



International Journal for Innovative Engineering and Management Research

A Peer Reviewed Open Access International Journal

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IJIEMR Transactions, online available on 10th Apr 2019. Link

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Title: **BIRTH/DEATH ONLINE REGISTRATION AND CERTIFICATE GENERATION**

Volume 08, Issue 04, Pages: 162–169.

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BIRTH/DEATH ONLINE REGISTRATION AND CERTIFICATE GENERATION

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Abstract: Generation of Birth/Death certificate is always a durable issue facing today in our society. Birth/Death certificate is the major need for an individual, even though there is an existing system for generating certificate; it is a time taking process. Here we dealt with the drawbacks of the existing system and introduced a new system which even give the application status of the particular certificate applied by an individual. Our approach develops a user friendly mobile application where each individual can apply for birth/death certificate and can check the status of the certificate. Integrated Servicers like Municipal officer and Hospital admin can also use this application for accepting or for declining the requests applied by an individual regarding the certificate.

1. Introduction:

Different services will be linked to Birth and Death of an individual. The current process for Birth and Death Registration is Maternity hospital informs Municipal Corporation by taking the credentials like Parent's \Guardian's Aadhar number and we have to visit the Municipal Corporation until we receive the Birth / Death Certificate. As this is an inconvenient process, instead of this a smart mobile application can be designed which can provide us information about the Birth / Death Status of a user. Previously user himself used to go the hospital to get the documents and then submit it to the MO office and when the documents are approved by the MO office, the certificates are generated and posted to users address. The users have to personally

go to hospital and MO Office and there is no time limit for a certificate to get generated. In the case of offline certification the officers in Mo office or the hospital management may take bribe which leads to corruption.

Birth/Death Registration Integration with Services: This is a useful application for Users, MO Office, and hospitals where a user will login into app and can apply for birth and death certificate, check out their records, and can view their application status. Integrated Servicers like Municipal officer and Hospital admin can also use this application for accepting or for declining the requests applied by an individual regarding the certificate. Hospitals will get request from the user for birth/death documents and these documents are sent and saved in cloud .MO officer will check the

submissions, he can approve or decline the application based on the health documents. Once the MO officer approves or declines the application the notification is sent to the user. If the application is approved the live status of the application will be sent or if it is declined the user will be notified with the reason of declination. This system provides the live status of the application. Duplication of certificates will be avoided. In case of any health issue user can book an appointment. If Aadhar number is linked with mobile number then there is no need to enter all the details of the user. In case of death, notifications will be sent to all integrated services. Corruption will be avoided. In case of misplace of the certificate user can again download and take printout of the certificate.

2. Literature Survey

We have conducted a survey regarding the preparation of the Birth and Death Registration application. There are some of the difficulties faced by the users, MO officers and hospital admin so on basis of this we have created three different types of applications. The user, integrated servicer and admin will be using android application.

- Online notifications of Birth/Death Registrations will be sent to MO officer for their convenience.
- Live application status regarding certificate approval or generation will be notified to the user.
- MO officer can view user details and can accept or decline the registration.
- Integrated Services app can be used by Hospital authorities, MO office authorities. Hospital authorities use this app to verify the details of the user; MO office

authorities use this app to accept the user birth/death registration and will generate certificates to the user.

- Sending email notification to both user and integrated servicer.

User login into their account and can apply for birth/death registration, can view live application status of birth/death registration, apply appointment in case of health issue, request for edit certificate, can download certificate or application forms, and can view his records.

Integrated servicer (MO officer) login in their particular account and can view the requests sent by the user and hospital admin and once if hospital admin notifies to him/her, generates the certificate.

Integrated servicer (Hospital Admin) login in to their registered account and view requests from the MO officer.

Admin also login into their registered account and can view total birth/death registrations, birth/death rate, forecasting information, number of requests and suggestion given by the user.

3. Existing System:

Previously user himself had to go the hospital to get the documents and then submit it to the MO office and when the documents are approved by the MO office the certificates are generated and posted to users address.

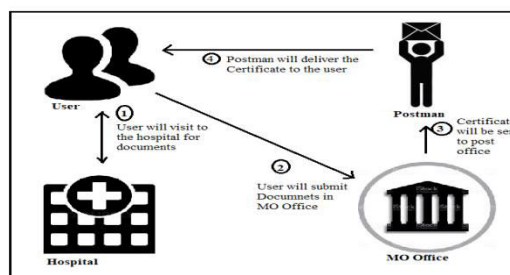


fig 3: existing system

4. Proposed System:

Birth Death Registration Integration with Services: This is a useful application for Users, MO Office, and hospitals where a user will login into app and can apply for birth and death certificate, check out their records, can view their application status, receives notification from mo officer and hospital admin, can give feedback to admin. Hospitals will get request from the user for birth/death documents and these documents are sent and saved in cloud. MO officer will check the submissions, he can approve or decline the application based on the health documents. Once the MO officer approves or declines the application the notification is sent to the user. If the application is approved the live status of the application will be sent or if it is declined the user will be notified with the reason of declination.

Advantages:

- This system provides the live status of the application.
- Duplication of certificates will be avoided.
- In case of death, notifications will be sent to all integrated services.
- Corruption will be avoided.
- In case of misplace of the certificate user can again download and take printout of the certificate.

4.1 System Architecture:

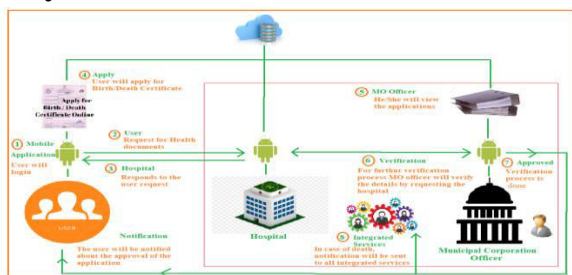


fig: system architecture

4.2 Modules Description:

4.2.1 User:

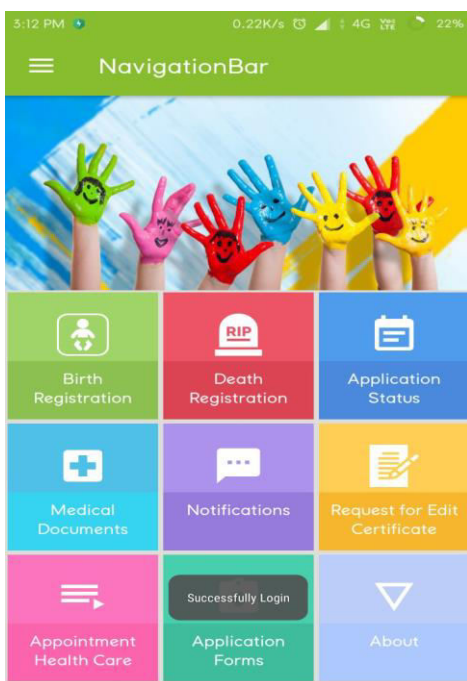
1. Birth Registration
2. Death Registration
3. Live Application Status
4. Medical Documents
5. Notification
6. Request for Edit Certificate
7. Appointment Health Care
8. Application Forms
9. About
10. Profile
11. My Records
12. Municipal Officer Schedule
13. Website
14. Feedback
15. Logout
16. Share

Main Screen



This is the main screen of our application where user can create his account or if user already have an account can directly signin.

Home Screen



Features:

1. Birth Registration:

Under this option the user has to get registered using their aadhar and phone number and fill in the birth details, if their aadhar or phone number are not linked then the user has to fill in the birth application form. After successful registration it directs to the homepage.

2. Death Registration:

Under this option the user has to fill in the application form and death details. After successful registration it directs to the homepage.

3. Application status:

Under this option the user can get their live application status about certificate and can download their certificate only after the payment.

4. Request for Medical documents:

In this the user can request for his medical documents to the hospital and fill in

the application form provided by the hospital, if documents are misplaced.

5. Notifications:

In this the user can view the both birth and death notifications generated by Municipal officer and hospital.

6. Request for Edit Certificate:

In this case the user can request to the municipal officer to edit the certificate if in case there are any mistakes.

7. Appointment Health Care:

In this option the user can book an appointment with their required/nearby hospital and also they can be guided to the particular location.

8. Application Forms:

In this option the user can download birth/death applications in pdf forms.

9. About:

In this option the user can view the specifications of our application.

10. Profile:

This option will display the profile name and profile photo. It also allows the user to update their profile like mobile number, email id etc.

11. My Records:

In this option the user can view his records and they can also chat with particular supervisor.

12. Municipal Officer Schedule:

In this option the user can book an appointment with the municipal officer in a particular time and book their slot.

13. Website:

This option will direct the user to the website.

14. Feedback:

User can give and their feedback and suggestions which can be implemented to improve our application.

15. Logout:

It will allow the user to logout from the application

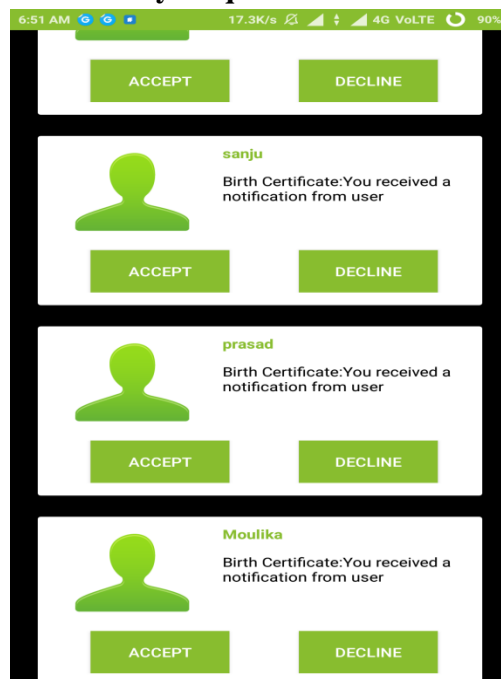
16. Share:

In this option the user can share our application using social networking sites.

4.2.2 Integrated Servicers:

- Login
- My Profile
- My Requests
- Hospital Approvals
- Share
- Logout

My Requests Screen



Features:

1. Login:

If the integrated servicer is MO officer he/she will login into the application or if the integrated servicer is Hospital admin he/she will login into the application.

2. My Profile:

This option will display the profile name and profile photo .It also allows the user to update their profile like mobile number, email id etc.

3. My Requests:

If the integrated servicer is MO officer he/she will get requests from user and hospital admin or if the integrated servicer is Hospital admin he/she will get requests from user and MO officer.

3. Hospital Approvals:

Only the integrated servicer MO officer he/she will get notifications from the hospital admin.

5. Logout:

It will allow the user to logout from the application

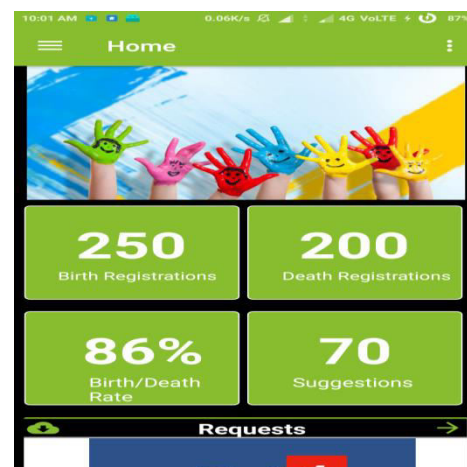
6. Share:

In this option the user can share our application using social networking sites.

4.2.3 Admin:

- User information.
- My account
- Current requests
- Suggestions
- Forecasting

Admin Home Screen



Features:

1. User information:

Under this option we are providing information about total number of users used your parking station, frequent users and non-frequent users. For better understandability we are displaying the graphs based on that information. They can view the information daily wise, weekly wise and monthly wise.

2. My account:

In this option we will display the Today's earnings, time of high earnings and low earnings in that day. We will plot a bar graph based on the information about the total revenue generated in that day with an interval of 4 hours. To know about the monthly generated click on monthly generated revenue it will display a line graph regarding the revenue generated in each month.

3. Current Requests:

This option shows the information like total requests in that day or month or year. It also displays request type (Emergency Booking, Manual booking, Automated Booking).

4. Suggestions:

We will display all the review of the user about that life span in this option. Based on the user reviews about that life span, we are giving some suggestion to improve his business and provide better facilities to the users.

5. Forecasting:

Based on the user information and the monthly generated revenue we will forecast the information by plotting the different types of graphs in this option.

4.3 Methodology:

First Come First Serve Scheduling Algorithm:

Step-1. Input the process along with their burst time (bt)

Step-2. Find waiting time (wt) for all process

Step-3. As first process that comes need not to wait so.

Process 1 waiting time will be 0. i.e.

$wt[0]=0$.

Step-4. find waiting time for all process. i.e. for

Process $i \rightarrow$

$wt[i]=bt[i-1]+wt[i-1]$

Step-5. Find turnaround time=waiting time+burst_time for all process.

Step-6. Find average waiting time= $\frac{\text{total_waiting_time}}{\text{no_of_process}}$.

Step-7. Similarly, find average turn around time= $\frac{\text{total_turn_around_time}}{\text{no_of_process}}$.

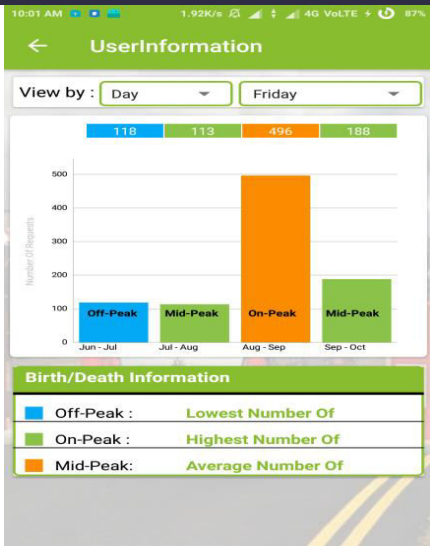
One of the operating system process scheduling algorithm is First come, first serve (FCFS) and a mechanism that automatically executes requests which are queued and processes by the arrival order is network routing management mechanism. Whatever the process will come first will be served first and will be handled and executed first.

FCFS is combination of first-in, first-out (FIFO) and first come, first choice (FCFC).

5. System Analysis:

5.1 User Information:

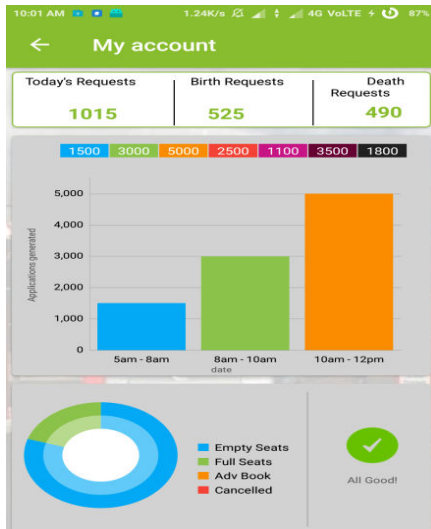
Here graphs will be displayed by analyzing all the user information about birth and death registrations so they can easily view all the details by day, month so that the data will be analyzed.



User Information screen

5.2 Birth/Death Requests:

Here graphs will be displayed by analyzing all the user requests about birth and death registrations so they can view details like total number of requests, birth requests and death requests so data will be analyzed easily.



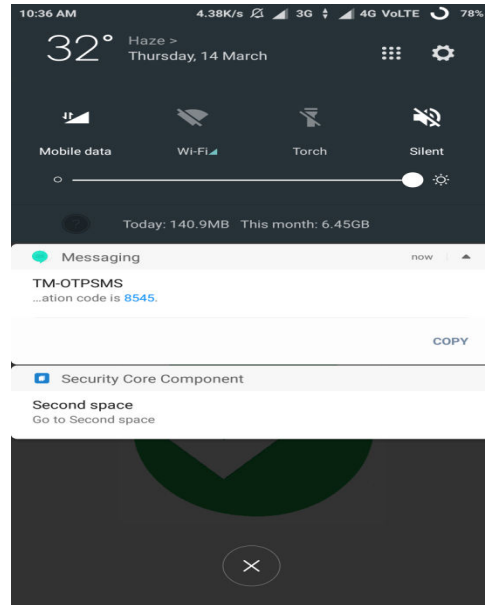
Birth/Death Requests Screen

6. Results:

6.1 OTP Received:

When the user will be registered into this application then it prompts to enter the mobile number for otp verification,

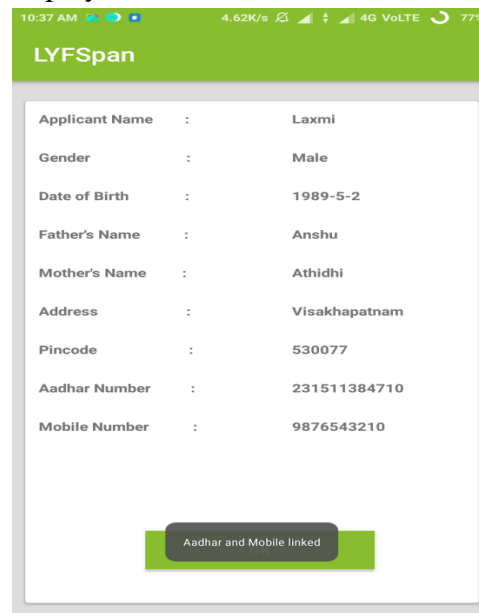
based on the number user entered otp will be received.



OTP Received Screen

6.2 Aadhar and Mobile Number Linked:

If the user aadhar and mobile number is linked, then there is no need to enter all the details of the particular user. Data in the database regarding the user will be displayed.



Aadhar and Mobile Linked Screen

6.3 Hospital Approvals:

Once if the Hospital admin verify the details then notification will be sent to the MO officer where they can view the notification in the hospital approvals screen.

7. Conclusion:

Finally, we implemented an android application for users, integrated servicers and also for admin. User login into their account and can apply for birth/death registration, can view live application status of birth/death registration, apply appointment in case of health issue, request for edit certificate, can download certificate or application forms, and can view his records. Integrated servicer (MO officer) login in their particular account and can view the requests sent by the user and hospital admin and once if hospital admin notifies to him/her, generates the certificate. Integrated servicer (Hospital Admin) login in to their registered account and view requests from the MO officer.

Admin also login into their registered account and can view total birth/death registrations, birth/death rate, forecasting information, number of requests and suggestion given by the user.

Future Enhancement:

The proposed birth/death registration consists of many features and in future we want to add some other features like user gets pop-up messages like whether they want to donate blood or organs to the hospital, we want to include data mining concept where we can mine data related to age group and will be notified to the user about schemes, job notifications, vaccination doses. We want to include an option

analytics to the admin. We want to include language conversion option.

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