

# SYSTEM DESIGN

The Aarogya Patrika has a client-server model. It has specific software and hardware architecture. The main task is to integrate these two components to work together.

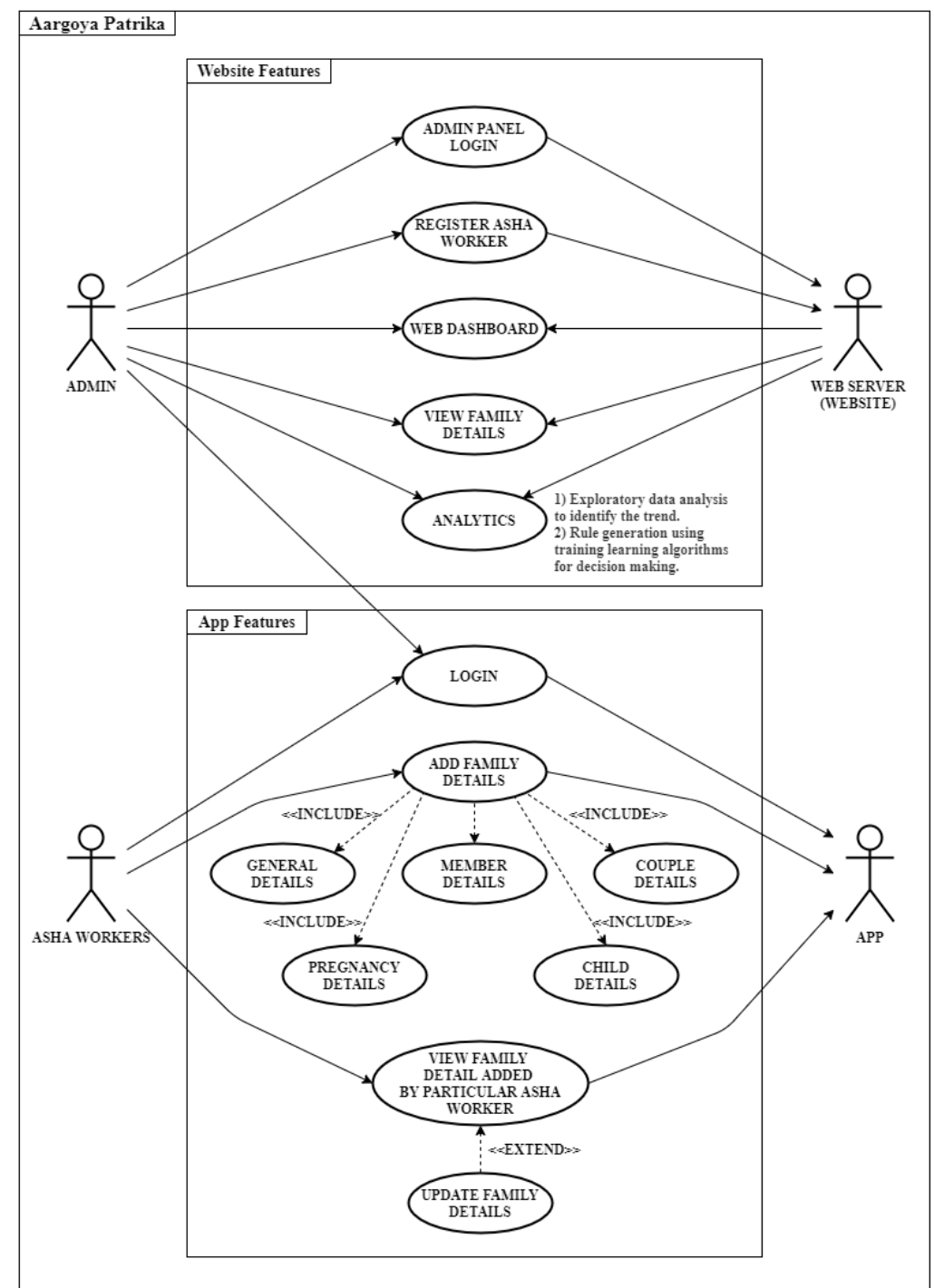
**Software Architecture:** The software architecture is comprised of the database, server and the client application.

**Database:** The database consists of a number of tables; some are fixed while some are created dynamically. These tables storing the data are implemented in MongoDB. MongoDB database is used as it is easy to use, fast and can store large amount of data efficiently requiring a little configuration.

**Client Application:** “The Aarogya Patrika” application is developed in Android studio framework. The application provides an efficient user interface for all the ASHA workers. Android devices being the most popular and affordable of the devices in the world, the android platform was chosen for this system. Moreover, programming in android is easy, user friendly and android has excellent data connectivity.

**Server** The server is deployed on Heroku as it is robust, free and easy to deploy

**Hardware Architecture:** The basic hardware requirement for the system is any device having access to the internet connection which can run the “Aarogya Patrika” app and a server to store the database and host the Smart ASHA website.



Login Page for ASHA: The application is made exclusively for ASHA workers. To prevent the non-authorized users from using the application, ASHA has to login with the username and password given to her by the medical supervisor working at the Primary Health Care centre. On click of the login button, the asynchronous process fetches the personal information of ASHA like her name, contact number, village id and stores the session in local storage for offline use.

Data Visualization: Efficient, meaningful data analysis is at the core of some of today’s most important medical studies. It’s also essential for physicians, nurses, and other health professionals during their day-to-day practice as they interact with health interfaces and databases, generate reports, and review patient information and trends. But a mountain of data is of little use without data visualization. Data visualization brings the most important takeaways in the health industry into focus, helps us identify patterns and correlations, and makes data analysis more efficient.

For all of these reasons, it’s safe to say that the health industry today could hardly survive without data visualization.

Dashboards that help medical professionals quickly analyze large sets of data can save time, and can even save lives. The graphs and charts are custom made, interactive and customizable according to the data viewer wish to visualize.



### List of registered pregnant women:

The data of pregnant women with high-risk pregnancies; , such as swelling in the face or hands, low or high blood pressure, or convulsions and women in their third trimester are shown. Pregnant women who are attending antenatal care are also shown. Using the data, they can be consulted and educated on the importance of ANC services and can refer to them to Village Health Nutrition Days (VHNDs) which are much closer to their homes .

List of pregnant women getting benefit of JSY and PMMY: The beneficiary would be required to fill up the prescribed scheme forms for registration and claim of the instalment and submit the same at the Anganwadi Centre/ approved Health facility.

Family Planning Counselling: The family planning methods used by the couples and details about Family Planning Counselling is available on the portal which will accordingly assist ASHAs to Provides antenatal care, family planning, and immunizations in villages

Show 10 entries													
Sub Center	Village	Area	Pregnant Mother Name	Age	Para	Last Menstrual Date	Expected Date of Delivery	Expected Place of Delivery	Outcome of Pregnancy	Type of Pregnancy	JSY	PMMVY	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	शंकर विवाजी	40	1	Thu Sep 24 2020	Sat Mar 14 2020	VileParle	Female	Schezarion	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	छाया सुनील	25	1	Fri Sep 11 2020	Wed Oct 07 2020	VileParle	Male	Normal	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	झाकीरा रमजान	50	1	Thu Feb 06 2020	Wed Jan 15 2020	VileParle	Male	Normal	yes	yes	More Information
पिलीय	सुळेवाडी	जरावस्ती	जोतीबा पोपट	26	1	Wed Nov 18 2020	Fri Apr 17 2020	VileParle	Male	Schezarion	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	संभाजी दगडू	58	1	Sat Jan 25 2020	Sun Dec 27 2020	VileParle	Female	Normal	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	जाहिदा सियाकत	39	1	Wed Mar 25 2020	Sat Mar 21 2020	VileParle	Male	Normal	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	शारदा वाढा	50	1	Wed Oct 21 2020	Mon Nov 23 2020	VileParle	Female	Schezarion	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	काजल आल्ताफ	21	1	Sun Aug 16 2020	Sat Jun 06 2020	VileParle	Female	Schezarion	yes	yes	More Information
पिलीय	सुळेवाडी	मुजावरवस्ती	हसीना बखीर	13	1	Wed Sep 02 2020	Sat Apr 25 2020	VileParle	Female	Schezarion	yes	yes	More Information

### List of registered pregnant women

DASHBOARD

Sign Out

Select Report:  
Disability

Area:  
All

Subcenter:  
All

Village:  
All

Criteria:  
ear

Search

Show 10 entries

Sub Center	Village	Area	Name of Person	Age	Sex	Disability	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	शरदाती सोमनाथ	23	स्त्री	ear,eye	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	डैचली सोमनाथ	8	स्त्री	ear,ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	धीरनाथ मुन	40	पुरु	ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	सुनील धीरनाथ	15	पुरु	eye,ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	रंजित धीरनाथ	13	पुरु	ortho,ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	सुधांध डामंड	38	स्त्री	ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	सोमनाथ डामंड	10	पुरु	ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	जयनाथ डामंड	14	पुरु	eye,ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	कविशेटाव गामंडे	50	पुरु	other,ear	More Information
इंदेरी	शिर्गोर्वा	गोडवे वस्ती	सुनाथ कविशेटाव	44	स्त्री	ear	More Information

Showing 1 to 10 of 72 entries

Previous12345...8Next

### JSY and PMMY details

Immunization: The ASHA enters the vaccines up to an year that have been given to child. The first cycle of immunization consists of vaccine doses of BCG, Hepatitis B (Birth, 1, 2, and 3), OPV (0, 1, 2 and 3), DPT (1, 2, 3); or equivalent. The pregnant women who are registered by ASHA already and who have now surpassed the due date will appear in a list in this activity. This will make it easier for ASHA to identify newborns and get them registered for the immunization. Not taking the vaccines, pose a high risk on the newborns. It is thus very essential to ensure that every newborn is vaccinated properly.

Records of disease prevalent and different modality used: NCDs(Non-Communicable Diseases) are diseases of long duration. These are non-infectious conditions that cannot be transmitted to other individuals. Five Common NCDs on which ASHAs are trained: Hypertension, Diabetes, Cervical Cancer, Breast Cancer and Oral Cancer . A list of all the people with NCDs are shown to the admin. This will help to faciliate health services; links community members and health facilities; provides community level health services; activist building understanding of health and right to health.

DASHBOARD

Sign Out

Search

Show 10 entries

Sub Center	Village	Area	Name of Child	Sex	Age	BCG	OPV1/ IPV1/ Penta1/ Rota1	OPV2/ Penta2/ Rota2	OPV3/ IPV2/ Penta3/ Rota3	MR1/ VtaA1	DPTB/ OPV6/ MR2/ VtaA2	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	वैष्णवी सोमनाथ	स्त्री	8	Mon Mar 23 2020, Thu Nov 26 2020, Sat Oct 10 2020	Sat Nov 21 2020, Mon Oct 19 2020, Sun Jan 12 2020	Mon Aug 03 2020, Wed Sep 02 2020	Thu Jan 09 2020, Wed Jul 22 2020, Sat Feb 15 2020	Tue Oct 20 2020, Wed Nov 04 2020, Tue Dec 15 2020	Wed Apr 08 2020, Fri Jan 10 2020, Wed Jun 24 2020	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	रामचंद्र तुकाराम काळेले	पु	80	Sat Jul 18 2020, Sat Nov 14 2020, Sun Apr 26 2020	Tue Sep 22 2020, Mon Oct 12 2020, Thu Sep 03 2020	Thu Nov 26 2020, Wed Jun 10 2020, Fri Aug 14 2020	Sat Sep 05 2020, Thu Jul 16 2020, Tue Oct 06 2020	Mon Aug 10 2020, Sun Apr 05 2020, Thu Oct 01 2020	Fri Mar 20 2020, Thu Aug 27 2020, Sun Aug 02 2020	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	ज्ञानेश्वर लक्ष्मण मुंजे	पु	55	Tue Sep 08 2020, Sat May 16 2020, Mon Dec 07 2020	Tue Feb 04 2020, Wed Feb 05 2020, Mon Apr 13 2020	Thu Dec 03 2020, Mon Feb 10 2020, Mon Jul 27 2020	Tue May 12 2020, Sun Dec 27 2020, Sat Feb 08 2020	Thu Feb 12 2020, Thu Jan 09 2020, Mon Apr 06 2020	Tue Dec 01 2020, Thu Aug 27 2020, Thu Jun 04 2020	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	महेश कारीलाल	पु	8	Tue Jun 09 2020, Wed Mar 18 2020, Fri Mar 13 2020	Wed Aug 05 2020, Mon Sep 07 2020, Mon Apr 13 2020	Tue Jun 16 2020, Sun Mar 08 2020, Tue Sep 08 2020	Sun Feb 02 2020, Fri Oct 09 2020, Sat Jun 06 2020	Tue Jul 14 2020, Thu Mar 19 2020, Fri Nov 27 2020	Wed Dec 16 2020, Fri Oct 17 2020, Tue Feb 18 2020	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	जनाबाई ज्ञानेश्वर	स्त्री	50	Sat Feb 08 2020, Mon Apr 20 2020, Mon Jan 13 2020	Tue Jan 21 2020, Mon Jan 13 2020, Mon Dec 14 2020	Sun Mar 08 2020, Fri Jan 24 2020, Tue Nov 17 2020	Wed Aug 05 2020, Sun Dec 06 2020, Wed Feb 12 2020	Fri Dec 11 2020, Wed Mar 04 2020, Sun Dec 20 2020	Wed May 13 2020, Wed May 13 2020, Sat Jan 04 2020	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	शितल गोपाळ गोडसे	स्त्री	23	Sun Apr 26 2020, Thu Oct 08 2020, Mon Jul 20 2020	Tue Dec 15 2020, Fri Apr 24 2020, Wed Jul 08 2020	Sun Aug 02 2020, Sun May 17 2020, Tue Aug 18 2020	Sun Sep 06 2020, Sat May 23 2020, Mon Oct 19 2020	Thu Aug 20 2020, Wed Mar 11 2020, Tue Aug 18 2020	Sun Sep 27 2020, Wed Jan 22 2020, Wed Mar 08 2020	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	लक्ष्मी गोपाळ गोडसे		32	Mon Apr 06 2020, Thu Aug 20 2020, Sat Oct 03 2020	Wed Nov 04 2020, Tue Dec 08 2020, Fri Oct 23 2020	Tue Mar 03 2020, Sat Jan 04 2020, Thu Nov 12 2020	Tue Jun 23 2020, Sat Jun 13 2020, Mon Apr 20 2020	Tue Jul 07 2020, Sun Nov 15 2020, Sat Jan 04 2020	Mon Jan 06 2020, Mon May 18 2020, Wed Apr 22 2020	More Information
बचेरी	शिगोर्गी	मोगाणे वस्ती	सुभाष उत्तम खिलारे	स्त्री	35	Sun Nov 15 2020, Sun Mar 22 2020, Tue Sep 22 2020	Tue Jan 14 2020, Thu Oct 08 2020, Sat Mar 07 2020	Mon Nov 09 2020, Mon Nov 09 2020, Thu Apr 09 2020	Sat Nov 21 2020, Sat Oct 03 2020, Sun Mar 08 2020	Sun Oct 11 2020, Sat Jan 27 2020, Sat May 20 2020	Sat Jul 25 2020, Mon Feb 16 2020, Fri Sep 04 2020	More Information
बचेरी	शिगोर्गी	मोगाणे वस्ती	उत्तम अण्णा खिलारे	पु	51	Mon Apr 06 2020, Tue Jun 02 2020, Wed Apr 01 2020	Wed Jan 01 2020, Tue Feb 25 2020, Fri Jun 26 2020	Sat Sep 19 2020, Sun Oct 11 2020, Sat Mar 14 2020	Tue Nov 17 2020, Wed Jan 01 2020, Sat Jul 04 2020	Wed Oct 07 2020, Mon Oct 05 2020, Thu Jul 23 2020	Sat Mar 14 2020, Tue Mar 10 2020, Sun Mar 15 2020	More Information
बचेरी	शिगोर्गी	मोगाणे वस्ती	रेखा देसा	स्त्री	38	Sun Feb 16 2020, Sat Dec 26 2020, Tue Nov 03 2020	Mon Jul 20 2020, Mon Oct 12 2020, Fri May 01 2020	Sun Dec 27 2020, Sun Oct 11 2020, Sun Oct 11 2020	Tue Sep 15 2020, Wed Jan 15 2020, Fri Nov 13 2020	Sun Oct 18 2020, Mon Dec 07 2020, Wed Jun 03 2020	Sun Apr 12 2020, Fri Oct 09 2020, Thu Jul 23 2020	More Information

Immunization details

Show 10 entries

Sub Center	Village	Area	Name of Person	Age	Sex	Disease	Modality	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	रुपारी सोमनाथ	23	स्त्री	cancer,heart disease		More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	दयानंद भागवत	40	पु	heart disease	Ayurvedic	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	सुमन कालिदास	44	स्त्री	heart disease,bp	Homeopathy,Ayurvedic	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	ज्ञानेश्वर लक्ष्मण मुंजे	55	पु	heart disease,bp	Aloepathy,Aloepathy	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	लक्ष्मी गोपाळ गोडसे	32		heart disease	Aloepathy,Ayurvedic	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	सिंधू उत्तम खिलारे	50	स्त्री	heart disease	Homeopathy	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	वनिता बाबासो	35	स्त्री	heart disease,other	Ayurvedic,Aloepathy	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	सचिन बाबासो	12	पु	heart disease,bp	Aloepathy	More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	सुमन कालिदास	44	स्त्री	other heart disease		More Information
बचेरी	शिगोर्गी	गोडसे वस्ती	जनाबाई ज्ञानेश्वर	50	स्त्री	heart disease,bp	Aloepathy	More Information

Showing 1 to 10 of 46 entries

Previous12345Next

Different Diseases present in the area and the modality used

MongoDB: NoSQL databases were created in response to the limitations of traditional relational database technology. When compared to relational databases, NoSQL databases are often more scalable and provide superior performance. In addition, the flexibility and ease of use of their data models can speed development in comparison to the relational model, especially in the cloud computing environment.

Advantages:

Handle large volumes of data at high speed with a scale-out architecture

Store unstructured, semi-structured, or structured data

Enable easy updates to schemas and fields

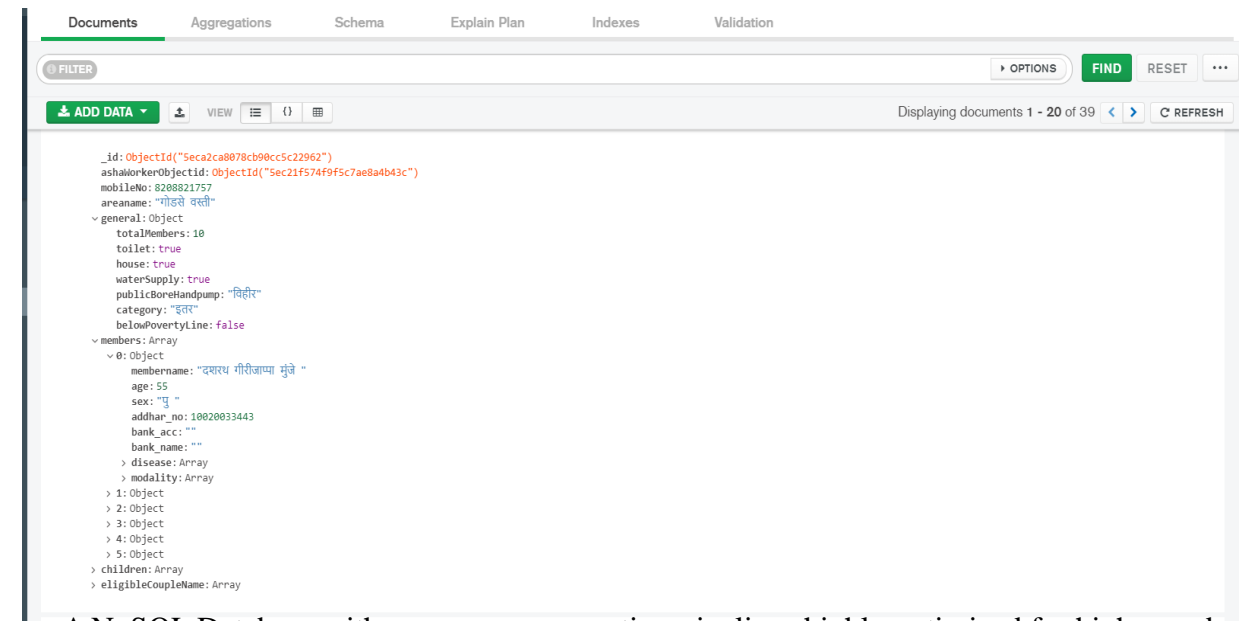
Be developer-friendly

Take full advantage of the cloud to deliver zero downtime

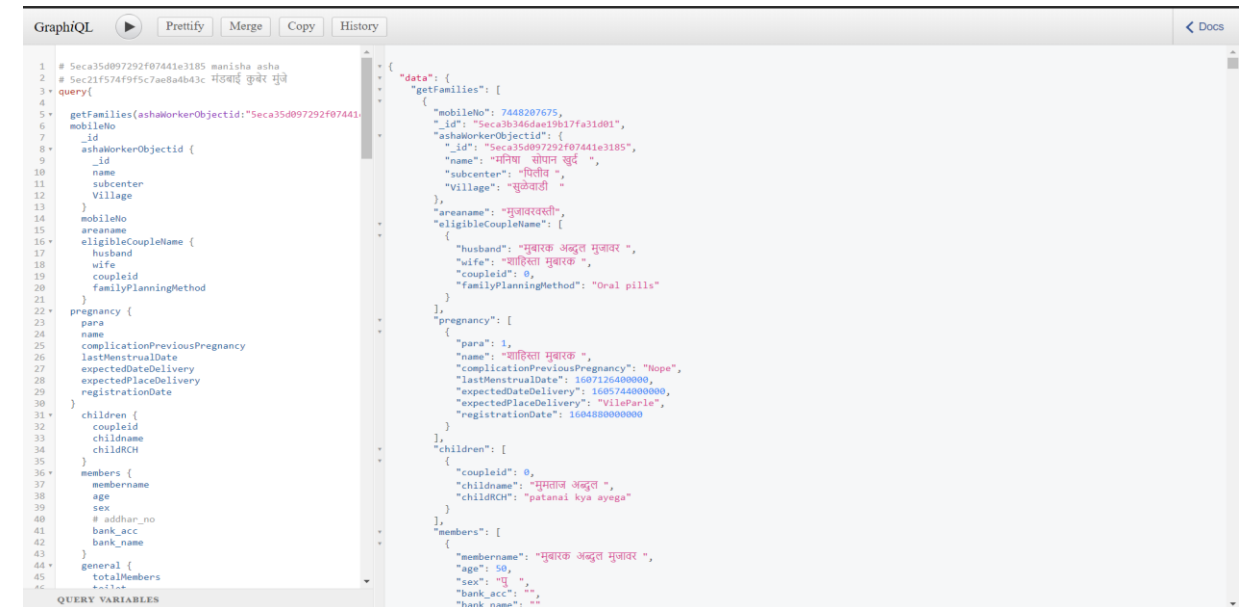
GraphQL: At its core, GraphQL is a language for querying databases from client-side applications. On the backend, GraphQL specifies to the API how to present the data to the client. GraphQL redefines developers' work with APIs offering more flexibility and speed to market; it improves client-server interactions by enabling the former to make precise data requests and obtain no more and no less, but exactly what they need.

GraphQL advantages:

- Good fit for complex systems and micro services
- Fetching data with a single API call.
- Auto generating API documentation
- Detailed error messages



A NoSQL Database with necessary aggregation pipelines highly optimized for high speed data retrieval operations



A GraphQL API for interaction of the Mobile App and website with the MongoDB Database

Home

General Information

गाव

शिंदोर्णी

शौचालय

☒ आहे
 ☐ नाही

दारिद्र्य रेषेखाली

☒ आहे
 ☐ नाही

घर

☒ कच्चे
 ☐ पक्के

पाणी पुरवठा

☒ सार्वजनिक
 ☐ बोअर
 ☐ विहीर
 ☐ हातपंप

प्रवर्ग अनुसूचित जाती/अनु.जमाती/इतर

☐ प्रवर्ग अनुसूचित जाती
 ☒ अनु.जमाती
 ☐ इतर

Save Information

Home

मागील सदस्यांचा तपशील

अभय सोमनाथ

Member 2 Details

नाव

जनाबाई सोमनाथ

वय किंवा DD/MM/YYYY

24

लिंग

☐ पुरुष
 ☒ स्त्री
 ☐ इतर

आधार क्र

8956435616546523

बँक खाते क्र

692869195832

बँकेचे नाव

सेंट्रल बँक ऑफ इंडिया

मोबाइल नंबर

9892506287

अपंगत्व प्रकार

☐ ओंठो
 ☐ डोळा
 ☒ कान

इतर

इतर अपंगत्व असल्यास

रोग

☐ हृदय रोग
 ☐ उच्च रक्तदाब
 ☐ टीबी
 ☒ कर्करोग
 ☐ कुष्ठरोग
 ☐ मधुमेह

रोग

☐ हृदय रोग
 ☐ उच्च रक्तदाब
 ☐ टीबी
 ☒ कर्करोग
 ☐ कुष्ठरोग
 ☐ मधुमेह

इतर

इतर रोग असल्यास

रोगाचा उपचार पद्धती

☐ होमिओपॅथी
 ☐ अ‍ॅलोपॅथी
 ☐ आयुर्वेदिक

इतर

इतर उपचार पद्धत असल्यास

Add Member

Next

Household and Member details collected by ASHAs

Home

सदस्याच्या नावाने शोधा (Search by member name)

सोमनाथ

शोध (Search)

कुटुंब (Family) 1

अभय सोमनाथ

जनाबाई सोमनाथ

विकास सोमनाथ

सृष्टी सोमनाथ

+

Add Couple

Next

Couple 1 Details

नवरा

अभय सोमनाथ

बायको

जनाबाई सोमनाथ

Currently used family method planning

☐ कॉपर टी

☒ निरोध

☐ गर्भनिरोधक गोळ्या

☐ अंतरा

☐ नसबंदी

☐ काहीही नाही

Couple ID

25

एकूण पुरुष मुले

1

एकूण महिला मुले

1

जनाबाई सोमनाथ

Currently used family method planning

☐ कॉपर टी

☒ निरोध

☐ गर्भनिरोधक गोळ्या

☐ अंतरा

☐ नसबंदी

☐ काहीही नाही

Couple ID

25

एकूण पुरुष मुले

1

एकूण महिला मुले

1

शेवटचे मुलाचे वय

6

अंतिम मुलाचे लिंग

☒ पुरुष

☐ स्त्री

☐ इतर

+

Add Couple

Next

Couple Information collected by ASHAs



+ Add Pregnant Information

Pregnant 1 Details

आईचे नाव

जनाबाई सोमनाथ

Para

3

मागील गरोदरपणात संकलन

नाही

शेवटच्या मासिक पाळी ची तारीख

2/8/2020

प्रसूतीची अपेक्षित तारीख

9/4/2021

प्रसूतीचे अपेक्षित ठिकाण

मुंबई

JSY

☒ Yes ☐ No

Paid Amount

700

Select benifit date

वितरण?

☐ Yes ☒ No

Add Child

Upload Details

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### Child 1 Details

मुलाचे नाव

विकास सोमनाथ

वडीलांचे नाव

अभय सोमनाथ

आईचे नाव

जनाबाई सोमनाथ

OPV

+ Add date

B2VIT

Date

15/8/2020

Date

2/9/2020

+ Add date

BCG

+ Add date

OPV1\_IPV1\_Penta1\_Rota1

+ Add date

OPV\_2\_Penta\_2\_Rota\_2

Date

23/8/2020

+ Add date

OPV\_3\_IPV2\_Penta3\_Rota3

Date

16/8/2020

Date

26/9/2020

+ Add date

MR1\_VitA1

+ Add date

DPTB\_OPVB\_MR2\_VitA2

+ Add date

मातेचा RCH ID

456

+ Add Child

Upload Details

## Pregnancy and child details