

# VAXTRAIL

THE VACCINE  
BOOKING AND  
INFORMATION  
PLATFORM



# INNOVATION



We designed an online vaccine booking or distribution system, helping users to tackle the current pandemic. It's a completely online system which would promote digitization and even promote social distancing as slots for vaccination would be available at the nearest hospital everyday thus reducing/ minimizing the risk of overcrowding.

Our project will help to keep things in order, maintaining proper records. Users will be notified about their appointment using mail and SMS.

Also we developed a way that gives priority to the senior citizens in the process, also they will be able to choose time slots as per their ease.

Users can (after 5 days of their vaccination give appropriate feedback) which can provide information about the effectiveness of vaccines.



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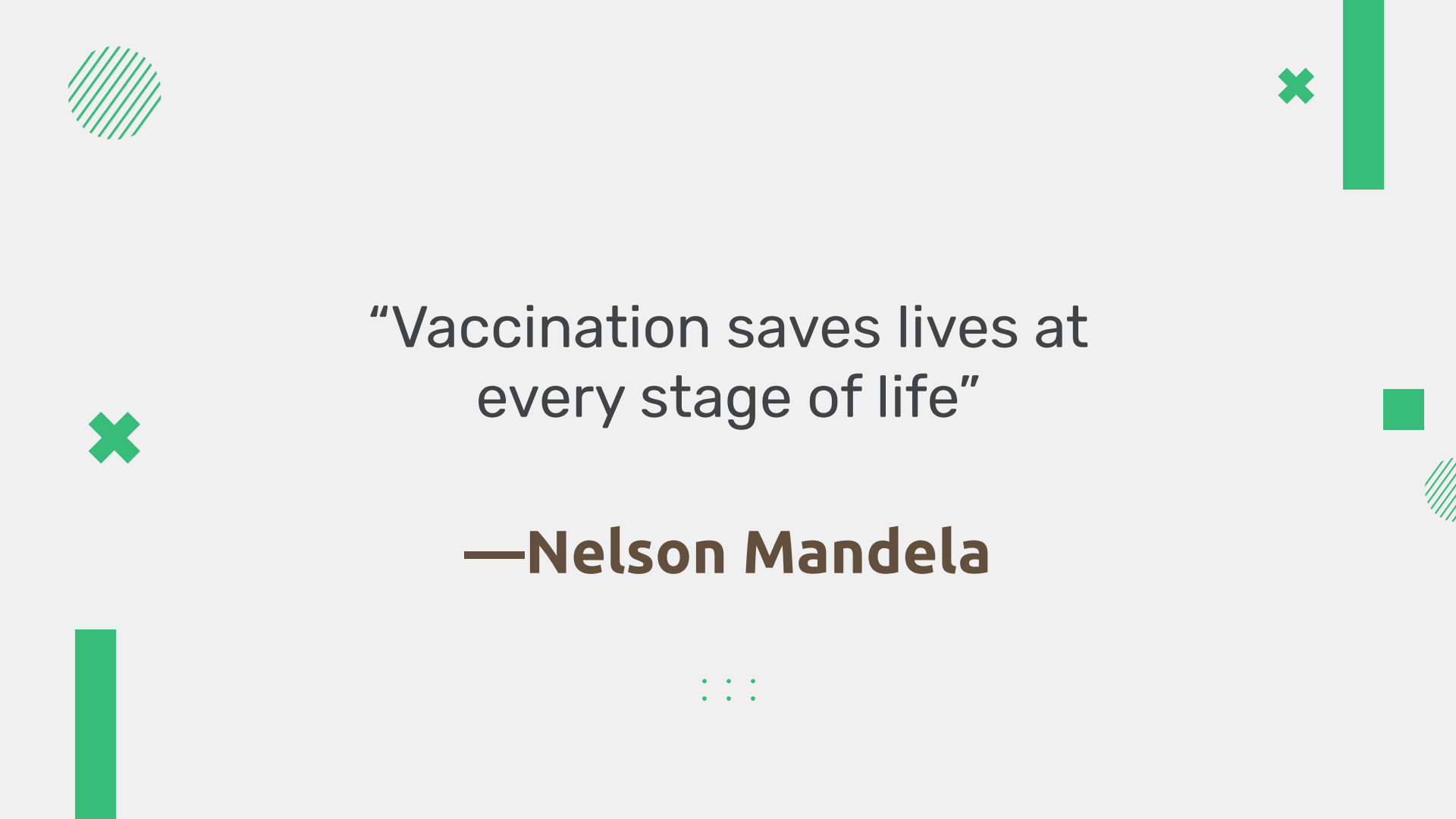
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“Vaccination saves lives at  
every stage of life”

—**Nelson Mandela**

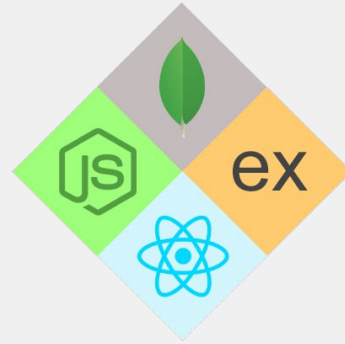


# 01

## About the Database

# TECHNOLOGY USED

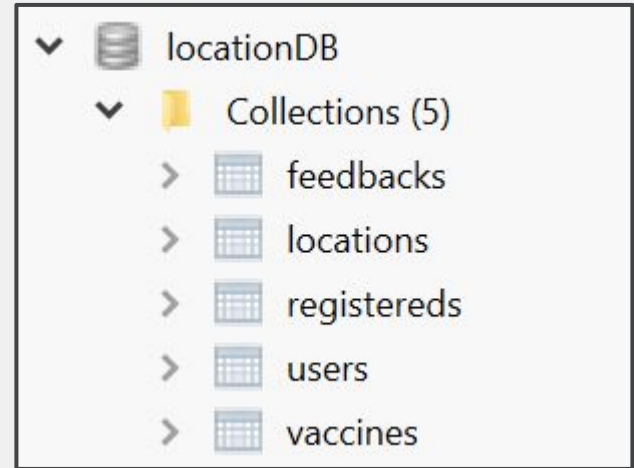
We have created a MERN based project using MongoDB for database management, a popular NoSQL database management software, we will be using ReactJS for designing the front end and Express and Node JS for designing the backend, thus making it as a full stack project.



# DATABASE DESCRIPTION

We have used 5 tables to store and use the data accordingly.

- **Feedbacks** -Stores the feedbacks of users.
- **Locations**-Stores the details and coordinates of the hospitals.
- **Registereds**- Stores the details of the registered users.
- **Users** -Stores the details of admin login.
- **Vaccines**-Stores the different vaccine details available in the country.



Collections

# FEEDBACK



▼	🔍 (1) ObjectId("606eff6c62f55512acc38ed3")	{ 8 fields }	Object
	🔍 _id	ObjectId("606eff6c62f55512acc38ed3")	ObjectId
>	🔍 userDetails	{ 18 fields }	Object
	🔍 health	Fine	String
	🔍 sideEffects	No	String
	🔍 name	Dhruv Kumar	String
	🔍 date	2021-04-03	String
	🔍 bid	606edf250a76ae494808b1f9	String
	🔍 __v	0	Int32





# FEEDBACK (Schema) ✖

```
const feedbackSchema = mongoose.Schema({
  userDetails: { type: registered.registeredSchema, required: true },
  health: { type: String, required: true },
  sideEffects: { type: String, required: true },
  name: { type: String, required: true },
  date: { type: String, required: true },
  bid: { type: String, required: true },
});
```

# Location

▼	📍 (1) ObjectId("6044901dad4cc4551064cfb3")	{ 7 fields }	Object
	📄 _id	ObjectId("6044901dad4cc4551064cfb3")	ObjectId
	📄 type	pvt	String
	📄 name	B.L Kapoor Hospital, Rajendra Place	String
	📄 contact	011 3040 3040	String
	📄 website	<a href="https://www.blkhospital.com/">https://www.blkhospital.com/</a>	String
	📄 directions	<a href="https://www.google.com/maps/dir/28.6514198,77.178...">https://www.google.com/maps/dir/28.6514198,77.178...</a>	String
▼	📍 location	{ 2 fields }	Object
	📄 type	Point	String
▼	📍 coordinates	[ 2 elements ]	Array
	📄 [0]	77.1796836391836	Double
	📄 [1]	28.6435105309367	Double

# Location (Schema)

```
const locationSchema = mongoose.Schema({  
  type: { type: String, required: true },  
  name: { type: String, required: true },  
  contact: { type: String },  
  website: { type: String },  
  directions: { type: String },  
  location: { type: Object, required: true },  
});
```

# Registered

▼ (1) ObjectId("606c8b90d9a65b43d4ca90e2")	{ 18 fields }	Object
_id	ObjectId("606c8b90d9a65b43d4ca90e2")	ObjectId
fname	Dhruv	String
lname	Kumar	String
gender	Male	String
address	E 16/21 Karol Bagh New Delhi	String
city	New Delhi	String
state	Delhi	String
zip	110005	String
phone	9818006088	String
email	cool.dhruv225@gmail.com	String
> shospital	{ 7 fields }	Object
dob	2021-04-07	String
> slot	{ 2 fields }	Object
appointmentDateandTime		String
appointmentDate	2021-04-08	String
age	0	Int32
date	Tue Apr 06 2021 21:55:52 GMT+0530 (India Standard ...	String

# Registered (Schema)

```
const registeredSchema = mongoose.Schema({  
  fname: { type: String },  
  lname: { type: String },  
  gender: { type: String },  
  address: { type: String },  
  city: { type: String },  
  state: { type: String },  
  zip: { type: String },  
  phone: { type: String },  
  email: { type: String },  
  shospital: { type: location.locationSchema },  
  dob: { type: String },  
  slot: { type: Object },  
  appointmentDateandTime: { type: String },  
  appointmentDate: { type: String },  
  age: { type: Number },  
  date: { type: String },  
});
```

# Users

▼ ⓘ (1) ObjectId("606e5e34e2731607e09460c7")	{ 6 fields }	Object
_id	ObjectId("606e5e34e2731607e09460c7")	ObjectId
firstName	DG	String
lastName	1	String
email	admin@abc.in	String
password	21232f297a57a5a743894a0e4a801fc3	String
__v	0	Int32

# Vaccines

▼ ⓘ (1) ObjectId("60588b077823ae46e828d206")	{ 7 fields }	Object
_id	ObjectId("60588b077823ae46e828d206")	ObjectId
name	Covaxin	String
about	Bharat Biotech, a 24-year-old vaccine maker, has a portf...	String
website	<a href="https://www.bharatbiotech.com/covaxin.html">https://www.bharatbiotech.com/covaxin.html</a>	String
status	Available in India	String
efficacy	81	Int32
__v	0	Int32

# Users

```
const user = new Schema({
  hospital: {type: hospital.locationSchema},
  vaccine: {type: vaccine.vaccineSchema},
  registered: {type: registered.registeredSchema},
  firstName: { type: String },
  lastName: { type: String },
  email: { type: String },
  password: { type: String },
});
```

# Vaccines

```
const vaccineSchema = mongoose.Schema({
  name: String,
  about: String,
  website: String,
  status: String,
  efficacy: Number
});
```



02

Sneak Peek







# COVID-19 VACCINE BOOKING PLATFORM

REGISTER YOURS



## COVID-19 STATS FOR INDIA

### RECOVERED

12953821

### DEATHS

178769

### ACTIVE

1929329

### TOTAL

15061919

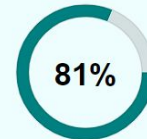
### TODAY

272191

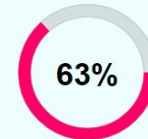
### VACCINATED

123852566

## SOME TOP VACCINES



Covaxin



Covshield



Sputnik V

\*As per the reports of WHO



Data for covid-19 stats have been taken from the mohw.in website

## LATEST COVID-19 NEWS



### **Serum Institute delays expected launch of Novavax vaccine in India - Reuters**

The launch in India of a new COVID-19 vaccine developed jointly by the Serum Institute of India and U.S.-based biotech firm Novavax is likely to be delayed to September, the Indian company's boss said on Saturday.



### **Coronavirus pandemic 'a long way from over', WHO's Tedros says - Reuters**

Confusion and complacency in addressing COVID-19 means the pandemic is a long way from over, but it can be brought under control in months with proven public health measures, WHO Director-General Tedros Adhanom Ghebreyesus said on Monday.



### **World's largest vaccine manufacturer pauses exports amid surge in India's cases**

Exports of the Oxford/AstraZeneca vaccine from the world's largest vaccine manufacturer, the Serum Institute of India, have been paused as India grapples...



# 03

## Functionalities



## Nearby Hospitals

View Hospitals near you  
and get directions



## Registration

Register for your vaccine  
by filling a simple form .



## Application Status

View your appointment  
(i.e your date and time slot)



## Admin controls

Admin can modify vaccine  
and hospital details and  
view the applicants



## SMS and Email Confirmation

User gets an Email and  
SMS confirmation of their  
appointment



## Feedback

One can give his/her  
health related  
feedback/review after  
vaccination



# Nearby Hospitals



VaxTrail

STATUS HOSPITALS VACCINES

Show All Hospitals

## B.L Kapoor Hospital, Rajendra Place

**Type:** Private

**Contact:** 011 3040 3040

**Website:** <https://www.blkhospital.com/>

Go to Website

Get Directions

## Sardar Vallabhai Patel Hospital, Patel Nagar

**Type:** Government

**Contact:** 011 2588 1201

**Website:** <https://www.nhp.gov.in/hospital/sardar-vallabh-bhai-patel-hospital-central-delhi>

Go to Website

Get Directions



# Registration

## Vaccine Booking

1 Enter Details — 2 Review Appointment — 3 Payment Details

### Enter Your Details

First name \*

Ramesh

Last name \*

Kumar

Gender

Male

Address \*

E 16/21 Karol Bagh

City \*

Central Delhi

State/Province/Region

Delhi

Zip / Postal code \*

110005

Phone number \*

+919818006088

Date Of Birth

01-04-2021



Email \*

ramesh@gamil.com

Hospitals

Sardar Vallabhai Patel Hospital, Patel Nagar, Government ▾

Select A Nearby Hospital

Appointment Date

24-04-2021



Select a suitable date

Slots

12:00 To 12:30 ▾

Select A Time Slot

NEXT

## Vaccine Booking

✓ Enter Details — 2 Review Appointment — 3 Payment Details

### Order summary

Corona Vaccine

Corona Vaccine Dose 1

Free

Corona Vaccine

Corona Vaccine Dose 2

Free

Total

Free

### Personal Details

Ramesh Kumar

E 16/21 Karol Bagh, Central Delhi,

Delhi, 110005

+919818006088

ramesh@gamil.com

DOB: 2021-04-01

### Vaccination Details

Sardar Vallabhai Patel Hospital,  
Patel Nagar

Date: 2021-04-24

Slot: 12:00-12:30

[Go to the Website](#)

[View Directions](#)

BACK

NEXT





# Application Status



VaxTrail

STATUS HOSPITALS VACCINES

**Name:** Aman Verma

**Gender:** Male

**Registered on:** Thu Apr 08 2021 19:56:29 GMT+0530 (India Standard Time)

**Date of birth:** 2002-01-12

**Address:** E 16/21 Karol Bagh, New Delhi, Delhi, 110005

**Phone:** +919818006088

**Email:** cool.dhruv225@gmail.com

**Name of the hospital:** B.L Kapoor Hospital, Rajendra Place

**Appointment Date:** 2021-03-31

**Chosen Slot:** 12:00-12:30

\*Time is in 24H format

Feedback

View Website

Get Directions







# Admin

## Personal Details

**Name:** Dhruv Kumar

**Gender:** Male

**DOB:** 2021-04-07

**Phone:** 9818006088

**Email:** cool.dhruv225@gmail.com

**Address:** E 16/21 Karol Bagh New Delhi, New Delhi, Delhi, 110005

## Other Details

**Booking ID:** 606c8b90d9a65b43d4ca90e2

**Registered On:** Tue Apr 06 2021 21:55:52

**Hospital Chosen:** B.L Kapoor Hospital, Rajendra Place, Private

**Appointment Date:** 2021-04-08

**Chosen Slot:** 09:00-09:30 (\*24hr format)

## Personal Details

**Name:** Dhruv Kumar

**Gender:** Male

**DOB:** 2021-04-07

**Phone:** +919818006088

**Email:** cool.dhruv225@gmail.com

**Address:** E 16/21 Karol Bagh New Delhi, New Delhi, Delhi, 110005

## Other Details

**Booking ID:** 606c8c459e68b7432c66a195

**Registered On:** Tue Apr 06 2021 21:58:53

**Hospital Chosen:** B.L Kapoor Hospital, Rajendra Place, Private

**Appointment Date:** 2021-04-10

**Chosen Slot:** 10:30-11:00 (\*24hr format)

## Personal Details

**Name:** Dhruv Kumar

**Gender:** Male

**DOB:** 1960-03-22

**Phone:** 9818006088

**Email:** dhruv.kumar.22012001@gmail.com

## Other Details

**Booking ID:** 606edf250a76ae494808b1f9

**Registered On:** Thu Apr 08 2021 16:17:01

**Hospital Chosen:** Sardar Vallabhai Patel Hospital, Patel Nagar, Government

**Appointment Date:** 2021-04-03

**Appointment Time:** 10:30 (\*24hr format)



# Email and SMS confirmation



**vaxtrail.portal247@gmail.com**

to me ▾

Vaccine Booked!

Thank You for registering for the Vaccination Program.

Your Booking ID: **606edf950a76ae494808b200**

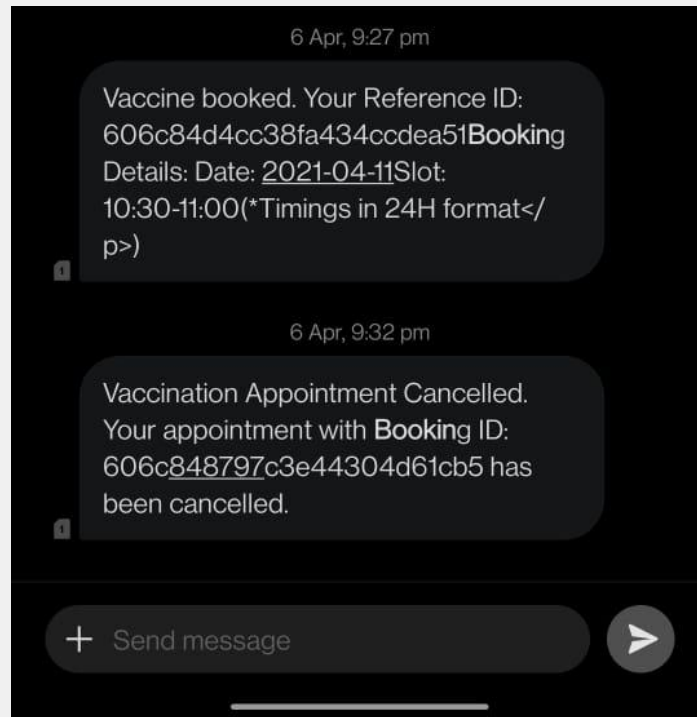
Keep this mail for future reference.

Stay safe and healthy!

## Booking Details:

Date and Time: 2021-04-11 10:30

\*Timings in 24H format





## Feedbacks

**Booking ID:** 606edf250a76ae494808b1f9

**Name:** Dhruv Kumar

**Vaccinated On:** 2021-04-03

**Side Effects:** No

**Health:** Fine

**Booking ID:** 606f129562f55512acc38f96

**Name:** Aman Verma

**Vaccinated On:** 2021-03-31

**Side Effects:** No

**Health:** Mild Fever during night time

# CONCLUSION



Referring to various research, conference papers as well as keeping in mind the current conditions the pandemic going on we designed an interactive vaccine booking system / platform. The front end provides proper interaction to the backend / database to whoever is using the website.

With the help of this project we learnt about a new technology i.e MongoDB, a noSQL database and discovered the flexibility and features it provides in order to make such projects. The project also gave us the opportunity to learn in depth about the ongoing pandemic which currently dismantled a lot of aspects of our lives.



04

References



[1]X. Zhang, P. Yu, J. Yan and H. Hu, "Developing an Online Patient Appointment Scheduling System Based on Web Services Architecture", ResearchGate, 2012.

[2]V. Akshay, A. Kumar S., R. M. Alagappan and S. Gnanavel, "BOOKAZOR - an Online Appointment Booking System," 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN), Vellore, India, 2019, pp. 1-6, doi: 10.1109/ViTECoN.2019.8899460.

[3]P. Gommans and M. Wangari, "Waithaka Health Centre Immunization Information System", International Journal of Scientific and Research Publications, vol. 4, no. 10, 2014.





[4]T. Renck and L. Sorgetz, "VCS: An Open Source Web-based Vaccination Management Information System", Proceedings of the Third International Conference on Web Information Systems and Technologies, 2007. doi: 10.5220/0001283002420246.

[5]B. Kifana and M. Abdurohman, "Great Circle Distance Method for Improving Operational Control System Based on GPS Tracking System", International Journal on Computer Science and Engineering, vol. 4, no. 4, pp. 647-651, 2012.

[6]"Geospatial Query Operators — MongoDB Manual", Docs.mongodb.com, 2019. [Online]. Available:<https://docs.mongodb.com/manual/reference/operator/query-geospatial/>.



# The whole world is affected!!!

So lets stay safe  
and healthy and  
take care of our  
family .





# THANK YOU

