

KANARA DAIVADNYA ASSOCIATION MUMBAI

By

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ABSTRACT

The online application provides all relevant information to the users.
All the relevant information & updates of the will be categorize separately

User can like, comment & share the post of the events.

For all the upcoming events user will get the notification & the countdown
of the event also start.

User can donate or make payment online by using netbanking & the receipt
will be given for the same.

The authority to update & check the application is given to admin.
All the data will be handle by admin & access of the data can be given to the
user subject to terms & conditions. Even admin can block any unauthorized
content uploaded by any user.

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Chapter 1 : Introduction

1.1 BACKGROUND

- Earlier the facebook page were just useful for connecting with people. now our community launching an application which provide every information useful for users and give latest updates about the event which is happening or will happen.

1.2 OBJECTIVE

- The main objective of this application will be the enhancement in user interface so that user find it easy.
- When you are reading a particular article Additionally, you can easily share the news article via social networking sites and even and other messenger apps that you may be using.
- The App supports very simple interface and on the homepage you will find the list of all the current events and news supported by the app.
- In application online payment facility is already given such as donation & collection of money for special purpose.

1.3 PURPOSE

- The Primary Purpose of the application is to ensure the customer have an accurate information about upcoming events occurred
- Reading News and staying up to date with current events has never been easier. It features many section to segregate news for easier reading

1.4 SCOPE

- User can see only the feeds but can't upload anything.
- Admin can access to upload the contents. And Also if he wants grant the permission to the specific users.
- User can share their events via app through whatsapp . facebook
- The contents , when it comes to the news dailies as well as the events information, is up-to-date and also provides Recent and Upcoming Events.

1.5 APPLICABILITY

- Reading news and staying up to date with current events has never been easier. It features many section to segregate news for easier reading.
- The app works brilliantly without any glitches. It's Light on resources and even when using it over EDGE, the page don't take too much time to load.

1.6 ACHIEVEMENTS :

From this topic

- Developing an Application we have learnt how to develop application using scripting languages such as java , xml
- I have also learnt how to add a "Payment Gateway"
- How to make coordination between notification & user.
- How to link whatsapp API with event menu
- Due to all of these technologies I have learnt how to make application more dynamic.
- The technologies we learn Android Studio, SDK, Firebase .

1.7 SUMMARY

- There are lots of options in the app that will help you to read stories on the go using your android device.
- **PERFORMANCE**- The Kanara Daivadnys (**KDA**) application works on most of the android device because it supports android version 5.0 and up. It works perfectly fine with 3G and wi-fi networks.
- **ALERTS AND NOTIFICATIONS** – KDA App can flash news alerts even when you're not using it by running in the background.

Chapter 2 : Survey Of Technologies.

There are multiple mobile app technologies that are widely used for a specific platform or cross-platform app development.

Technologies used in application as follows :

2.1 ANDROID STUDIO :

- Android studio provides code editing, debugging and testing tools all within an easy-to-use drag-and-drop interface .It is free to download and is supported not only by Google but also by a large and actively engaged community of Android developers.
- Android app development tools and technologies refers a set of tools and programming language that are used to get done the different tasks involved in the Android app development tasks include wire-framing, design, development(creating codebase with programming languages) and testing.

2.2 ANDROID SDK (Software Development Kit) :

- Android SDK is the official software development kit that enables developers to develop apps for the Android platform .SDK consist of sample projects with source code ,an emulator, development tools, and required libraries to develop Android apps.

2.3 XML FOR FRONT END DESIGN :

Basically xml is used for layout designing.

1. All the UI and layout of your app is designed using xml.
2. Unlike java(which is back bone of your app) xml helps you to design your app , how it will look , how components like buttons , textview , etc will be placed and their styling.
3. Apart from these xml is also used for parsing data either from database or server into your android app.(xml parsing).

2.4 Back End Design

2.4.1 JAVA

- The object oriented programming language is the official language for android development .This language is easy to handle and many open source libraries are made available for users to choose from.
- Java is very popular because of its association with the android operating system , some of its features include :
 - It can run on all platforms
 - It supports API's
 - It is very easy to read and learn
 - It has an object oriented language
 - It HAS a very powerful IDEs which makes coding error-free and easy.

2.4.2 FIREBASE

- Firebase is one such tool that includes multiple services that helps businesses take care of their development needs. It is useful in building mobile and web applications integrated with a real-time database. There is no explicit need to configure a server .since that is taken care by Firebase itself.
- Since Google took over Firebase , the major internet company added more features that enables more developers to shift this platform.
- Right Now , most of android apps are using Firebase because of following features:
 - Authentication
 - Storage capabilities for user generated contents
 - Cloud Messaging for alerting customers about updates
 - Crash Reporting

2.5 NEW TECHNOLOGIES TO DEVELOP A MOBILE APPLICATION FASTER

2.5.1 KOTLIN

- Enter Kotlin. Based on the Java Virtual Machine , this open-source language is becoming popular among Android application developers since it arrived on the scene in February 15,2016 .The best part about kotlin is that it can easily integrate with Android Studio, the most contemporary development environment made solely create Android apps.

2.5.2 SWIFT

- If you are building something specific for Apple products , swift is the language to seek. It has advance features with minimal coding that can be easily maintained.

2.5.3 Angular Material Design

- Material Design has been around 2014 but we think that it not much attention has been given to how awesome it is. Considering companies are adopting mobile-first strategies , the main predicament application face is badly designed user experiences (UX).Hence ,Google focused on creating this design language that can motivate product developers to create practical yet aesthetically captivating android application.

2.5.4 FLUTTER

- Flutter is the new trending cross-platform mobile application development technology in town .
- It uses DART as a programming language instead of javascript which facilitates rapid and effective analysis fabricates UIs, include highlights and fixes bugs in milliseconds . The open source cross-platform SDK by Google extends a wide range of plugins backed by Google and allows both Android and Apple IOS platform to construct mobile app.

2.5.5 React Native

- This JavaScript open-source framework has become the most preferred mobile app development technology. It Offers ample support to IDEs and other mobile app development tools and enables the development of native apps for IOS and Android Platforms.

Chapter 3: Requirement and Analysis

3.1 Problem Definition

- Earlier the application was not so precise on giving the required information to the users.
- The information on the application was in very raw form. Application was not able to provide end to end information to the users.

3.2 Solution

Latest application is capable of providing all the needed information to the user.

Which consist the following :

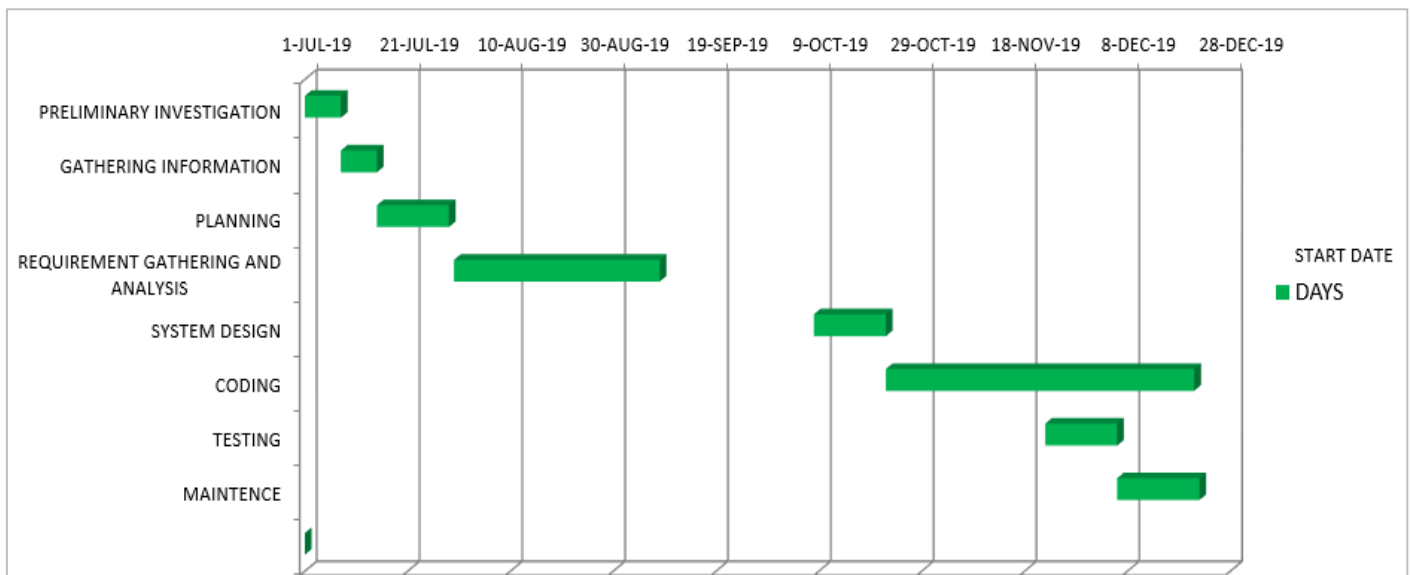
1. One click information of events (Past,Present,Future)
2. Itinerary of events.
3. Easy registration interface for users
4. Online donation facility

3.3 Planning and Scheduling

The process of making this system is divided into several tasks....it include many phase like:

3.3.1 Gantt Chart

TASK	START DATE	DAYS
Preliminary Investigation	1-Jul-19	7
Gathering Information	8-Jul-19	7
Planning	15-Jul-19	14
Requirement Gathering and Analysis	30-Jul-19	40
System Design	8-Oct-19	14
Coding	22-Oct-19	60
Testing	22-Nov-19	14
Maintenance	6-Dec-19	16



- 1. Preliminary investigation:** This phase includes total inspection of the existing system. Finding all the problems of existing system and finding all possible solutions of the problem of existing system.
- 2. Gathering Information :** This stage of discovering and researching . The most important part is to understand the future application purpose. The main goal is to target the user we want to attract.

3. Planning : In this stage we create a data that allow us to judge how the entire application will look. Based on the gathered information we plan can put features will only focus on the customer

4. Design : During the design our main focus will be on the information we gathered during 1st task .We are making the application which will attract more users.

5. Content Writing : At this step we write down all the features design, problem, its solution so that we can understand them one-by-one.

6. Coding : At This stage we build the actual application. Basically the main home page is created first and the other pages will be created simultaneously .Framework and CMS will be added so that the server (Firebase) can handle everything easily.

7. Testing :

1. Why Android testing ?

Android is the largest operating system in the world . At the same time , Android is fragmented. There are tone of devices and android Version that your app must be compatible with varity of devices.

1. Typical Failures in Android Application

2. Application Installation Failure

3. Application crash during execution

4. Scaling/Layout Problems

5. Application hangs if some resources is not available

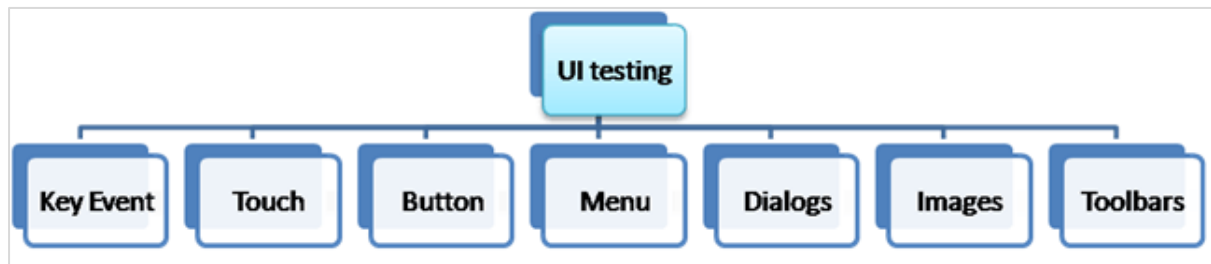
6. Problems in Landscape/portrait mode

7. Android Testing Strategy

8. Unit Test

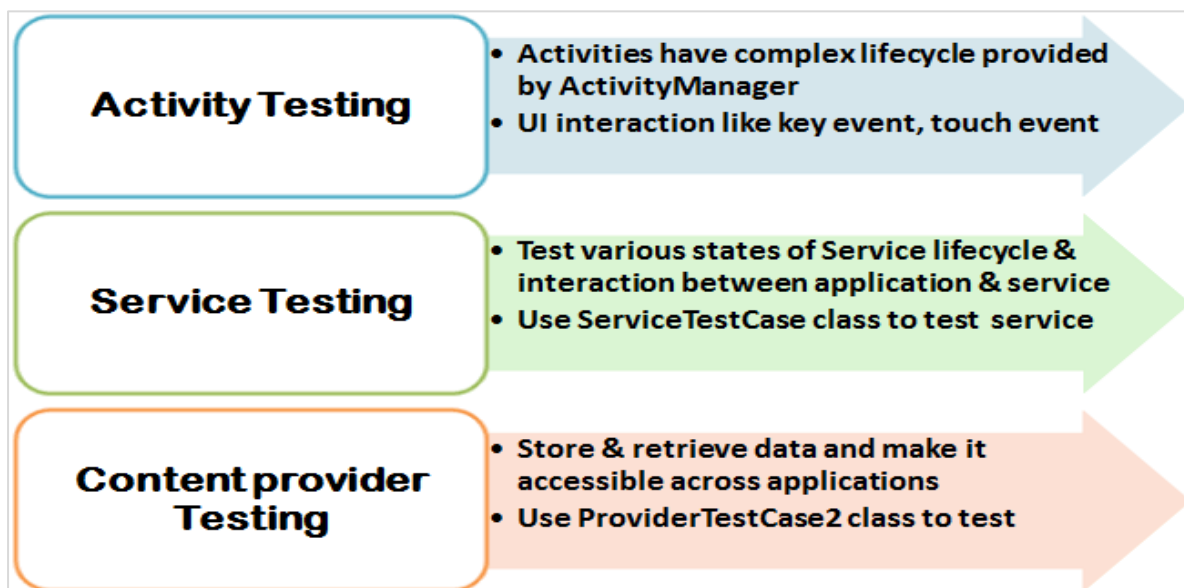
9. Android Platform comes pre-integrated Junit 3.0 framework. Its open source framework for automating Unit Testing .Android Testing Framework is powerful tool for developer to write the effective unit test program. An additional to Unit Testing is User Interface (UI) tests.

10. These tests relate to UI components of your target application return the correct UI output in response to sequence of user action on device.



11. Integration Tests

1. In Integration Testing , all unit tested modules are combined and verified. In Android , integration tests often involved checking integration with Android component such as service testing , activity testing , content provider testing ,etc



12. Operational Tests

1. Operational are also called Functional Tests or Acceptation tests. Tests are high level tests designed to check the completeness and correctness of application.
2. In Android , FitNesse is open-source framework that makes it easy to conduct operational tests for target application.

13. System Tests

1. In System Testing the system is tested as a whole and the interaction between the components and hardware is checked.
2. In Android , System Testing normally includes
3. GUI tests
4. Usability tests
5. Performance tests
6. Stress tests

8. Maintenance : A application is more then a service than a product , delivering a app not enough.

We should also sure that everything works fine and everyone is satisfied and the app should be prepared to make further changes.

3.4 Hardware and Software Requirements

Software Requirements :Android Studio, Android SDK, JDK, JRE.

Front end	: XML
Back end	:Java , FireBase
Operating system	: windows7 or above

Description about software requirements:

- **Android** applications use **XML** to create layout files. Unlike HTML, **XML** is case-sensitive, requires each tag be closed, and preserves whitespace.
- **Android** applications can be developed by using the **Java** programming language and the **Android** SDK.
- The Assistant tool window in **Android Studio**. **Firebase** is a mobile platform that helps you quickly develop high-quality apps, grow your user base. **Firebase** is made up of complementary features that you can mix-and-match to fit your needs, with Google Analytics for **Firebase** at the core.

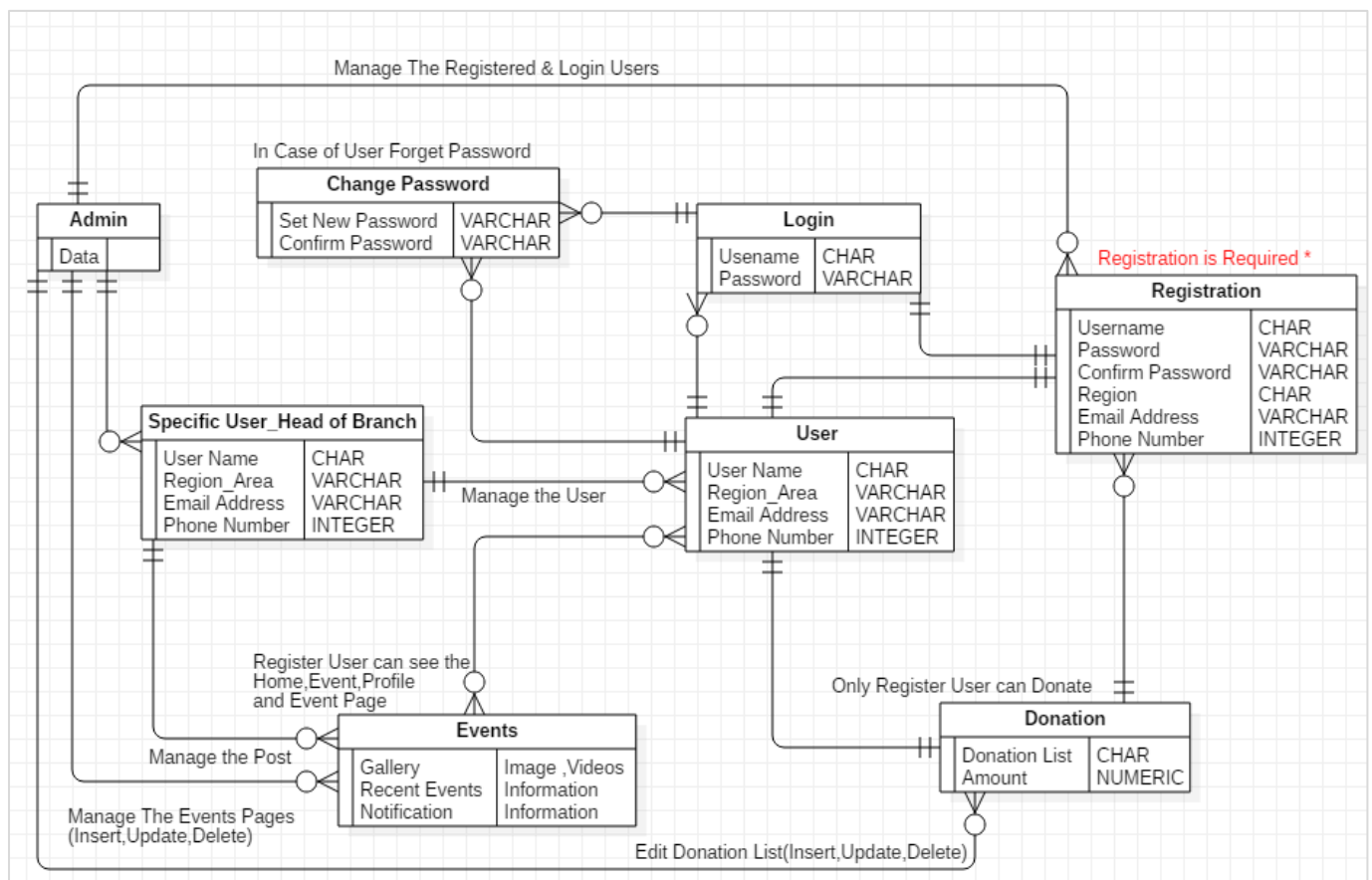
➤ Hardware Requirements :

- 6GB RAM , Minimum intel i3 processor is required*,windows 7/8/10, Android device as per specification (Minimum Android lollipop version is required*)

3.5 Conceptual Model

3.5.1 ER Diagram

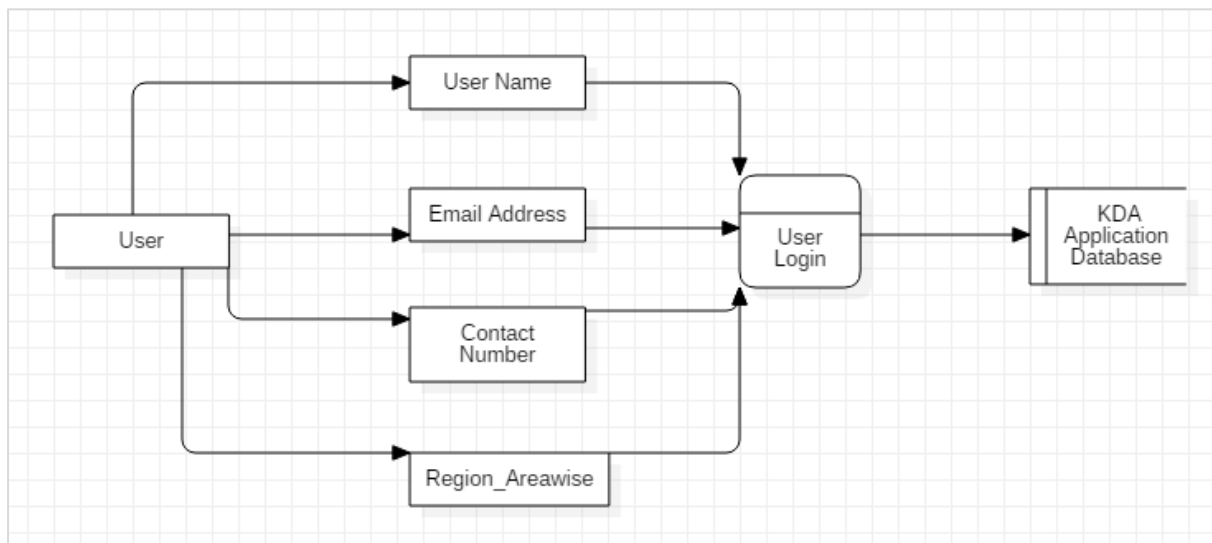
- Entity Relationship Diagram is a graphical representation of entities and their relationship to each other, typically used in computing in regard to the organization of data within database or information system.
- Entity is a definable thing-such a person ,object, concepts, or events – that can have data stored about it. Example – a customer , student, car, or product.
- Typically shown as a rectangle.



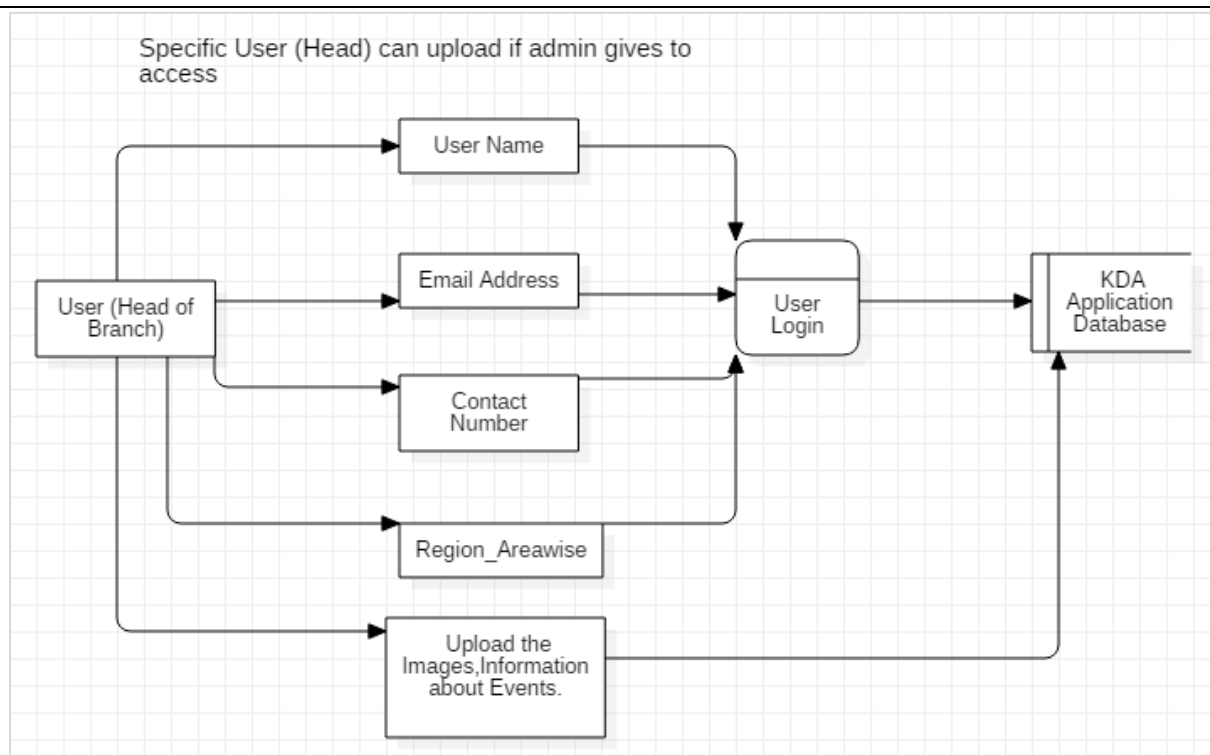
3.5.2 Data Flow Diagram

- It is the graphical representation of the flow of the data through an information system. It shows how information is input to and output the system, the source and destination of that information, and where that information is stored.
- Movement of data is shown by point arrows. Data movement is shown from the base of arrow as its towards head of the arrow destination.

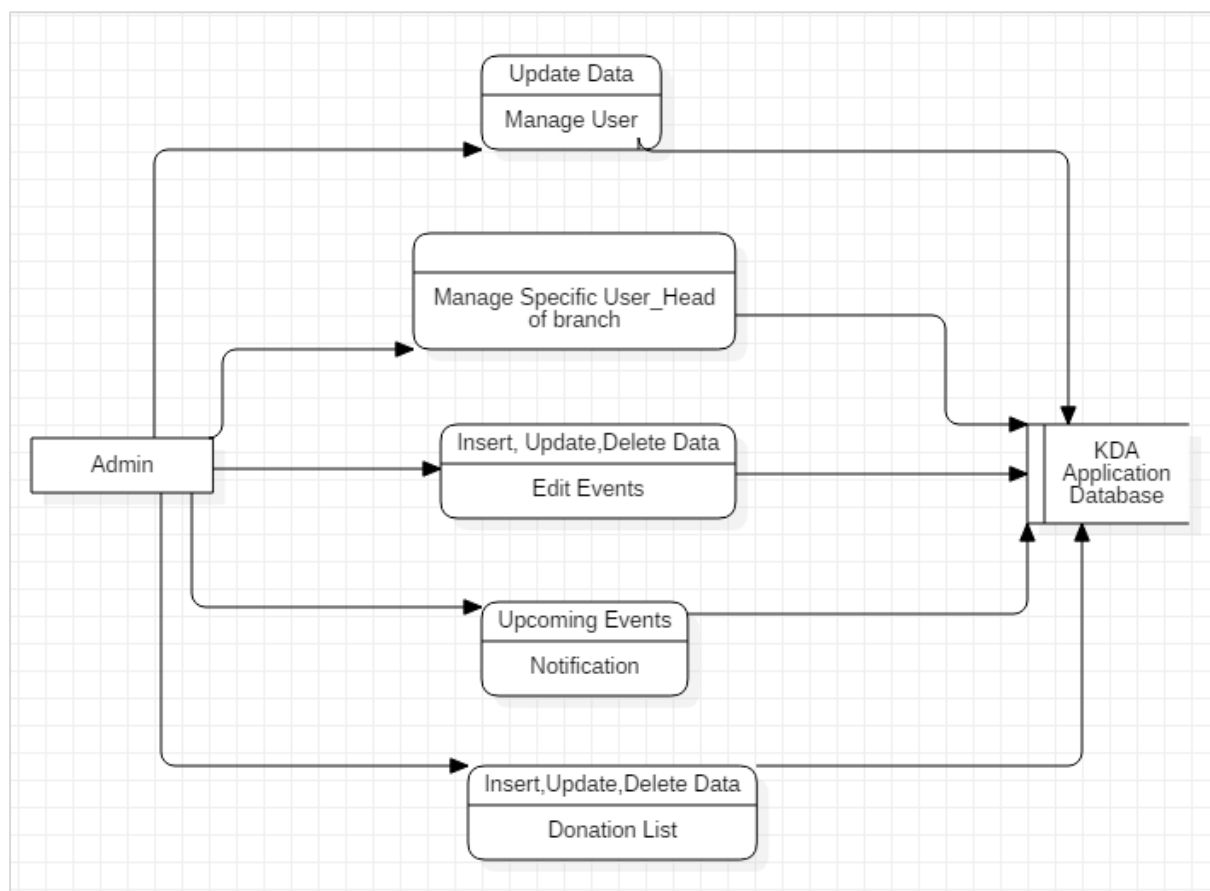
User



Head of Branch (Specific User)



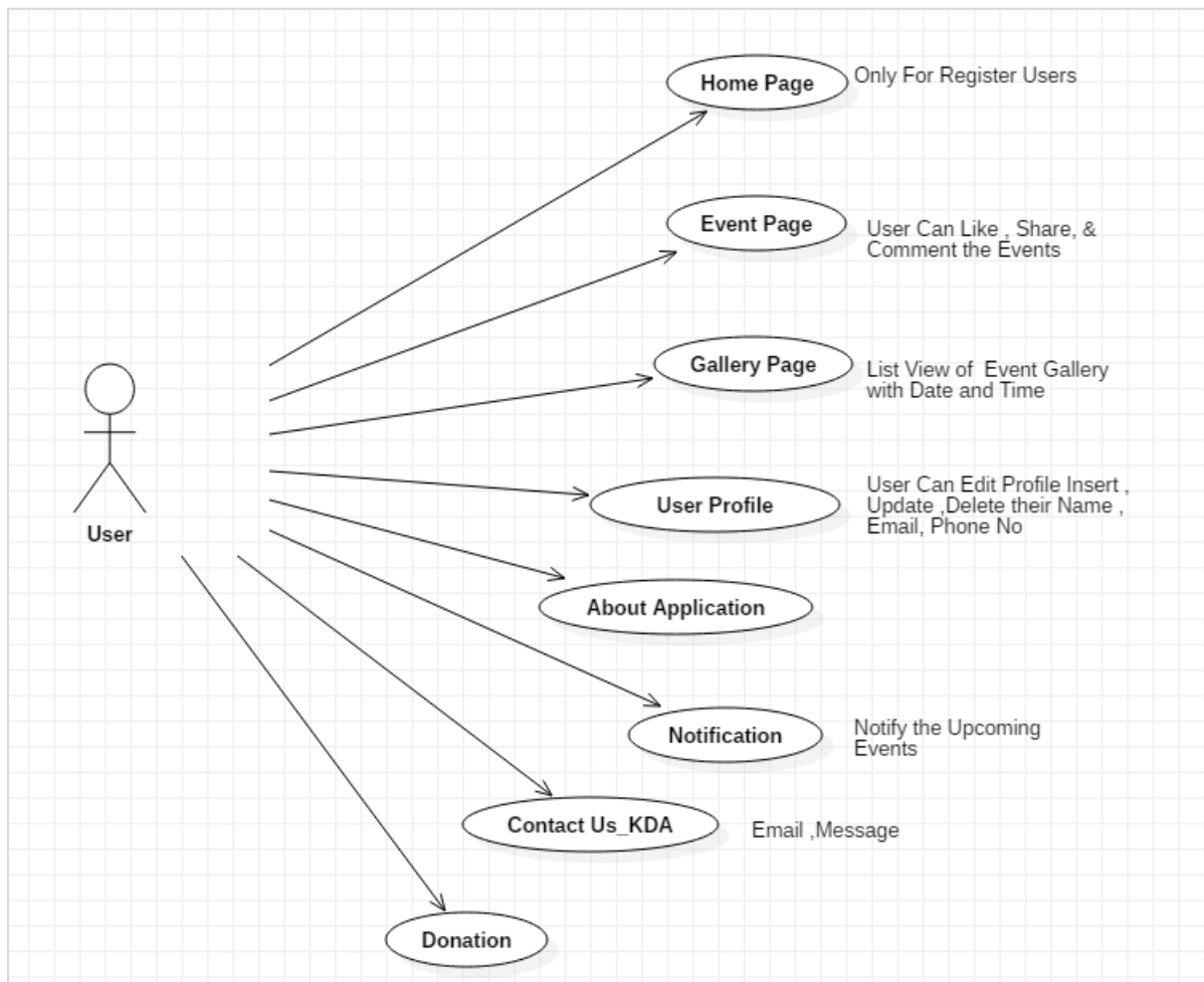
Admin



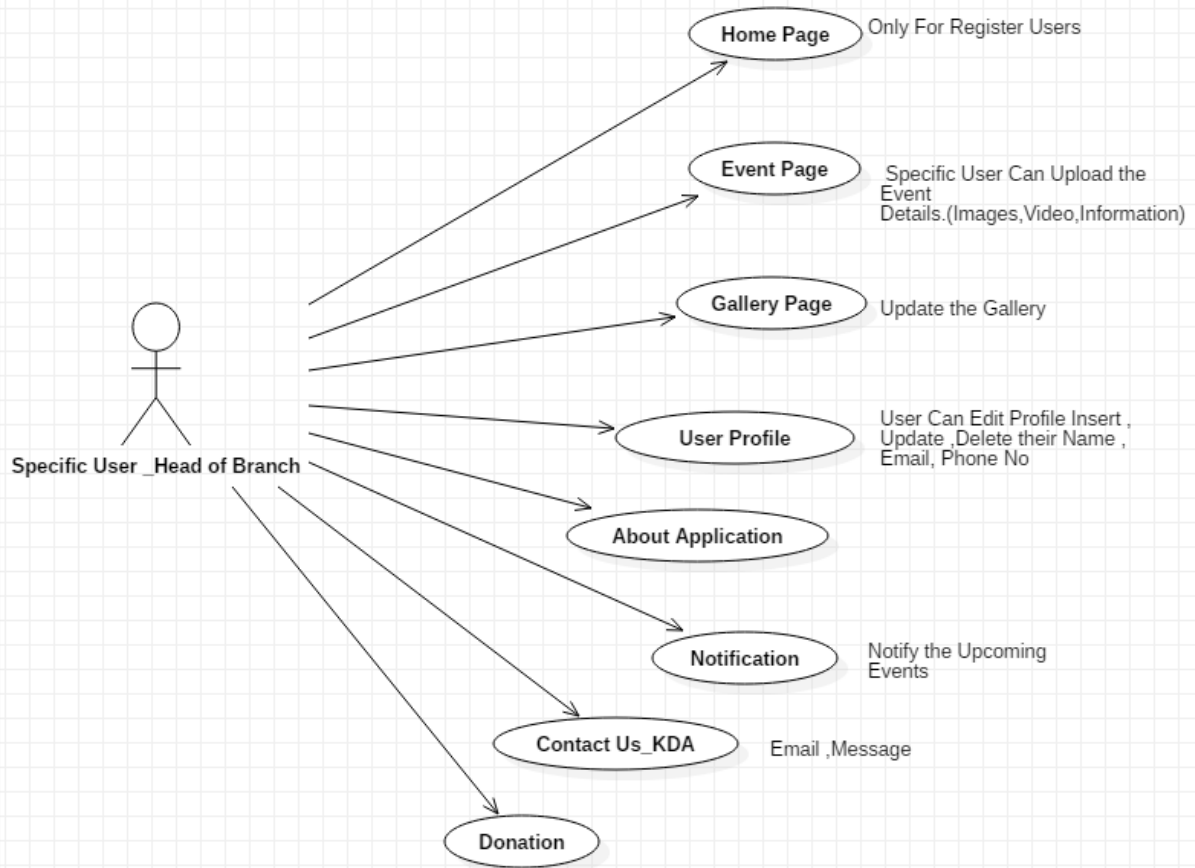
3.5.3 Use Case Diagram

- A Use Case Diagram is a graphical depiction of the interaction among the elements of a system. A use case is a methodology used in system analysis to identify , clarify , and organize system requirements. The actors ,usually individuals involve with the system defined according to their roles. Components – Actors ,Use Case, Association, include relationships.

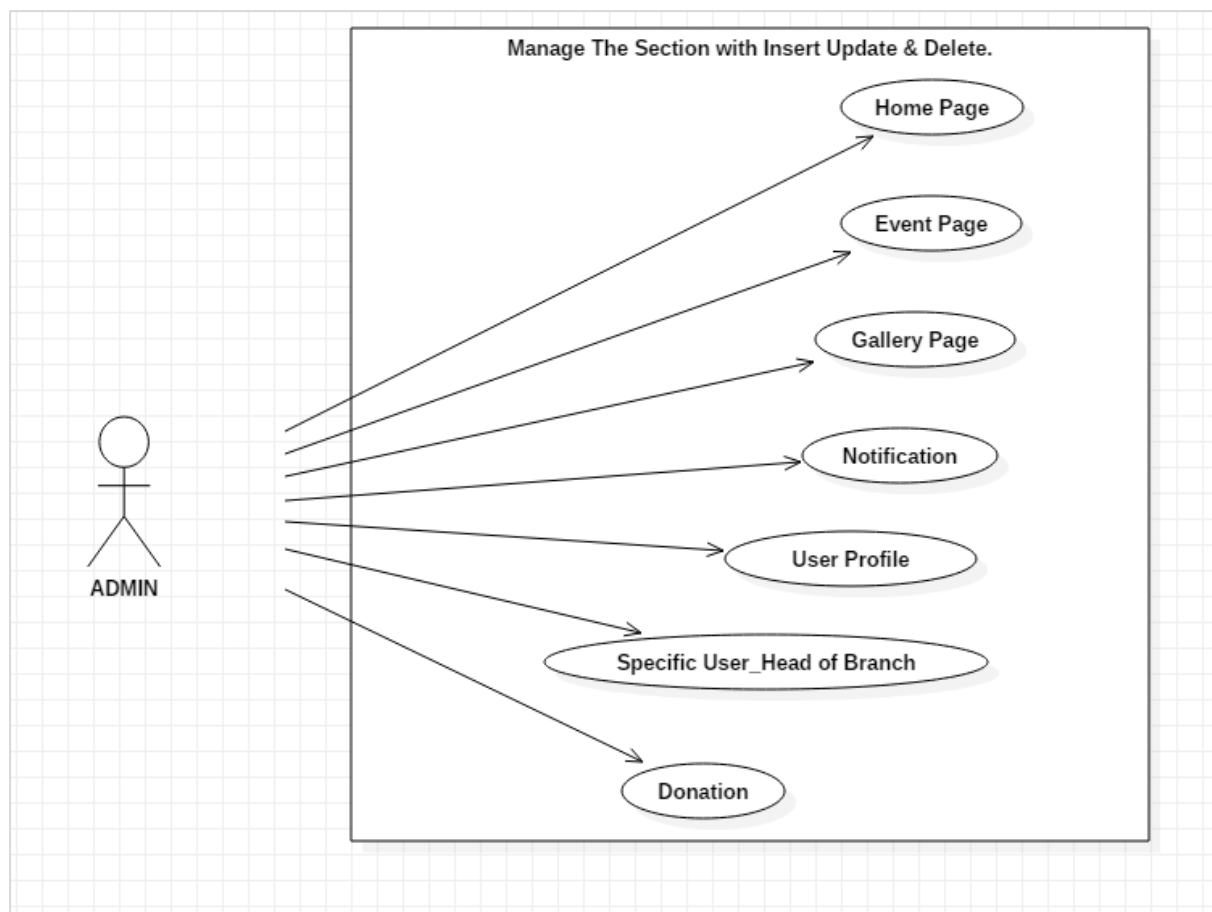
User



Head of Branch (Specific User)



Admin



Chapter 4 : SYSTEM DESIGN

System Design is that the method of process the design, modules, interfaces and information for a system to satisfy given needs System design might be seen because the applications of the system theory to development. The modelling techniques employed in system development are :

Screen Layout :It determines the general structure of a system screen. A screen layout comprised of the following : Main Space , Adjacent Region , Position : Header , Left , Right and Footer

Responsiveness permits the screen layout to regular in line with screen size, providing Association in Nursing optimum user expertise on a desktop , tablet , and phone.

Screen layout includes a good type of application wherever screens or display may be distinguished from the functions of a graphical interface.

4.1 Data Design:

1. Determine the purpose of your database.
2. Find and organize the information required.
3. Divide the information into tables and columns.
4. Specify primary keys.
5. Setting up the table relationships.
6. Refine the design.

4.2 Data Table

User Data :

Column Name	Data Type	Constraints
User ID	Varchar	Primary Key
User Name	Varchar	
User Password	Varchar	
Email-Id	Varchar	
User Address.(Region)	Varchar	
Contact No.	Integer	

Event Data :

Column Name	Data Type	Constraints
Event Name	Varchar	Primary Key
Event Information	Varchar	
Event Gallery	Images , Videos	
Event Comments	Varchar	

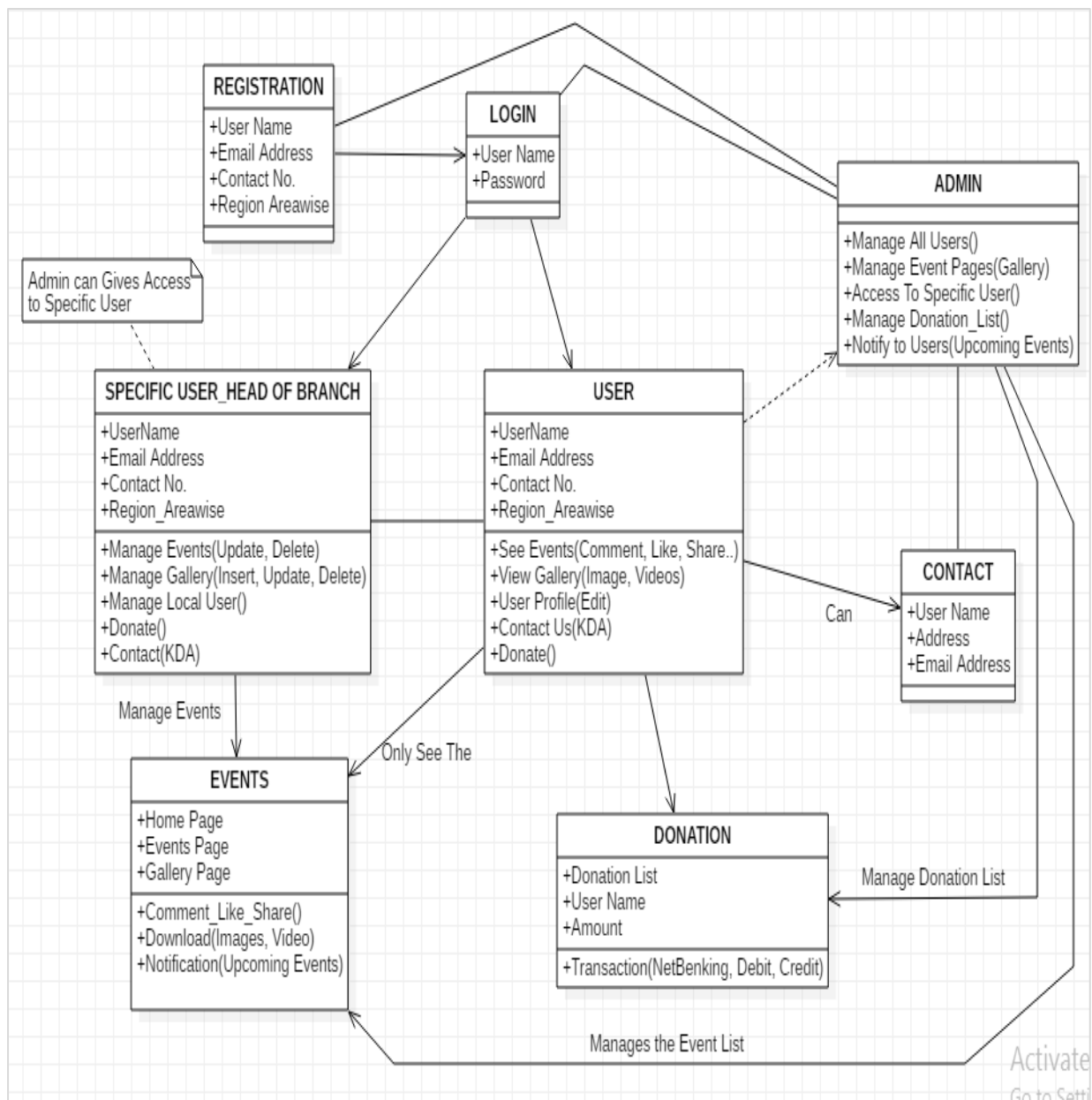
Donation Data :

Column Name	Data Type	Constraints
User ID	Varchar	Foreign Key
Donation List	Varchar	
Donation Amount	Integer	
Source	Net- Banking , Debit Card , Credit Card	

4.3 Class Diagram

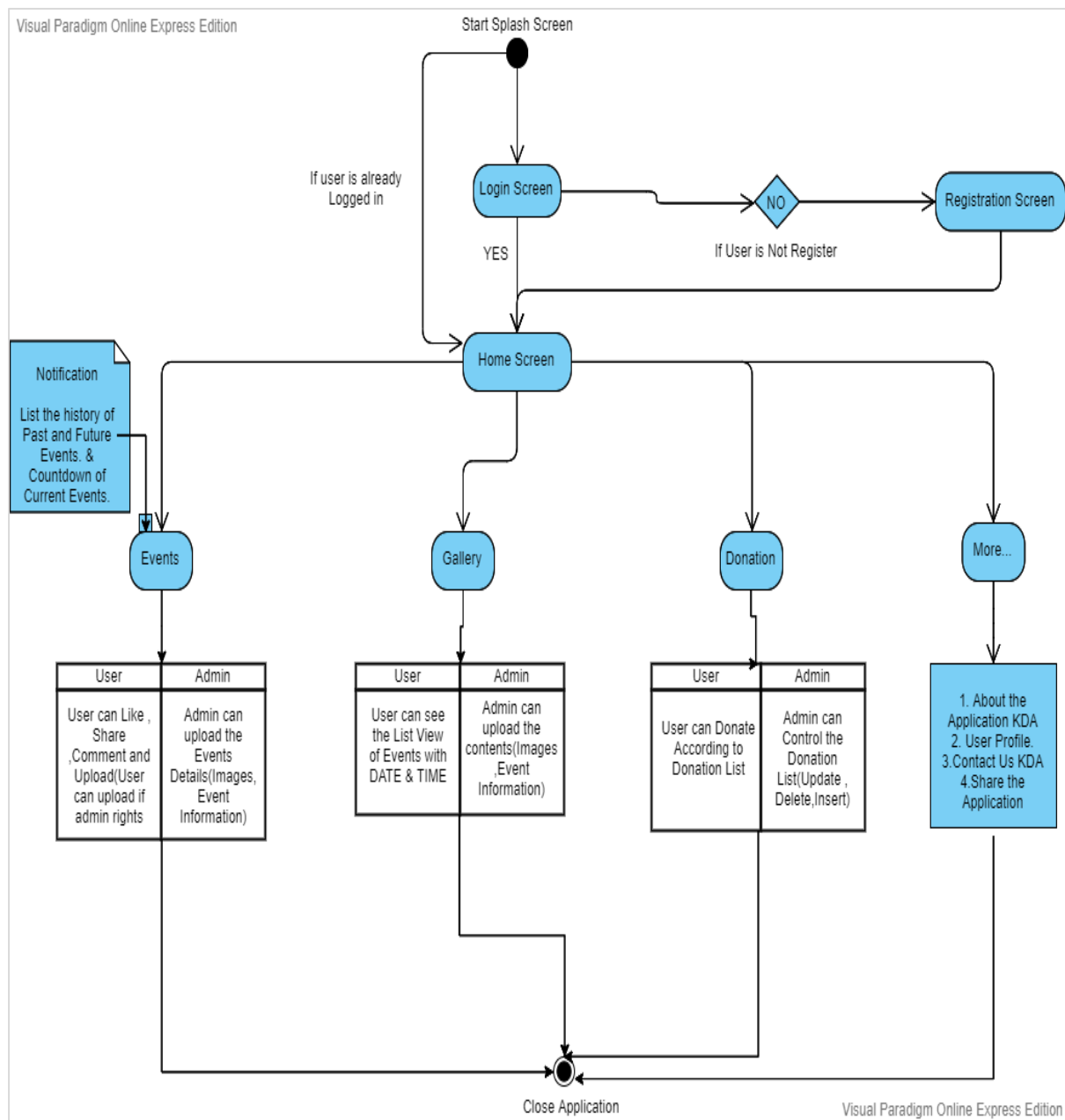
Is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

The class diagram is the main building block of object-oriented modelling. It is used for general conceptual modelling of the structure of the application, and for detailed modelling translating the models into programming code



4.4 Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. An activity represents a business process. The individual elements of an activity diagram can be divided into individual areas or ‘partition’.



4.5 Schema design:

- Schema refers to the organization of knowledge as a blueprint of however the info is made.
- A info schema is that the skeleton structure that represents the logical read of the whole info. It defines however the info is organized and the way the relations among them are associated. It formulates all the constraints that are applied on the info. It defines tables, views, and integrity constraints.
- Data integrity and constraints:
- Data integrity refers to the accuracy and consistency of knowledge hold on during a info.
- It is the general completeness, accuracy and consistency of knowledge. this may be indicated by the absence of alteration between 2 instances or between 2 updates of a knowledge record, which means information is undamaged and unchanged. Information integrity means the info is correct and reliable.
- It is maintaining and reassuring the accuracy and consistency of knowledge over its entire life cycle.

4.6 Procedural design:

- A design methodology combines a scientific set of rules for making a program design with schematization tools required to represent it.

Procedural design is best wont to model programs that have a plain flow of knowledge from input to output.

4.7 Algorithm:

1. On application every user needs to register themselves to follow the news & Information
2. Once the registration is done user can login to the application & surf the homepage
3. If the user forgets the password, it can be set again by completing authentication process. Authentication process includes sending OTP on Phone number.
4. Admin has all the rights to manage & secure payment gateway on application.
5. User get in touch with the application by notification.

4.8 Security Issues

- The security check is must in any application, which prevents hacking from others.
- To keep check on the security the control of the payment gateway is laid down in the hand of admin. It also secures the donation list of users.
- In latest application admin can block any unauthorised content or information uploaded by the users.
- For mobile app developers, the first steps in ensuring that you are writing vulnerability-free code is secure mobile app development education and awareness. These days mobile devices became the treasure chest of sensitive information (like Bank account & credit/debit card details, personal details etc.,) and it's crucial for both users and app developers to be aware of the risks that may be hiding behind the mobile applications that we put an incredible amount of trust, and data, into.
- Here are a few tips for you to consider with mobile app security
- Secure your app's code from the ground up.
- Secure your back end network connections.
- Put identification, authentication, and authorization measures in place.
- Be mindful of how customer data is secured and implement a good mobile encryption policy.
- Have a solid API security strategy in place.
- Test your app software as many times as you can before releasing it.

4.9 Test Case Design

- Test case of a web application is used to manipulate that every function in a system is working or not.
- Test case design defines the life cycle of system in tubular form.
- Test case design is used during the testing of each and every component of a system.
- This case is used to check whether the system is correctly responding to all inputs or not.

Test Case Diagrams

Sr. No	Test Case	Input	Expected Output	Actual Output	Test Result
1	User Register	Give Username, Password & Region.	Verifies username, password Region & redirect to login page	Username, password & region is verified & redirect to user side login page	Successful
2	User Login	Give Username, password .	Verifies Username, Password & redirect to Home page	Username, Password is verified & redirect to user side Home page	Successful
3	Invalid Login	Username , Password is Incorrect	It will not display Home page and it will redirect to same Login page	Username ,Password is Incorrect & Redirect to Same Login Page	Successful
4	Forget Password	Sends OTP to Message or on User Register Mobile Number	Verify the Password and redirect to Login Page	Password is Verified and redirect to Login Page	Successful
5	Admin (Head) Update, Add, Delete Events	Edit the Events Details	Event Details Should be edited and added in the Database	Changes Accepted and added in the Database	Successful
6	Admin Send the Notification to User	Select in order to Upcoming Events	Notification sends to User	User get Notify with Upcoming Event	Successful
7	Admin Manage the Donation List	Edit List Update , Add , Delete	User can see the changes and Donate According	Changes Accepted and User can see the Update List	Successful

			To List		
8	User Like ,Comment and Share Event	User Gives the Like , Comment on Event	User Click on Like and Comment Symbol .	Like Symbol changes colour & Comment shows on top.	Successful
9	Download Event Images	User see Gallery	User Click on Download Button	Images goes to Gallery Automatically.	Successful
10	Contact Us	User Sends Message or Email to Admin (Head)	Admin Get Notify	Message is received to Admin and response back to User	Successful

4.10 Conclusion

- The beauty of the application is simplicity for all.
- App is able to give all information to the user with minimum hassel.
- It is based on less paper work system & promotes net banking.
- Control of the system is given in trustful hands to prevent any malpractices.

4.11 Reference

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