviation from specification is exposed and a deficiency list is created. Proposed gadget below attention has been examined with the aid of the usage of validation testing and observed to be running satisfactorily.

- **Output Testing**

After acting validation testing, the subsequent step is output testing of the proposed gadget since no machine could be useful if it does not produce the desired output in the specified layout. Asking the customers approximately the layout required by way of them tests the outputs generated via the machine underneath attention. Here the output format is considered in methods, one is on the display and other is the printed format.

The output layout on the screen is discovered to be accurate as the layout changed into designed in the device designed phase according to the consumer desires.

For the tough replica additionally, the output comes as the required requirements through the users. for this reason, output trying out does now not end result any corrections in the gadget.

- **User Acceptance Testing**

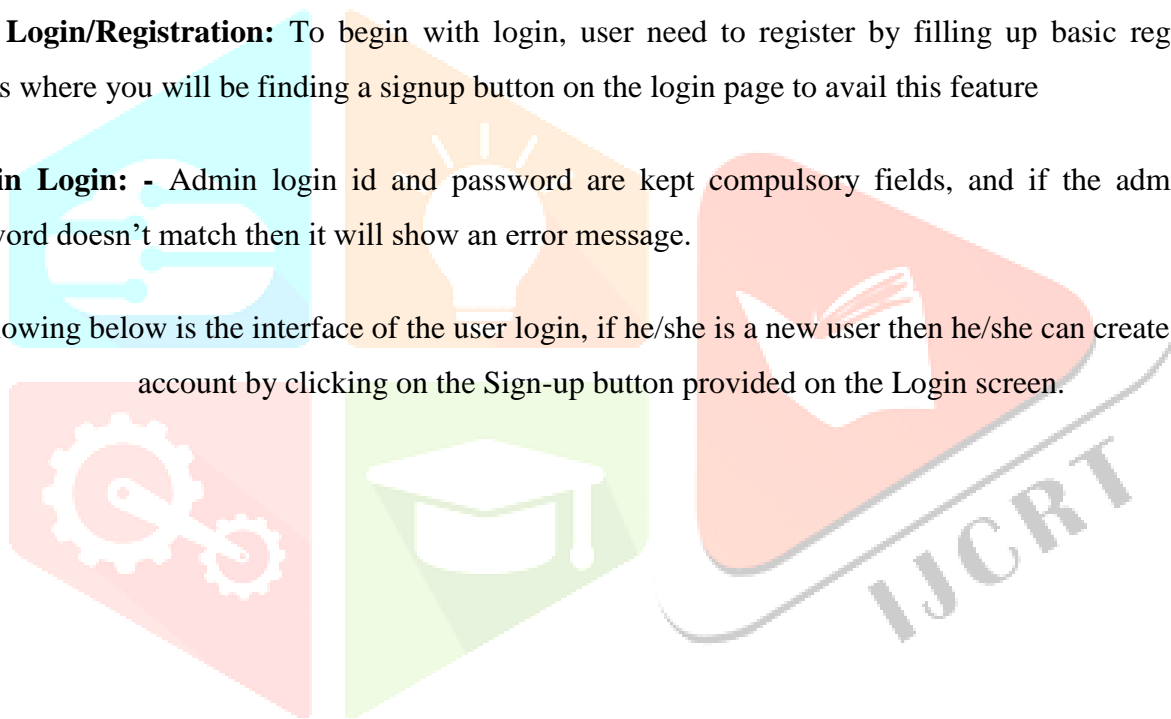
Person attractiveness of a gadget is the important thing element of the achievement of any gadget. The gadget underneath study is examined for the consumer acceptance by using constantly keeping in touch with the potential device users on the time of developing and making modifications wherever required.

Test Cases

User Login/Registration: To begin with login, user need to register by filling up basic registration details where you will be finding a sign-up button on the login page to avail this feature

Admin Login: - Admin login id and password are kept compulsory fields, and if the admin id or password doesn't match then it will show an error message.

Following below is the interface of the user login, if he/she is a new user then he/she can create a new account by clicking on the Sign-up button provided on the Login screen.



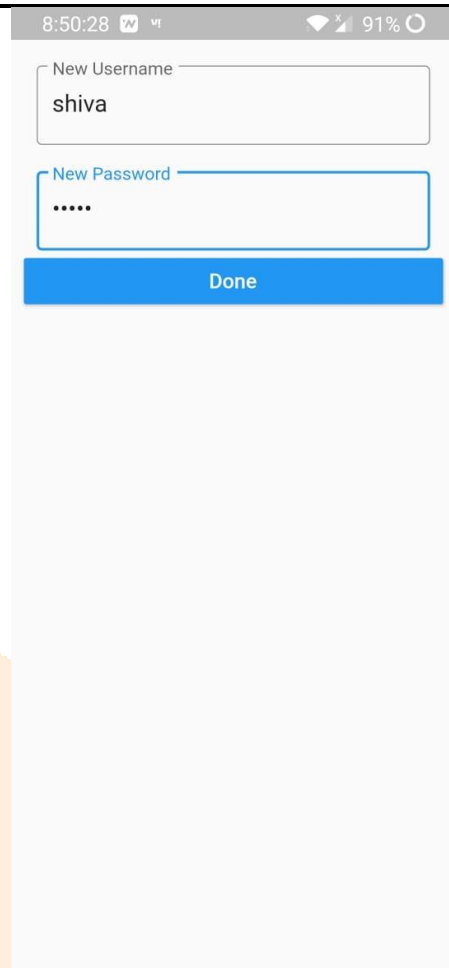


Fig.4. User Sign-up Interface Snapshot

This is the registration interface for the user here the user ID and the password are created automatically and after that the user is required to fill the given details and then create the account.

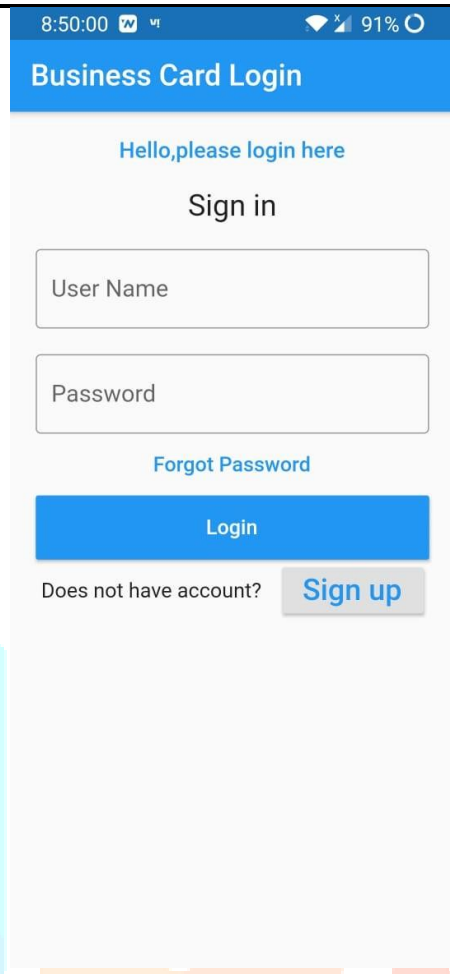


Fig.5. User Login Interface Snapshot

This is the interface of the Administrator Login where a user can login in into his/her business card in a secure manner.

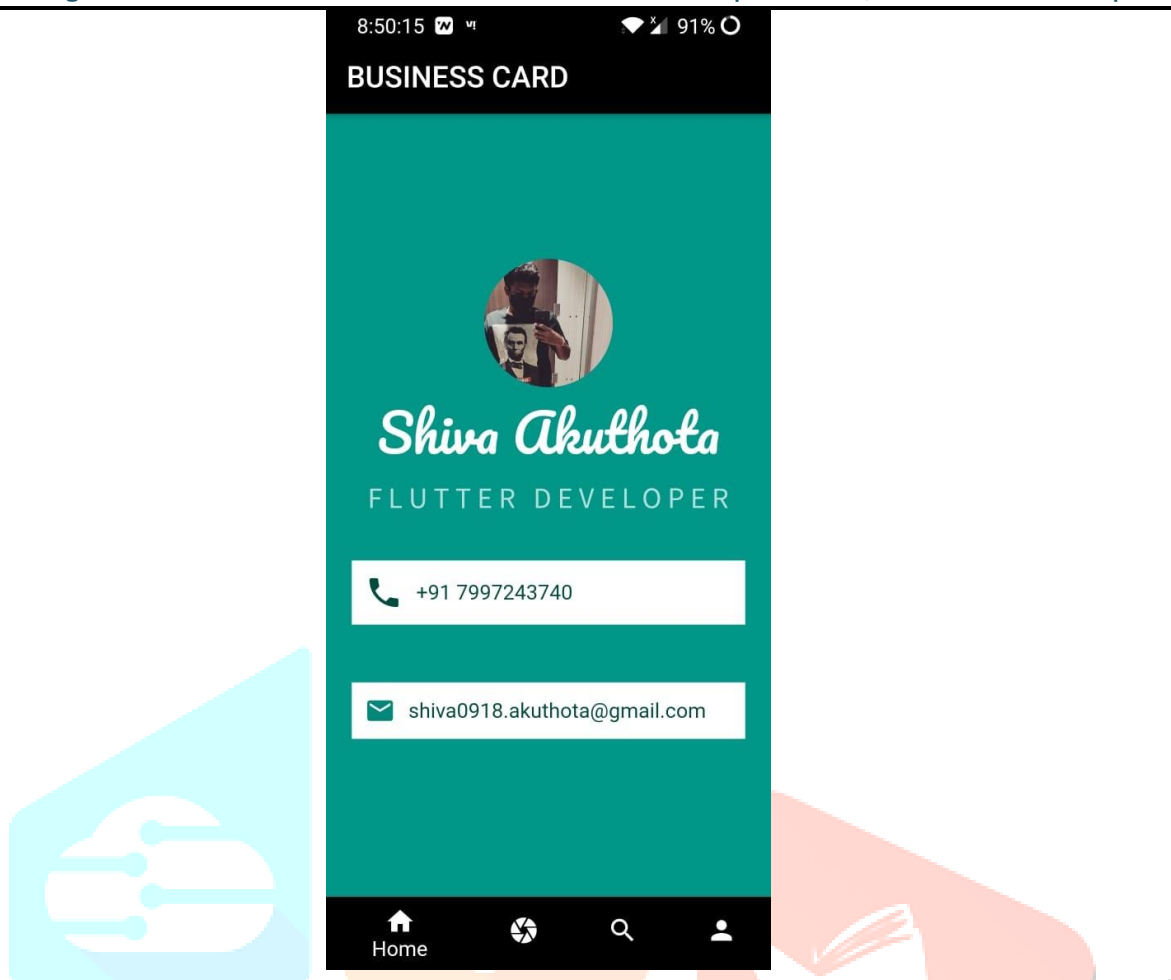


Fig.6. View his/her business card of user Snapshot

Validation Criteria

1. In each form, no field which is not null able should be left blank.
2. All numeric fields must be checked for non-numeric values. In addition, textual content fields like names need to know not contain any numeric characters.
3. All primary keys should be routinely generated to prevent the user from getting into any current key.
4. Use of error handling for each Save, Edit, delete and other important operations.
5. Whenever the user Tabs out or Enter from a text box, the data should be validated and if it is invalid, focus should again be sent to the text box with proper message.

Advantages of Project

- There is no wastage of time or paper when your business card is represented in physical format.
- People can't miss use this application as this is pre-build business card.
- This business card can be added to app lock where it is secure.
- This business card has a login page where it can only be accessed by user.

Conclusions

This is a special designed business for users who need it. This E-Business Card is just a sample step to progress ahead instead of wasting lots of money and time having a physical card. This App Development project helped us to gain lots of knowledge on app development. This is what we wanted to represent you. Hope you all loved it
Thank You each and all for sparing time on us!!!

Each paper and virtual business cards are amazing in terms of sharing your contact info and making an enduring impression. Both the cards have their own advantages and disadvantages for businesses. Their use will depend upon your branding approach. It will be good to use both types of cards to gain from their advantages.

References

- **Websites**
 - [En.wikipedia.org](https://en.wikipedia.org)
 - <https://www.coderzheaven.com/>
 - <https://flutter.dev/>
 - [GitHub.com](https://github.com)
 - <https://www.tutorialspoint.com>