GOVERNMENT POLYTECHNIC, PUNE

(An Autonomous Institute of Government of Maharashtra)

DEPARTMENT OF COMPUTER ENGINEERING

ACADEMIC YEAR 2018-2019

PROJECT REPORT ON

"ONLINE BIRTH – DEATH REGISTRATION"

SUBMITTED BY

1606012	**Vaishnavi Shrikant Bidaye.**
1606019	**Aniket Govind Dahibhate.**
1606025	**Mandar Shankar Desai.**
1606028	**Sanket Tukaram Dhake.**

UNDER THE GUIDENCE

OF

Mrs. A. M. Galshetwar

(COMPUTER ENGINEERING DEPARTMENT)

GOVERNMENT POLYTECHNIC, PUNE

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that

1606012   Vaishnavi Shrikant Bidaye.

1606019   Aniket Govind Dahibhate.

1606025   Mandar Shankar Desai.

1606028   Sanket Tukaram Dhake.

Of class Third Year (2016-17) have successfully completed Project on "**Online Birth – Death Registration**" under the guidance of "**Mrs. A.M.Galshetwar**" in parallel fulfilment of requirement for the award of Diploma in Computer Engineering from Government Polytechnic, Pune.

Mrs. A.M.Galshetwar   **Mr. U.V.Kokate**

(Project Guide)   (H.O.D)

                                                                        Dr.D.R.Nandanwar

(External Examiner)   (Principal)

ACKNOWLEDGMENT

1606012 – Vaishnavi Shrikant Bidaye

1606019-Aniket Govind Dahibhate

1606025-Mandar Shankar Desai

1606028-Sanket Tukaram Dhake

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ABSTRACT

Online Birth/Death registration and its integration with services like Bank, RTO, etc.

There are different services which are linked to birth and death of individual. If these services are integrated together it will help individuals. Doctors register child birth in their Database. Then parent can one time enter the name of their child and its information and get print of birth certificate after three - five days to the registered email or mobile numbers. In case of death registration build a system, which will notify all tear down services to update death status of individuals.

Chapter 1: Introduction

In the busy Global schedule, everyone is not capable of spending time for the processes such as applying for Birth or Death certificate. But these certificates are important to carry. So, this Online Birth-Death Registration makes process feasible and easier so that everyone can easily deal with it. In this computerized controlled world this is little bit of contribution towards Smart India.

Online Birth/Death registration and its integration with services like Bank, RTO, etc. There are different services which are linked to birth and death of individual. If these services are integrated together it will help individuals. Then parent can one time enter the name of their child and its information and get print of birth certificate after three - five days to the registered email or mobile numbers. In case of death registration build a system, which will notify all tear down services to update death status of individuals.

This project is a **small initiative from our side to support Digital India Campaign undertaken by Government of India**.

1.1. Project Objectives :

1. This project integrates User, Doctor and Municipal Office.

2. To make flexible communication between Government organizations and common man.

3. It destinates Birth Certificate to user by sending Email.

4. To seal bank accounts after death by automatically granting Death Certificate.

5. It reduces utilization of time of doing lengthy legal banking processes.

1.2. Goal :

In the busy Global schedule every one is not capable of spending time for the processes such as applying for Birth or Death certificate. But these certificates are important to carry. So this Online Birth-Death Registration makes process feasible and easier so that every one can easily deal with it. In this computerized controlled world this is little bit of contribution towards Smart India.

Chapter 2: Problem Definition

2.1. Problem Statement :

- The existing way to get certificate, is manually.
- After birth or death, user should visit the Municipal Office and request them for the certificate.
- And it was time consuming and long process.
- Then Municipal Office checks details and then make the certificate. After a month user gets that document.
- This process was offline and due to unavailability of common platform there was lack of integration between Government Organization and common man.

2.2. Problem Finding :

- As technology is evolving day by day, technical solutions for reducing time consumption. This is kind of innovation.
- Till date no platform is developed to online Birth or Death certificates.
- So this system will help users to get certificates by saving their valuable time.
- In this application, Firstly user register in it and send request to specific doctor for certificate. Doctors also enter their daily records on database. After sending request doctor verifies the information and send it to Municipal Office.
- So Municipal Office send the certificate to the requested user through email.

2.3. Purpose :

Nowadays it is long process to get a document. It involves long procedure as it involves doctor records, requested user records. Manual process is to lengthy that it destinate certificate to user within span of one month. It is time consuming.

So, our goal is to integrate users, doctors and municipal offices on one platform and to give a destinate certificate to a user within few days. Proper integration, helping users to get certificate on time i.e. three to five days is our basic goal. Thus, the system met our goal to automate the work and save lot of time spent in offline work.

2.4. System Features :

1. Android Application

This is an Android Application therefore it can be easily deployed and it can be accessible via mobiles as well as tablets through internet connection.

2. Ease of Use

The system is user friendly. All the controls are well placed to assist user while handling an Application

3. Role based access

The system is not open to common people, only authorized user can access system based on their roles.

4. Integration

Initially this whole work was done offline, but now Users, Doctors and Municipal Offices will get one integrated platform.

Chapter 3: Requirement Specification

3.1 Software Specifications :

    1. Front end   : Java

    2. Back end   : Firebase Database

    3. Editor   : Android Studio

    4. Operating system   : Windows 10

    5. Documentation   : MS-office

3.2 Hardware Specifications :

    1. Processor   : Intel, core i3 5th Generation and above

    2. RAM   : 4 GB and above

    3. Disk   : 40 GB

3.3 Android :

Android is a mobile operating system developed by Google. It is based on a modified version of the Linux kernel and other open source software, and is designed primarily for touchscreen mobile devices such as smartphones and tablets

3.4 Firebase :

The Firebase Realtime Database lets you build rich, collaborative applications by allowing secure access to the database directly from client-side code. Data is persisted locally, and even while offline, real-time events continue to fire, giving the end user a responsive experience.

Chapter 4: System Design

4.1. Modules

The proposed system is divided into three different modules as follows:

- User
- Doctors
- Municipal Officer

4.1.1 User :

       User have to register once to create an account, then login anytime. After login, he/she can apply for the Birth or Death certificate. For applying, he/she should choose one of the option from birth or death certificate. After that he/she have to fill up all the forms necessary for it and he/she have to send the request. Sending request goes to appropriate doctor and doctor takes a next step.

4.1.2 Doctor :

       In this system Doctor have to register once to create an account, then login anytime. After login, Doctor received information from User if it has matched doctor name and doctor ID, in Notification menu. The necessary information like Childs' birth date – time or a death persons' death – time is checked and send it to a Municipal Office. So now Doctor role is over here.

4.1.3 Municipal Officer :

       Municipal Officer have to register once to create an account, then login anytime. After login, Municipal Officer receives request from Doctor, the user gets certificate through his/her registered email from the Municipal Officer.

4.2. Diagrams

4.2.1. Data Flow Diagram :

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated.

4.2.1.1 Level 0 :
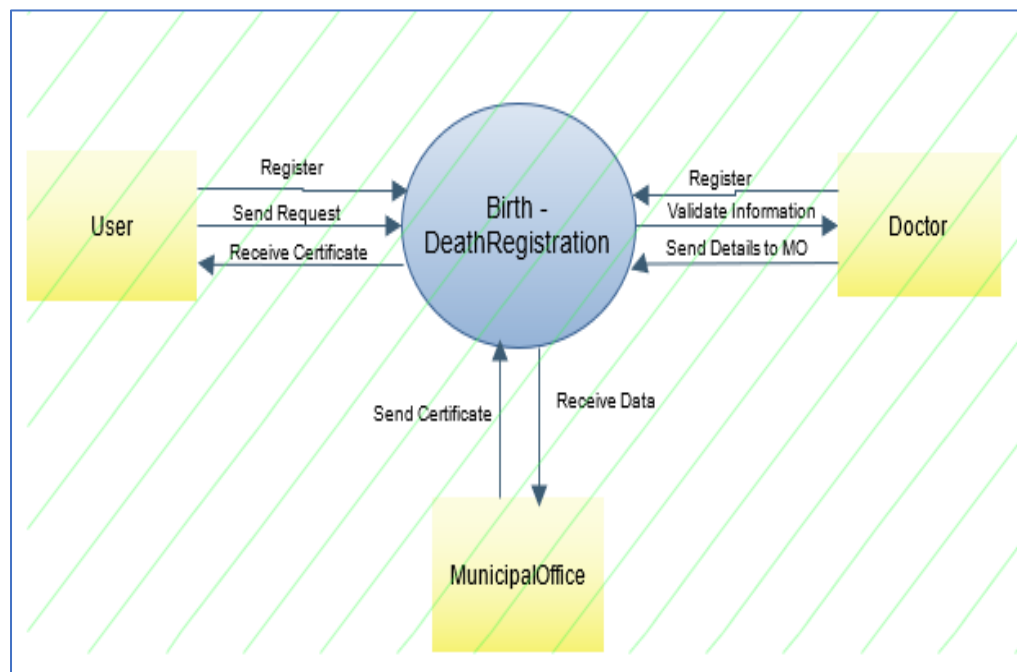
Fig. 4.2.1.1 Level 0 DFD

4.2.1.2 Level 1 :
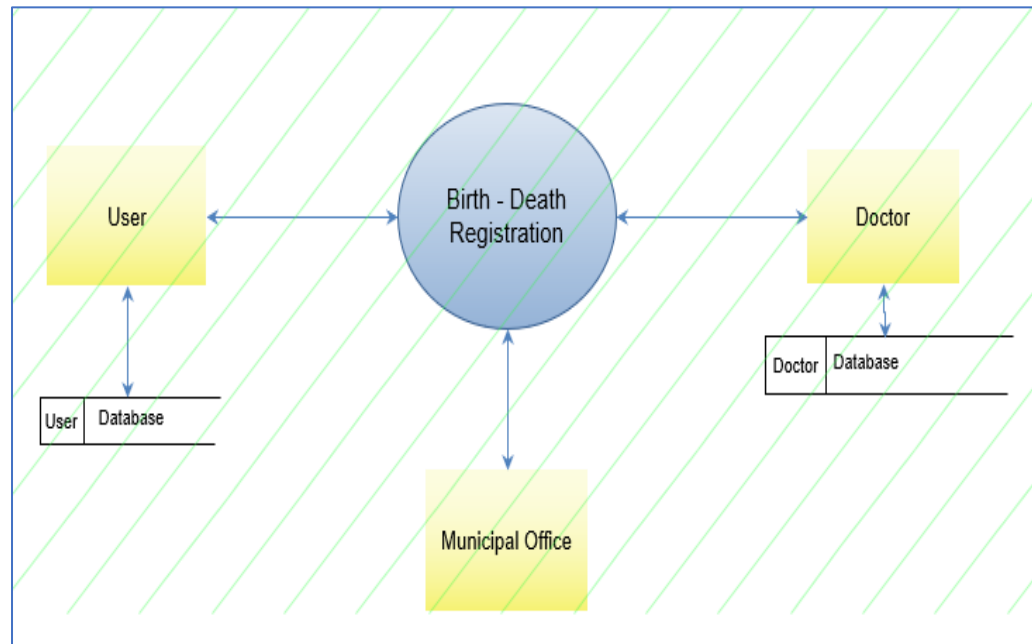
Fig. 4.2.1.2 Level 1 DFD

4.2.2 Use Case Diagram :

Use case diagrams are usually referred to as behaviour diagrams used to describe a set of actions (use cases) that some system or systems (subject) should or can perform in collaboration with one or more external users of the system (actors).
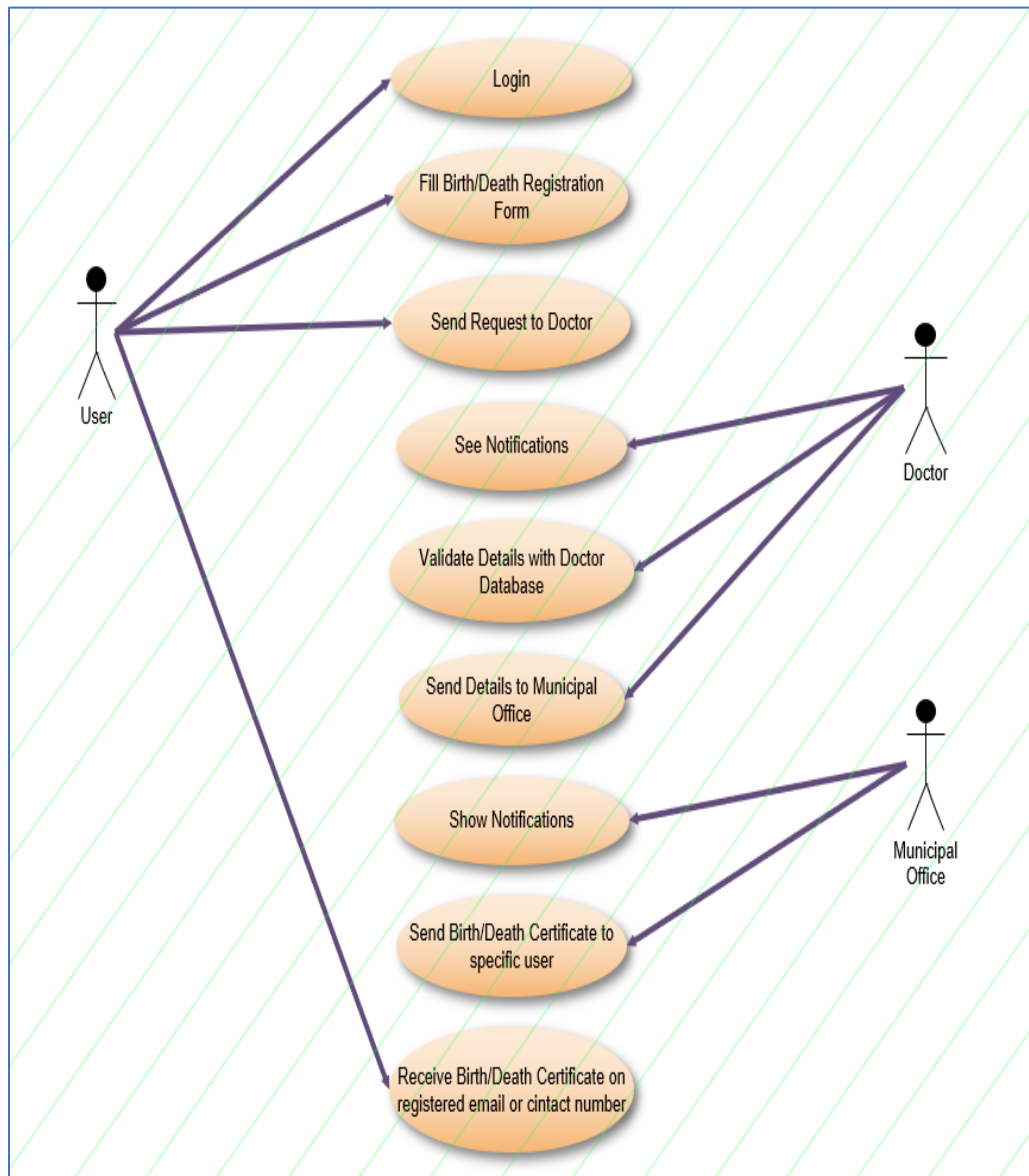

Fig 4.2.2 Use Case Diagram

4.2.3 Activity Diagram :

Activity diagram is basically a flow chart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. So the control flow is drawn from one operation to another.
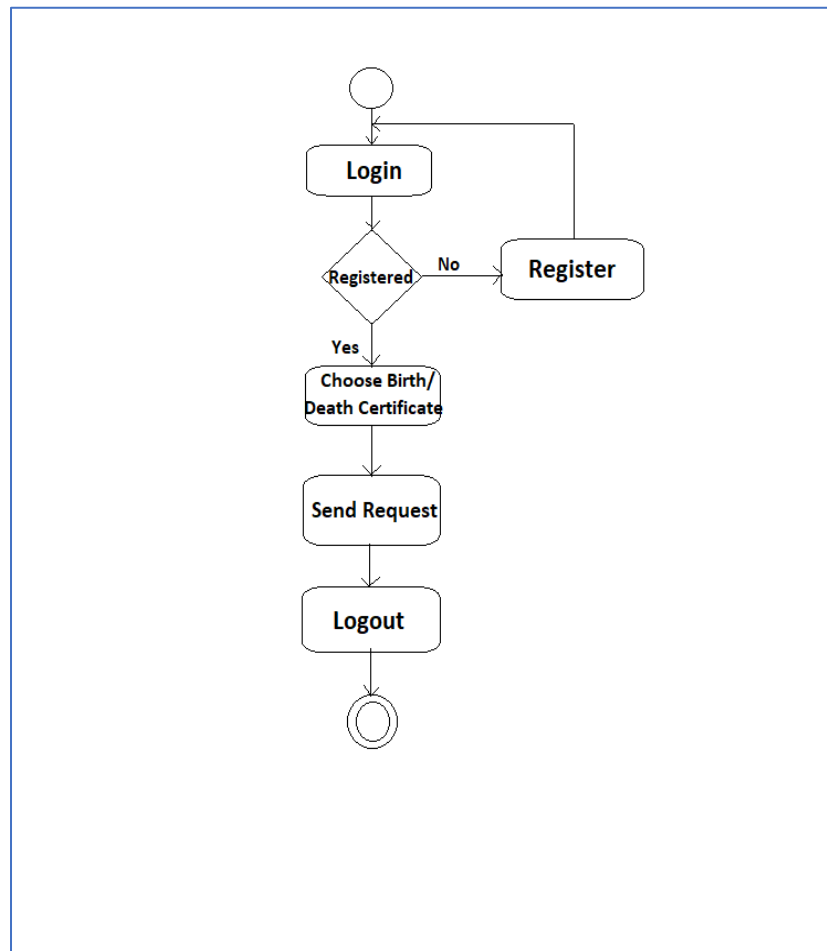

Fig. 4.2.3.1 User Activity Diagram
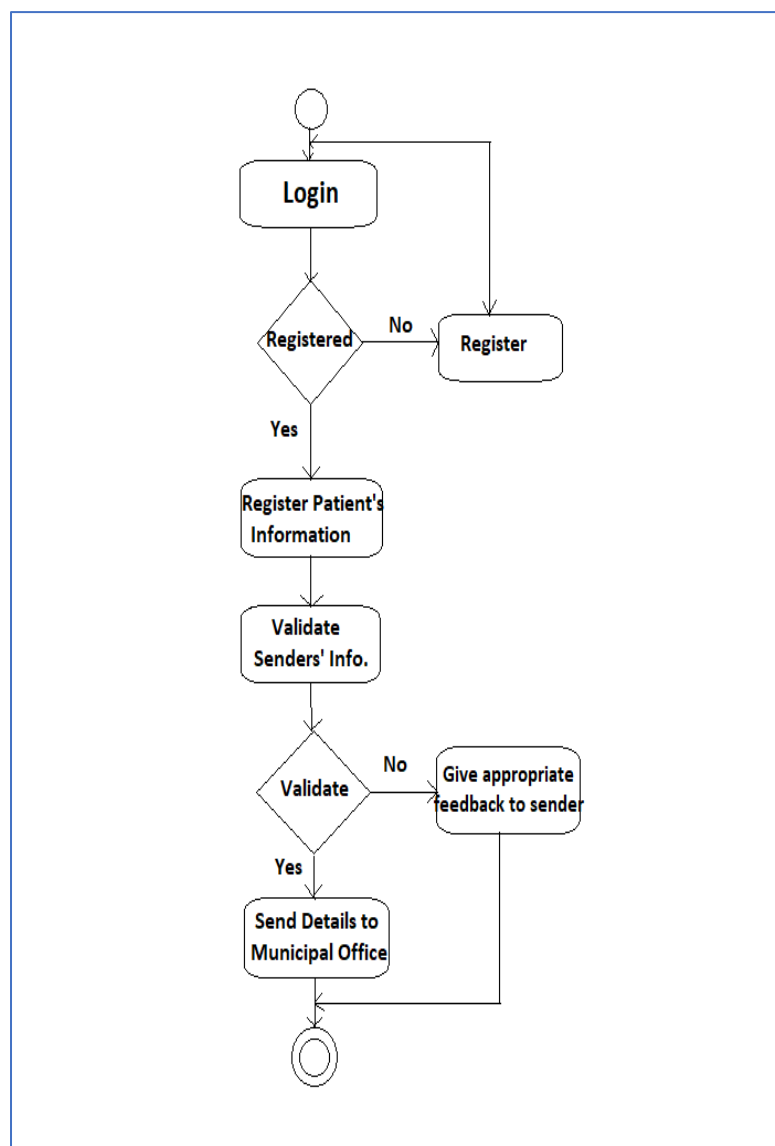
Fig. 4.2.3.2 Doctor Activity Diagram
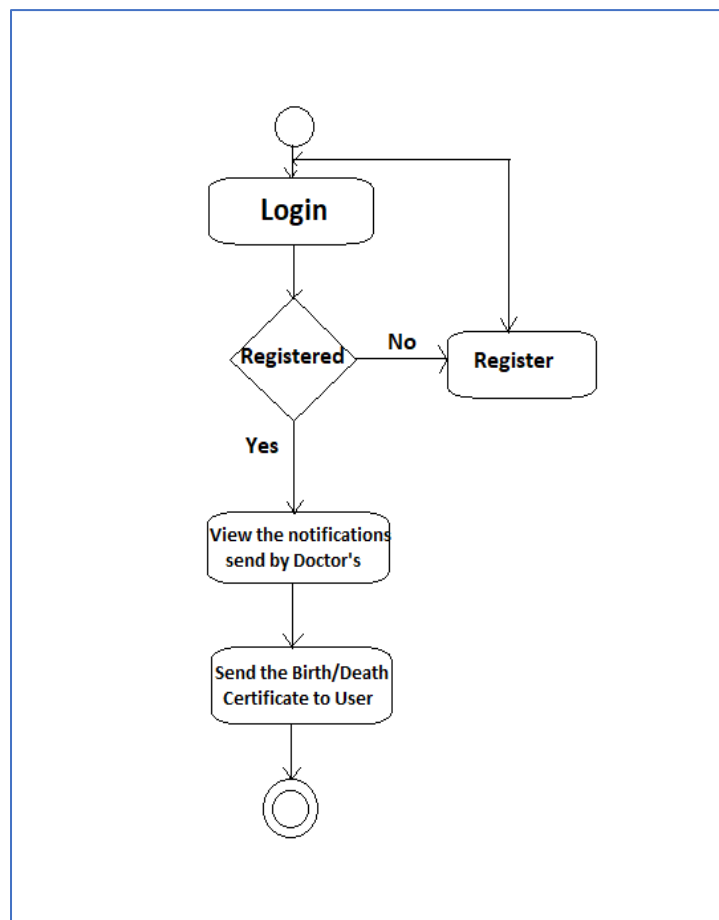
Fig. 4.2.3.3 Municipal Office Activity Diagram

4.2.4 ER Diagram :

An entity relationship diagram (ERD) shows the relationship of entity sets stored in a database. At first glance an entity relationship diagram looks very much like a flowchart. It is the specialized symbols, and the meanings of those symbols, that make it unique.
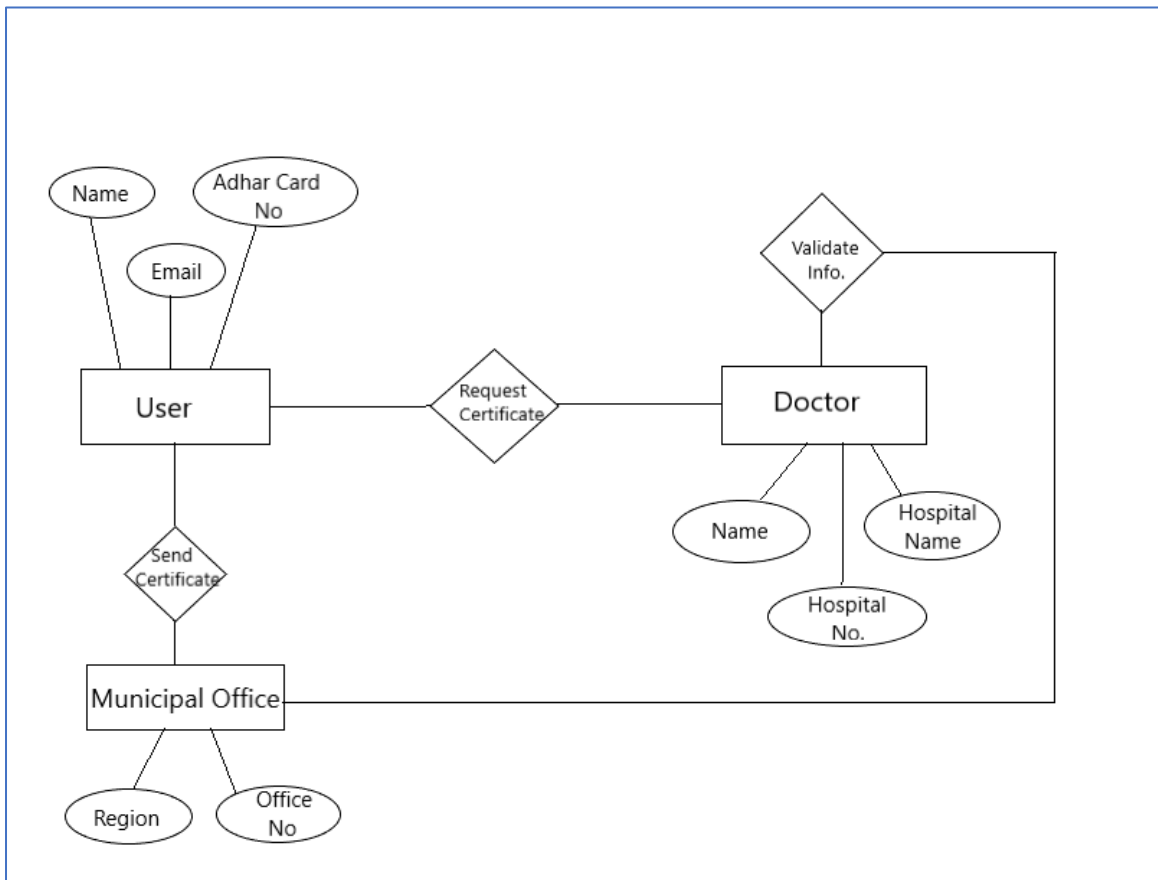

Fig. 4.2.4 ER Diagram

4.2.5 Deployment Diagram :

Deployment diagrams are used to visualize the topology of the physical components of a system, where the software components are deployed. Deployment diagrams are used to describe the static deployment view of a system. Deployment diagrams consist of nodes and their relationships.
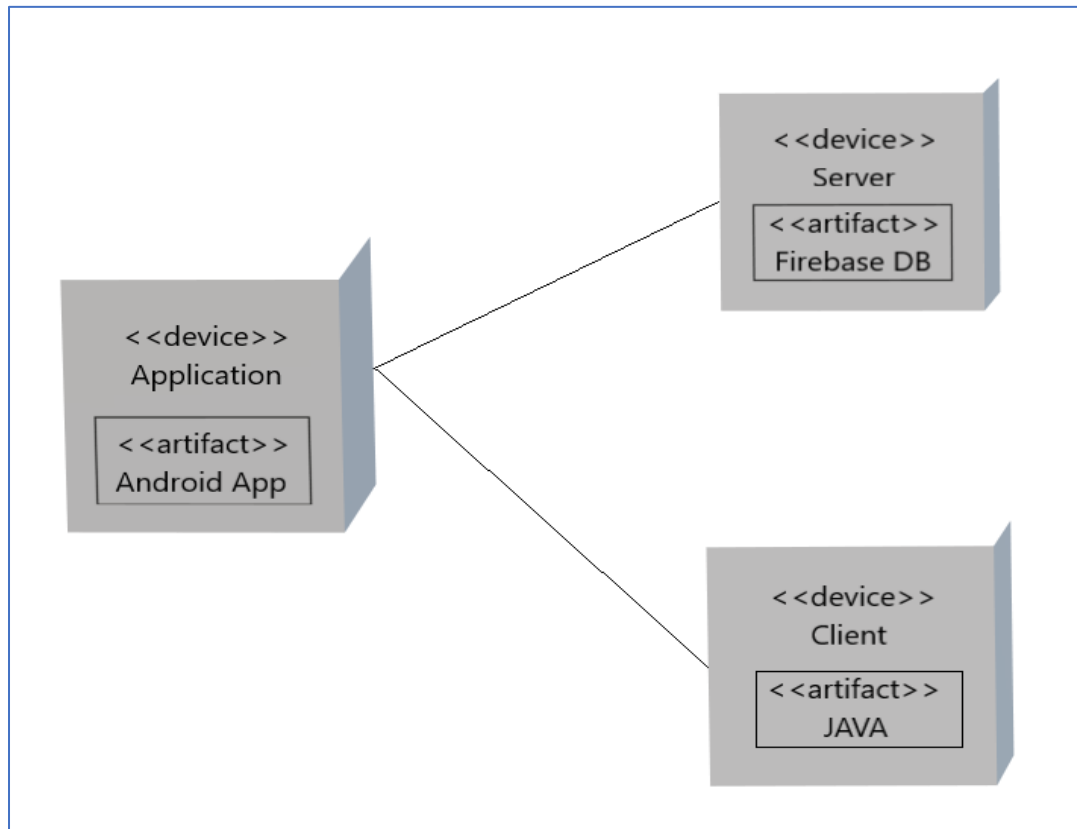

Fig. 4.2.5 Deployment Diagram

4.3. Implementation

4.3.1. Login :

First step is to login into the system to access the features of system according to the role. User, Doctor and Municipal Office, all three roles have different logins. If you have not created an account yet, you have to register first.

4.3.2. Send Request from User to Doctor :

The major role that plays in this system is of User. If user wants the certificate then after filling the form he/she request to the doctor. So, user will login into system and will send the send the request to the Doctor.

4.3.3. Notify Doctor :

Now after sending the request to Doctor, Doctor will get notified about the requested users information and in return Doctor will confirm birth/death related information and send that request to the Municipal Office.

4.3.4. Validate Request with Doctors Database :

As now Doctor gets users ID, doctor will check is the user bind with the Doctors ID. Doctor has their own database, which includes all patient data in it. If users request comes, it checks in database that the user has really visited to this Doctor or not.

4.3.5. Send Request from Doctor to Municipal Office :

After validating user's information through respective Doctor, Doctor sends that information to Municipal Office. If the information is correct then only it sends to Municipal Office otherwise it is discarded.

4.3.6. Notify Municipal Office :

Sending the request to Municipal Office, Municipal Office will get notified about the requested user's information through Doctor. After that Municipal Office takes next steps.

4.3.7. Send Certificate :

After receiving request from Doctor, Municipal Office sends certificate to the requested user. By this, user gets certificate within three to five days.

4.4 Database Design

The system uses Firebase Database to store the data of required for the validations. When input is given by the user, values are stored in the appropriate tables and then retrieved at the time of doctor validation. The system uses the following tables :

4.4.1 User Login Table :

Sr. No.	Field Name	Data type	Description
1	ID	Text	Stores the unique id for each user
2	Username	textPersonName	Stores the username of each user
3	Password	textPassword	Stores password of each user
4	Re-type Password	textPassword	Stores re-type password of each user
5	Full Name	textPersonName	Stores full name of each user
6	Address	textPostalAddress	Stores address of each user
7	Phone Number	Phone	Stores phone number of each user
8	Email	textEmailAddress	Stores email of each user
9	Aadhar-card Number	Number	Stores aadhar-card number of each user

4.4.2 Doctor Login Table :

Sr. No.	Field Name	Data type	Description
1	ID	text	Stores the unique id for each doctor
2	Username	textPersonName	Stores the username of each doctor
3	Password	textPassword	Stores password of each doctor
4	Re-type Password	textPassword	Stores re-type password of each doctor
5	Full Name	textPersonName	Stores full name of each doctor
6	Address	textPostalAddress	Stores address of each doctor
7	Phone Number	Phone	Stores phone number of each doctor
8	Email	textEmailAddress	Stores email of each doctor
9	Aadhar-card Number	Number	Stores aadhar-card number of each doctor
10	Education	Text	Stores education of each doctor
11	Hospital Name	Text	Stores hospital name of each doctor
12	Register No.	Number	Stores register no. of each doctor

4.4.3 User Birth Certificate Request Table :

Sr. No.	Field Name	Data type	Description
1	ID	Text	Stores Unique ID
2	Child's Father Name	textPersonName	Stores Child's Father Name
3	F Phone Number	Number	Stores father's phone number
4	F Email	textEmailAddress	Stores father's email
5	F Aadhar-card Number	Number	Stores father's aadhar-card number
6	Child's Mother Name	textPersonName	Stores Child's Mother Name
7	M Phone Number	Number	Stores mother's phone number
8	M Email	textEmailAddress	Stores mother's email
9	M Aadhar-card Number	Number	Stores mother's aadhar-card number
10	House No., House Name	Text	Stores mother's House No., House Name of parents
11	Street Name	Text	Stores street name
12	Taluka	Text	Stores name of taluka
13	District	Text	Stores name of district
14	State	Text	Stores name of State
15	Child Name	textPersonName	Stores Child's name
16	Gender	Text	Stores Child's gender
17	Birth Date	Date	Stores Child's birth date
18	Birth Time	Time	Stores Child's birth time
19	Birth Place	Text	Stores Child's birth place
20	Blood Group	Text	Stores Child's blood group
21	Hospital Number	Number	Stores hospital number
22	Doctor Name	textPersonName	Stores doctor name

4.4.4 User Death Certificate Request Table :

Sr. No.	Field Name	Data type	Description
1	ID	Text	Stores Unique ID
2	Fathers' Name	textPersonName	Stores Person's Father Name
3	Mothers' Name	textPersonName	Stores Person's Mother Name
4	Wife's/Husband's Name	textPersonName	Stores Person's Wife's/Husband's Name
5	W/H Relation	Text	Stores relation
6	Other's Name	textPersonName	Stores Name of another Person
7	Other's Relation	Text	Stores relation of another person with death person
8	Other's Phone Number	Number	Stores another person's phone number
9	Other's Email	textEmailAddress	Stores another person's email
10	Other's Aadhar-card Number	Number	Stores another person's aadhar-card number
11	House No., House Name	Text	Stores another person's House No., House Name of parents
12	Street Name	Text	Stores street name
13	Taluka	Text	Stores name of taluka
14	District	Text	Stores name of district
15	State	Text	Stores name of State
16	Name	textPersonName	Stores Death Person's name
17	Gender	Text	Stores Death Person's gender
18	Death Date	Date	Stores Death Person's death date
19	Death Time	Time	Stores Death Person's death time
20	Death Place	Text	Stores Death Person's death place
21	Hospital Number	Number	Stores hospital number
22	Doctor Name	textPersonName	Stores doctor name

4.4.5 Doctors Birth Registration Table :

Sr. No.	Field Name	Data type	Description
1	ID	Text	Stores Unique ID
2	Child's Father Name	textPersonName	Stores Child's Father Name
3	F Phone Number	Number	Stores father's phone number
4	F Email	textEmailAddress	Stores father's email
5	F Aadhar-card Number	Number	Stores father's aadhar-card number
6	Child's Mother Name	textPersonName	Stores Child's Mother Name
7	M Phone Number	Number	Stores mother's phone number
8	M Email	textEmailAddress	Stores mother's email
9	M Aadhar-card Number	Number	Stores mother's aadhar-card number
10	Gender	Text	Stores Child's gender
11	Birth Date	Date	Stores Child's birth date
12	Birth Time	Time	Stores Child's birth time
13	Birth Place	Text	Stores Child's birth place
14	Blood Group	Text	Stores Child's blood group
15	House No., House Name	Text	Stores mother's House No., House Name of parents
16	Street Name	Text	Stores street name
17	Taluka	Text	Stores name of taluka
18	District	Text	Stores name of district
19	State	Text	Stores name of State

4.4.6 Doctors' Death Registration Table :

Sr. No.	Field Name	Data type	Description
1	ID	Text	Stores Unique ID
2	Fathers' Name	textPersonName	Stores Person's Father Name
3	Mothers' Name	textPersonName	Stores Person's Mother Name
4	Wife's/Husband's Name	textPersonName	Stores Person's Wife's/Husband's Name
5	W/H Relation	Text	Stores relation
6	Other's Name	textPersonName	Stores Name of another Person
7	Other's Relation	Text	Stores relation of another person with death person
8	Other's Phone Number	Number	Stores another person's phone number
9	Other's Email	textEmailAddress	Stores another person's email
10	Other's Aadhar-card Number	Number	Stores another person's aadhar-card number
11	Name	textPersonName	Stores Death Person's name
12	Gender	Text	Stores Death Person's gender
13	Death Date	Date	Stores Death Person's death date
14	Death Time	Time	Stores Death Person's death time
15	Death Place	Text	Stores Death Person's death place
16	House No., House Name	Text	Stores another person's House No., House Name of parents
17	Street Name	Text	Stores street name
18	Taluka	Text	Stores name of taluka
19	District	Text	Stores name of district
20	State	Text	Stores name of State

4.4.3 Municipal Office Login Table :

Sr. No.	Field Name	Data type	Description
1	User ID	Text	Stores the unique id for each municipal office
2	Username	textPersonName	Stores the username of each municipal office
3	Password	textPassword	Stores password of each municipal office
4	Re-type Password	textPassword	Stores re-type password of each municipal office
5	Region	Text	Stores full name of each municipal office
6	Regional Office No.	number	Stores address of each municipal office
7	Address	textPostalAddress	Stores phone number of each municipal office
8	Phone Number	Phone	Stores email of each municipal office
9	Email	textEmailAddress	Stores aadhar-card number of each municipal office

Chapter 5: Test Cases

Test Case ID	Objective	Steps	Input	Expected Result	Actual Result	Status
TC_01	To check that user is able to login with valid username and password	Enter the valid username and password and click on login button	Username: ab@gmail.com Password: Ab123	Respective homepage will be open	Respective homepage is opened	Pass
TC_02	To check whether user is able to login with invalid username and password	Enter invalid username and password	Username: aabbcc Password: abc	Invalid username and password toast message will appear	Invalid toast message is appeared	Pass
TC_03	To verify that validation message is displayed in case the user leaves password and username field blank	Enter username and leave password field empty and then click on login button	Username: ab@gmail.com Password:	Validation message will be appeared	Validation message is appeared	Pass
TC_04	To check if unregistered user clicks on Login now button then home page opened	Click on login now button on login page	N/A	Home page won't open	Home page isn't opened	Pass

TC_05	To verify that all required fields are showing message if user leaves fields empty	Enter data in some fields & leave other empty & click on submit button	Text	Validation message will appear	Validation message is appeared	Pass
TC_06	To validate Email address field	Enter email address without '@' sign	Text	Validation message will appear	Validation message is appeared	Pass
TC_07	To verify that correct date is displayed in field when user choose date from date picker	Select date from date picker	N/A	Correct date should be displayed	Correct date is displayed	Pass
TC_08	To check after clicking on submit button data is stored in database	Enter the valid data And click on submit button	Text	Data should be stored and User can login	Data is stored and user can login	Pass
TC_09	To check whether page jumps on respective page when user clicks back button	Click on back button	N/A	Appropriate page should open	Appropriate page is opened	Pass
TC_10	To check respective homepage will open for respective module	Login for validated module in login page	Username: doctor1@gmail.com Password: Doc123	Respective homepages will open	respective homepages will opened	Pass

Test Case ID	Objective	Steps	Input	Expected Result	Actual Result	Status
TC_01	To check after clicking on menu whether the respective page is opened or not	Click on any menu in drawer menu	N/A	The respective page will open on same screen	The respective page is opened on same screen	Pass
TC_02	To check whether the information is sent to Doctor or not after clicking the 'Send Request' Button	Fill the Valid Information And Click on 'Send Request' Button	Text	Data should appear on Doctor's notification field	Data is appeared on Doctor's notification field	Pass
TC_03	To check whether the form is submitted when the submit btn is clicked	Fill valid information and click on button	Text	Data should be saved to database	Data is saved to database	Pass
TC_ 04	To Check whether the user's information is retrieved when it goes to Doctor	View Doctor's Notification field	N/A	User's information should be retrieved	User's information is retrieved	Pass
TC_05	To check whether the user's Information is stored in Doctor's database	Enter the valid data And click on submit button	Text	Data should be stored	Data is stored	Pass

TC_06	To check whether the notification is sent to respective Doctor	Fill Valid Information and click submit button	Text	The information should be displayed on respective doctor's notification field	The information is displayed on respective doctor's notification field	Pass
TC_07	To check whether the notification is sent from Doctor to Municipal Office	Click submit button	Text	The information should be displayed on respective Municipal Office's notification field	The information is displayed on respective Municipal Office's notification field	Pass
TC_08	To check whether the respective page is opened or not when clicked on back button	Click on Back button	N/A	The respective page should open	The respective page is opened	Pass
TC_09	To check whether the requested user gets a certificate	Municipal Office clicks on 'send certificate' button	Text	Certificate should be send	Certificate is sent	Pass

Chapter 6: Screenshots
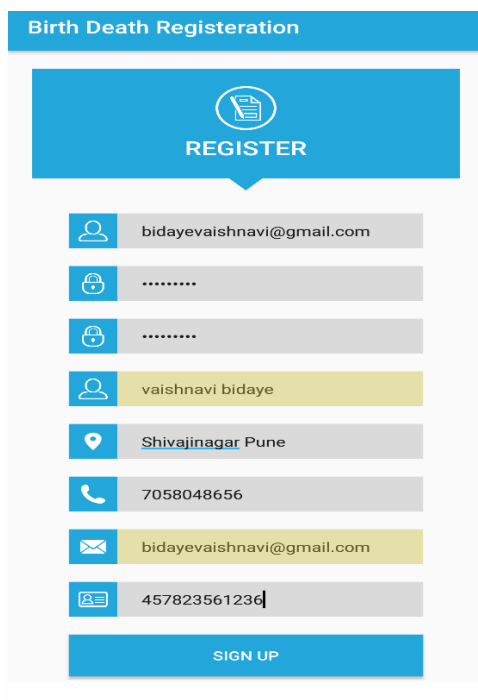
6.1.1 Homepage :

6.1.2 Homepage :

USER

DOCTOR
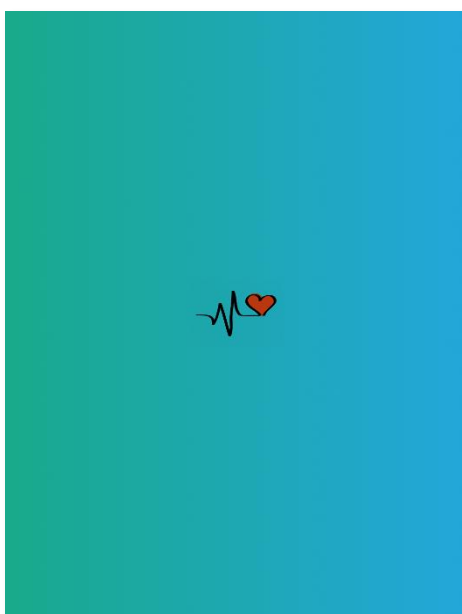
MUNCIPAL
OFFICE
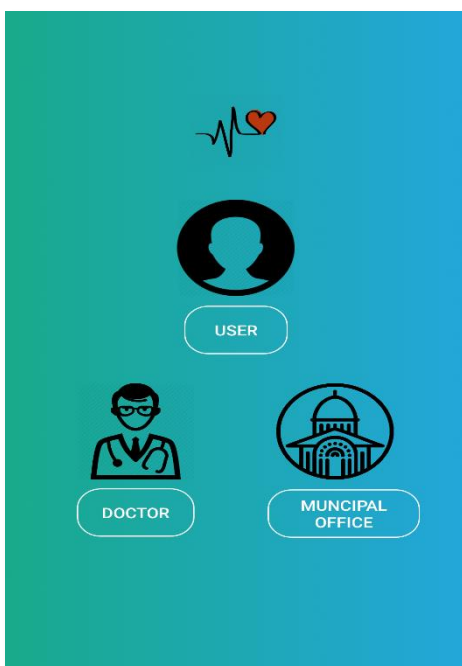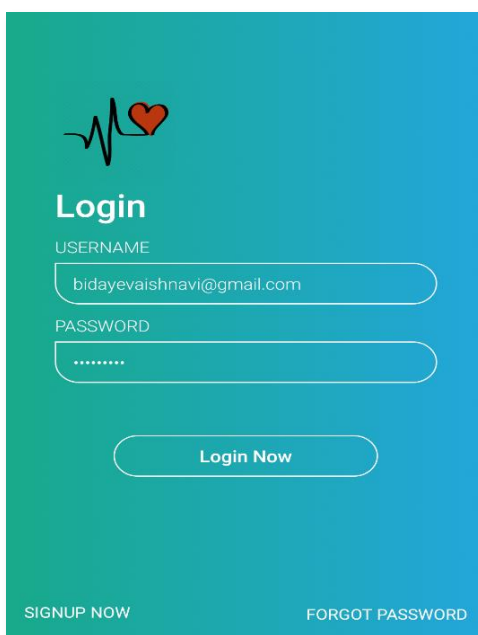
6.2.1 User's Registration Page :

6.2.2 User's Login Page :

6.2.3 User's Home Page :

6.2.4 Sending Birth Certificate Request :

3. Address Details

- Aarya Complex
- Ganeshkhind Road
- Haveli
- Pune
- Maharashtra
- bidayevaishnavi@gmail.com

Child Registeration Form :

1. Child Details

- Jui
- Female
- 06/10/2018
- 08:30
- Shivajinagar
- O+
- 1234
- sanket27@gmail.com

BACK   NEXT

(continued)

≡ **Birth Death Registeration**

💬 **BIRTH CERTIFICATE**

For a Birth Certificate, you can apply online. Certificates are sent you on your registered email id or phone number. You can not get a certificate from a service center.

BIRTH CERTIFICATE

updated

6.2.5 Sending Death Certificate Request :

5. Address Details

Aarya Complex

Ganeshkhind Road

12

Pune

27

BACK   NEXT

(continued)

≡ **Birth Death Registeration**
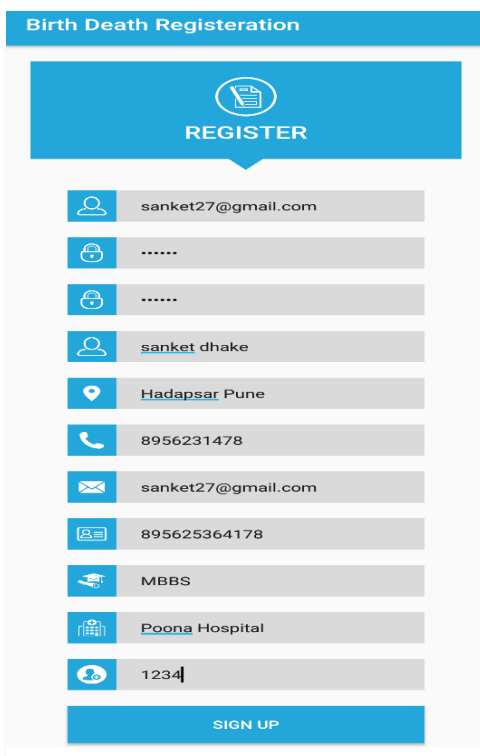
💬 **DEATH CERTIFICATE**

For a Death Certificate, you can apply online. Certificates are sent you on your registered email id or phone number. You can not get a certificate from a service center.

DEATH CERTIFICATE
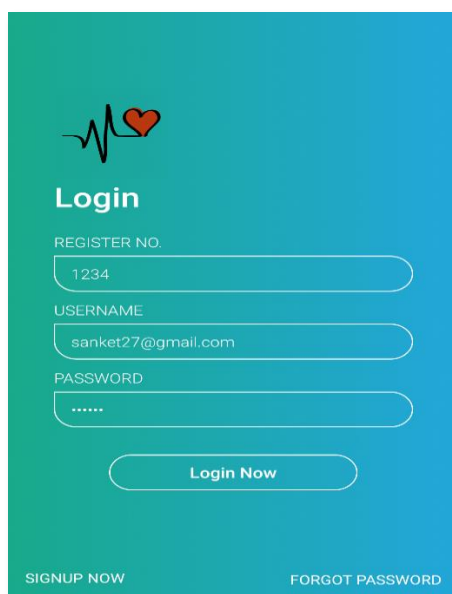
Record savedAarya bidaye

6.3.1 Doctor's Registration Page :

6.3.2 Doctor's Login Page :

6.3.3 Doctor's Home Page :

6.3.4 Requested User's Birth Certificate Notification To Doctor :
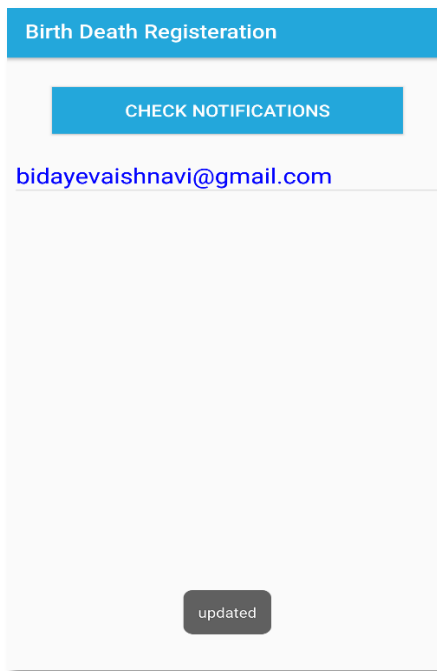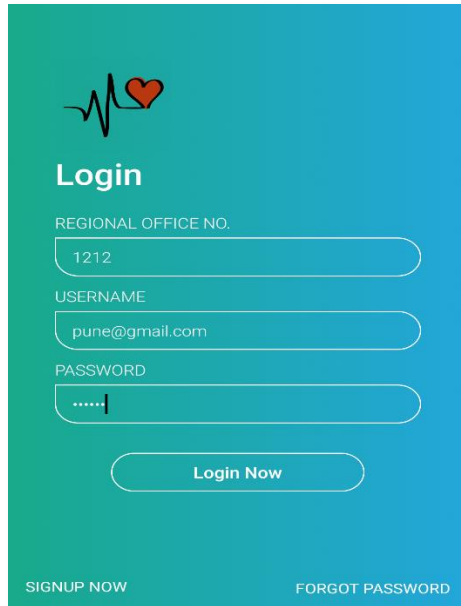
### 6.3.5 Requested User's Death Certificate Notification To Doctor :

### 6.4.1 Municipal Office's Registration Page :

### 6.4.2 Municipal Office's Login Page :
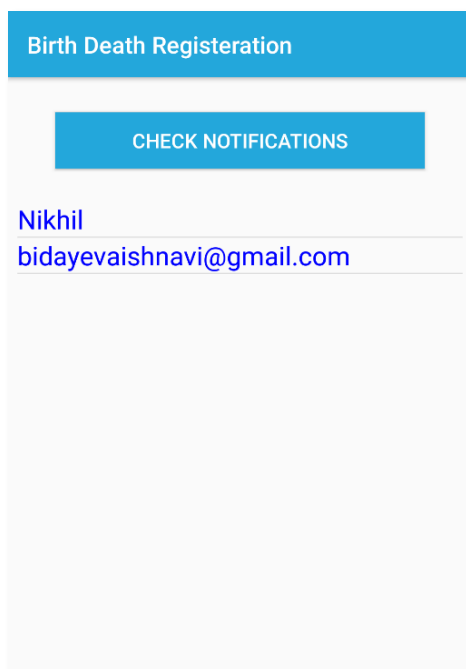
6.4.3 Municipal Office's Home Page :

6.4.4 Birth Certificate Notifications through Doctor :

6.4.5 Death Certificate Notifications through Doctor :

6.5.1 Birth Certificate Email received on User's Email Address :

BIRTH CERTIFICATE
Childs Father Name Shrikant Bidaye
Childs Father phone number 9421189357
Childs Father aharcard 458697032112
Childs Mother Name Shreya Bidaye
Childs Mother Phone number 8237623935
Childs Mother adharcard 451236980745
Childs address Aarya ComplexGaneshkhind RoadHaveliPuneMaharashtra
Childs Name1
Childs GenderFemale
Childs Birth Date 06/10/2018
Childs Birth Time 08:30
Childs Birth PlacePune
Childs Blood Group O+
Childs Hospital namenull
Childs Doctor Namesanket27@gmail.com

6.5.2 Death Certificate Email received on User's Email Address :

DEATH CERTIFICATE

(Issued under section 12/17 of the registration of Births and Deaths Act. 1969 and Rules 8/13 of the Maharashtra Registration of Births and Deaths Rules,2000)

This is to certify that the following information has been taken fromthe original record of death which is the register for (local area/local body) pune muncipal corporation of tahshil/block pune of district pune of maharashtra State

Full name of Deceased :Aarya bidaye

Gender Male :

Date of Death :09/05/2018

Place of Death :845588

Name of Mother :Shreya Bidaye

Fullname of Father :Shrikant Bidaye

Husband/Wife Name :

Time of Death :07:05

Address :Aarya ComplexGaneshkhind Road12Pune

Chapter 7: Strength and Limitations

Strength :

1. The work has automated with this system.

2. It helps in getting the certificate to user within three to five days.

3. User, Doctor and Municipal Office got one common platform to integrate and work together.

4. This system saves a lot of time and offline work.

5. Promotes Digital India.

6. Easy to use and understand.

Limitations :

1. Lack of digital literacy in users may create some limitations for system acceptance.

Chapter 8: Future Scope

1. It will give scopes to rural peoples to step up for Globality.
2. We will also notify the users about all required important legal documents he/she should have for his/her academic or professional purpose.

Chapter 9: Conclusion

This Application promotes Digitalization and easy to use and understand. It provides direct platform for healthy communication between Government Organization and common man by utilizing minimum time that it can be.

It eliminates mediators in system and provide direct communication between User and Municipal Office. There is a less commission gap and hence it reduces Inflation problem.

In future it also gives scopes to rural peoples to step up for Globality.

Chapter 10: References

- https://www.tutorialspoint.com
- https://firebase.com
- https://stackoverflow.com
- https://www.quora.com
- https://www.youtube.com
- www.google.com