

1. Project Scope (Predico)

- The disease prediction system have 3 users such as doctor, patient and admin.
- Each user of the system are authenticated by the system.
- There is a role based access to the system.
- The system allows the patient to give symptoms and according to those symptoms the system will predict a disease.
- The system suggests doctors for predicted diseases.
- The system allows online consultation for patients.
- The system helps the patients to consult the doctor at their convenience by sitting at home.

2. TECHNOLOGY USED

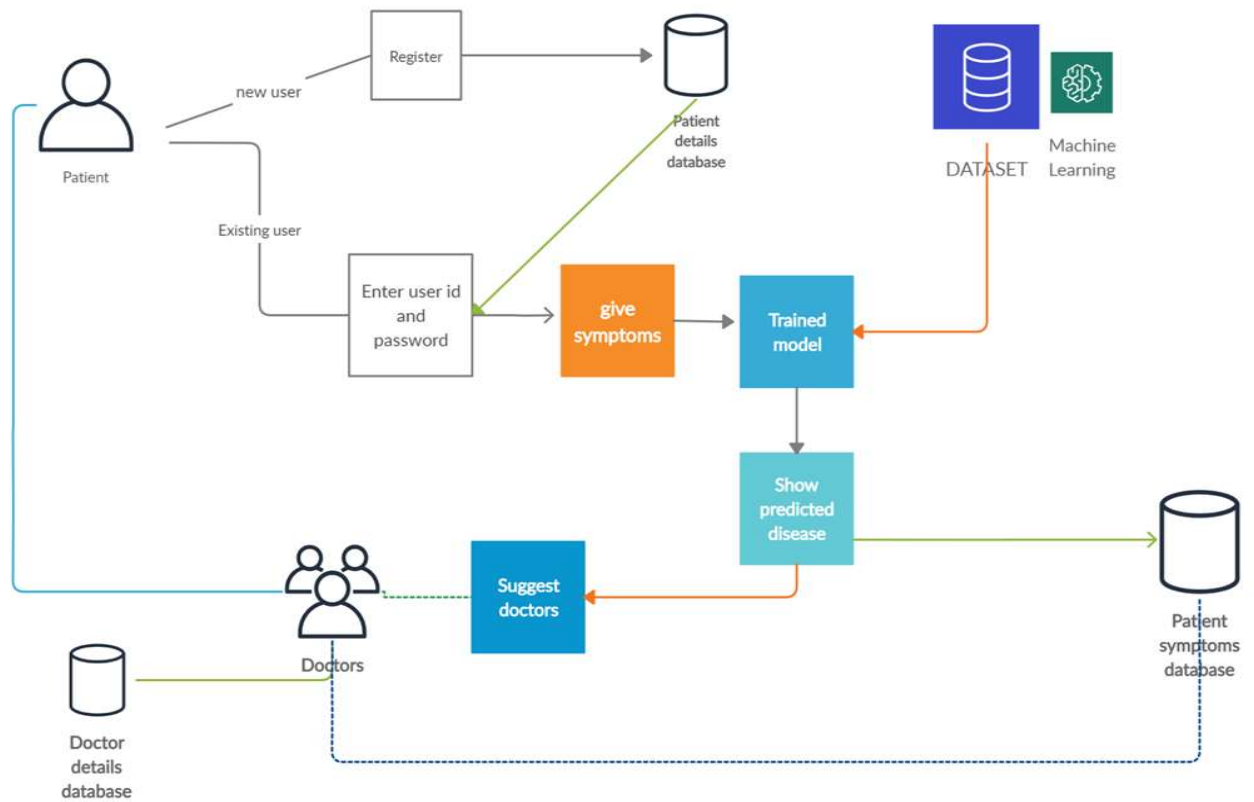
Front end: HTML, CSS , Bootstrap, Javascript, JQuery

Back end: Django (python based web framework)

Database: PostgreSQL

Tools: PgMyadmin, Orange

3. Architecture of the System



4. Data collection

Data collection has been done from the internet to identify the disease here the real symptoms of the disease are collected i.e. no dummy values are entered.

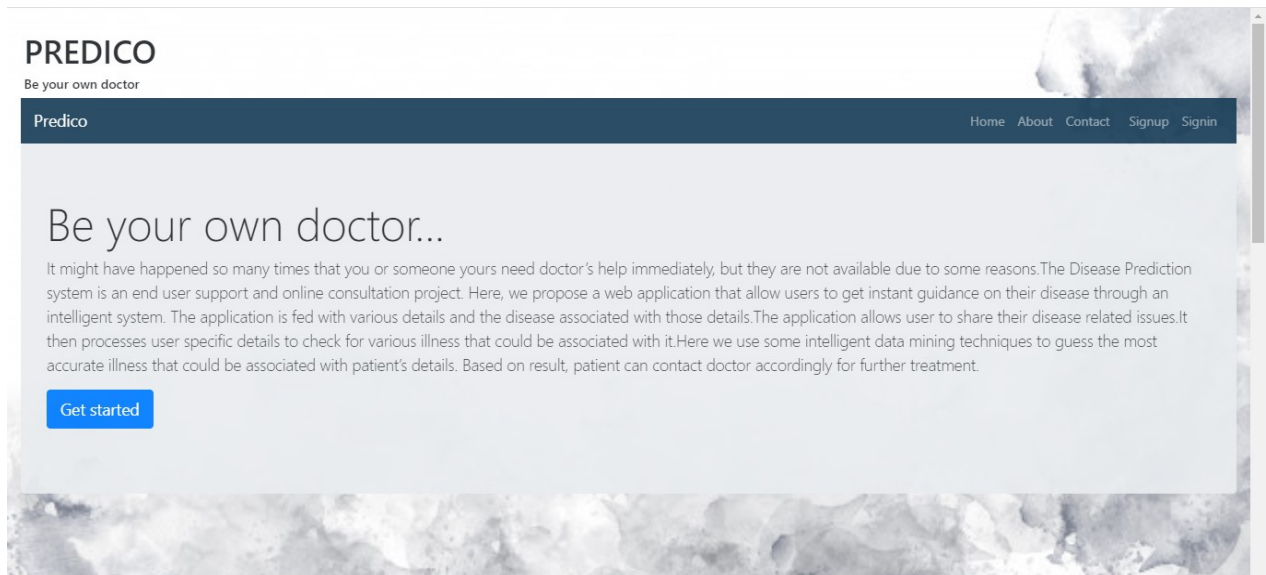
The symptoms of the disease are collected from kaggle.com and different health related websites. This csv file contain 5000 rows of record of the patients with their symptoms(132 types of different symptoms) and their corresponding disease(40 class of general disease) .

Some rows of disease with their corresponding symptoms in the dataset are -

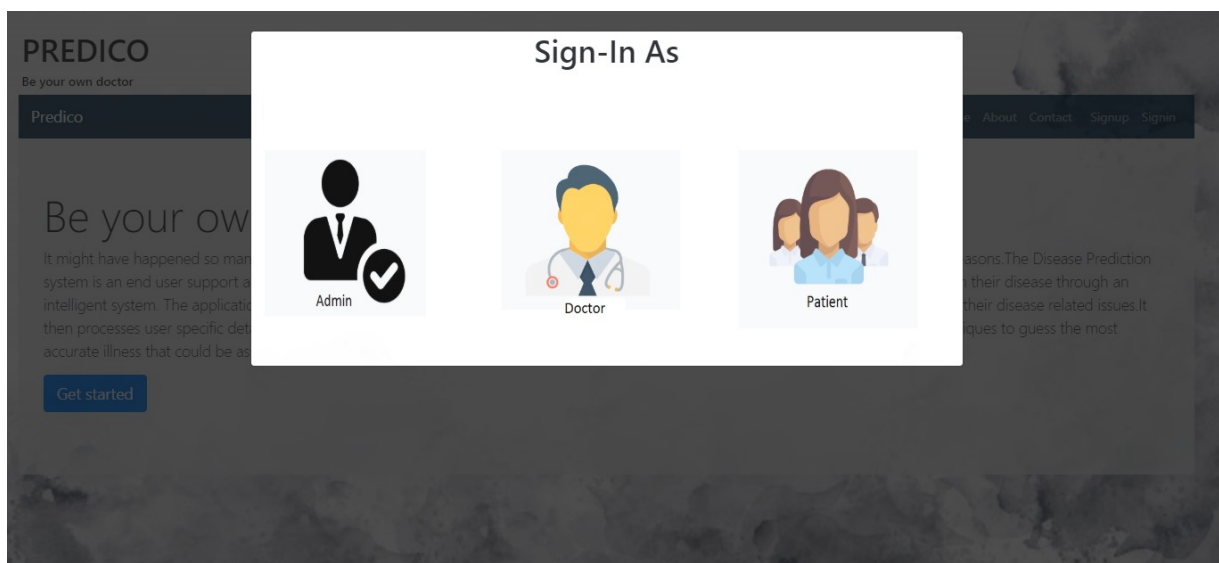
	Disease	Symptoms
0	Malaria	[chills, vomiting, high_fever, sweating, heada...
1	Allergy	[continuous_sneezing, shivering, chills, water...
2	Fungal infection	[skin_rash, nodal_skin_eruptions, dischromic _...
3	Gastroenteritis	[vomiting, sunken_eyes, dehydration, diarrhoea]
4	arthritis	[muscle_weakness, stiff_neck, swelling_joints,...
5	Typhoid	[chills, vomiting, fatigue, high_fever, headac...
6	Hypertension	[muscle_weakness, stiff_neck, swelling_joints,...

5. Webpages-

Homepage-



Login Modal-



Login as Patient-

The screenshot shows the 'Login as Patient' page of the Predico application. The header includes the Predico logo with the tagline 'Be your own doctor' and a navigation bar with links for Home, About, Contact, Signup, and Signin. The main heading is 'Login as Patient'. Below this, there are two input fields: 'Username' with a person icon and 'Password' with a lock icon. Both fields have placeholder text 'Type your username' and 'Type your password' respectively. A link for 'Forgot password?' is located below the password field. A large, rounded 'LOGIN' button with a blue-to-purple gradient is positioned at the bottom of the form area.

PREDICO
Be your own doctor

Predico

Home About Contact Signup Signin

Login as Patient

Username
Type your username

Password
Type your password

[Forgot password?](#)

LOGIN

Patient UI-

The screenshot displays the 'Patient Profile' page. The header is identical to the login page, but the navigation bar includes 'Hello, itishree' and a 'Profile' link, with a 'Log out' button. The main heading is 'Patient Profile'. On the left, there is a profile card featuring an illustration of three people, the title 'Patient', and the following details: 'Patient name : itishree', 'Patient ID - 2', and 'Patient email - itishreebehera2018@gmail.com'. A 'View Profile' button is at the bottom of the card. To the right of the card, there are three buttons: 'check disease', 'view consultation history', and 'Give feedbacks'.

PREDICO
Be your own doctor

Predico

Home About Contact **Hello, itishree** Profile Log out

Patient Profile

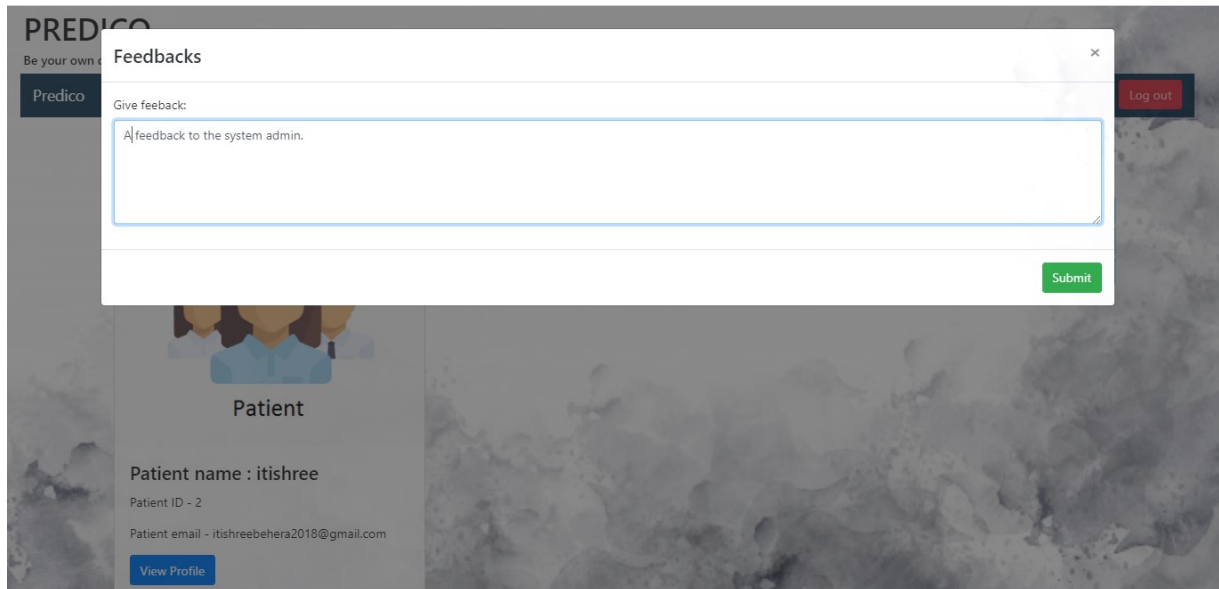
Patient

Patient name : itishree
Patient ID - 2
Patient email - itishreebehera2018@gmail.com

View Profile

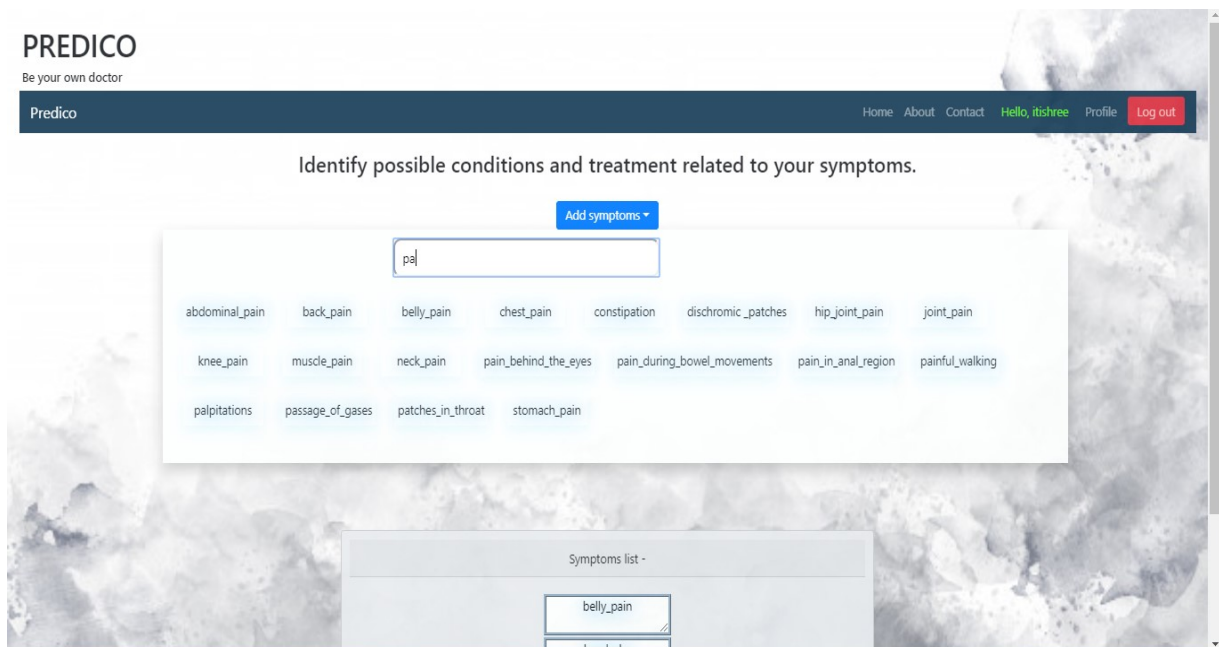
check disease
view consultation history
Give feedbacks

Feedback Form-



The screenshot shows a web application interface for Predico. At the top left, the logo "Predico" is visible with the tagline "Be your own doctor". A dark navigation bar contains a "Predico" button and a "Log out" button. A "Feedbacks" modal window is open in the center, featuring a text area with the placeholder "Give feedback to the system admin." and a green "Submit" button. Below the modal, a "Patient" profile section is visible, displaying the patient's name "itishree", ID "2", and email "itishreebehera2018@gmail.com", along with a "View Profile" button.

Check Disease- Entering symptoms



The screenshot displays the "Check Disease- Entering symptoms" section of the Predico application. The header includes the "Predico" logo and tagline, and a navigation bar with links for "Home", "About", "Contact", "Hello, itishree", "Profile", and "Log out". The main heading reads "Identify possible conditions and treatment related to your symptoms." Below this is an "Add symptoms" button and a search input field containing the text "pal". A dropdown menu lists various symptoms: abdominal_pain, back_pain, belly_pain, chest_pain, constipation, dischromic_patches, hip_joint_pain, joint_pain, knee_pain, muscle_pain, neck_pain, pain_behind_the_eyes, pain_during_bowel_movements, pain_in_anal_region, painful_walking, palpitations, passage_of_gases, patches_in_throat, and stomach_pain. At the bottom, a "Symptoms list" section shows a table with "belly_pain" and "headache" as entries.

Predictions-



A prediction form interface with five input fields stacked vertically, each containing a symptom: 'chills', 'vomiting', 'headache', 'nausea', and 'muscle_weakness'. Each field has a small double-slash icon in the bottom right corner. Below the fields is a green button labeled 'Predict'.

Patient name : itishree Age : 22
predicted disease is : **Malaria**

confidence score of :

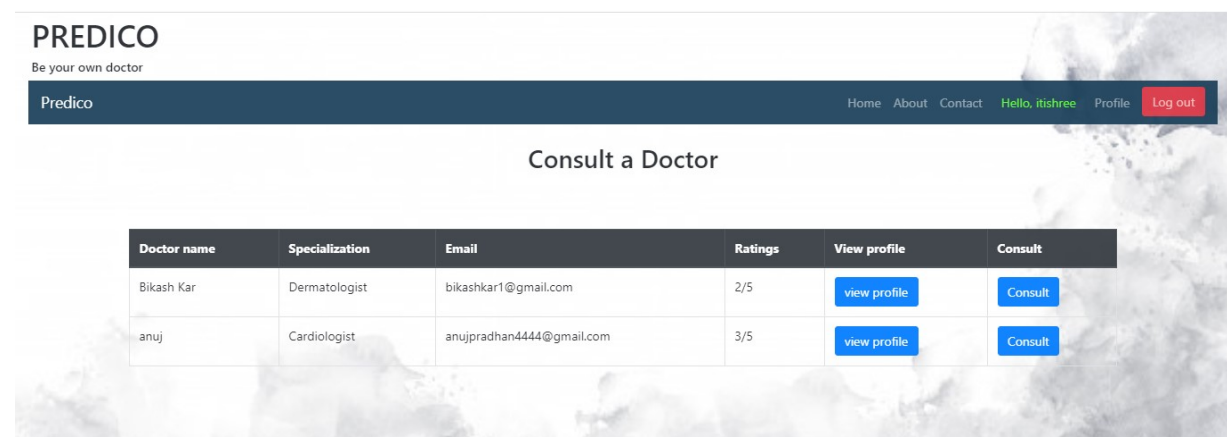
71%

[Click here to know more about Malaria](#)

This tool does not provide medical advice. It is intended for informational purposes only.
It is not a substitute for professional medical advice, diagnosis or treatment.

[Consult a Allergist/Immunologist doctor](#)

Consult a Doctor-



The Predico website interface. The header includes the logo 'PREDICO' with the tagline 'Be your own doctor', a navigation bar with links 'Home', 'About', 'Contact', 'Hello, itishree', 'Profile', and 'Log out', and a main heading 'Consult a Doctor'. Below this is a table listing two doctors: Bikash Kar (Dermatologist) and anuj (Cardiologist). Each doctor entry includes their name, specialization, email, ratings, a 'view profile' button, and a 'Consult' button.

Doctor name	Specialization	Email	Ratings	View profile	Consult
Bikash Kar	Dermatologist	bikashkar1@gmail.com	2/5	view profile	Consult
anuj	Cardiologist	anujpradhan4444@gmail.com	3/5	view profile	Consult

Consultation UI-

Be your own doctor

Predico [Home](#) [About](#) [Contact](#) [Hello, itishree](#) [Profile](#) [Log out](#)

Consultation

Give Rating and Reviews to Doctor Bikash Kar

[Close Consultation](#)

Predicted disease : Malaria

list of symptoms -

chills
nausea
high_fever
nausea
vomiting

confident score - 67.00 %

Patient age - 22

Consultation date - Dec. 28, 2019

Consultation status - active

Chat Box

Jan. 19, 2020, 6:41 a.m. [Good morning, Dr. Bikas kar !](#)

Jan. 19, 2020, 6:41 a.m. [Good morning Itishree ! What's wrong with you?](#)
Bikash Kar

Jan. 19, 2020, 6:42 a.m. [I have been suffering from fever since yesterday.](#)

Jan. 19, 2020, 6:45 a.m. [Do you have any other symptoms?](#)
Bikash Kar

Jan. 19, 2020, 6:46 a.m. [I also feel headache and shivering.](#)

Jan. 19, 2020, 6:47 a.m. [Get your blood tested for malaria, and come with the report tomorrow.](#)
Bikash Kar

Jan. 19, 2020, 6:48 a.m. [OK doctor.](#)

Type a message [Send](#)

Consultation history- (Doctor)

PREDICO

Be your own doctor

Predico [Home](#) [About](#) [Contact](#) [Hello, Dr. Bikash Kar](#) [Profile](#) [Log out](#)

Consultion History


Patient name	Patient Email	View Patient's profile	Predicted Disease Name	Consultation Date	Consultation Status	Resume Consultation
itishree	itishreebehera2018@gmail.com	view profile	(vertigo) Paroysmal Positional Vertigo	Dec. 27, 2019	active	Consult
itishree	itishreebehera2018@gmail.com	view profile	Malaria	Dec. 28, 2019	active	Consult
itishree	itishreebehera2018@gmail.com	view profile	Arthritis	Jan. 12, 2020	closed	Consult
itishree	itishreebehera2018@gmail.com	view profile	Heart attack	Jan. 19, 2020	active	Consult

Admin Sign in-

PREDICO
Be your own doctor

Predico Home About Contact Signup Signin

Admin Signin



Username

Password

☒ Remember me

Admin Interface-

Django administration WELCOME, ANUJ / VIEW SITE / CHANGE PASSWORD / LOG OUT

Site administration

AUTHENTICATION AND AUTHORIZATION	
Groups	+ Add Change
Users	+ Add Change

CHATS	
Chats	+ Add Change
Feedbacks	+ Add Change

MAIN_APP	
Consultations	+ Add Change
Diseaseinfos	+ Add Change
Doctors	+ Add Change
Patients	+ Add Change
Rating_reviews	+ Add Change

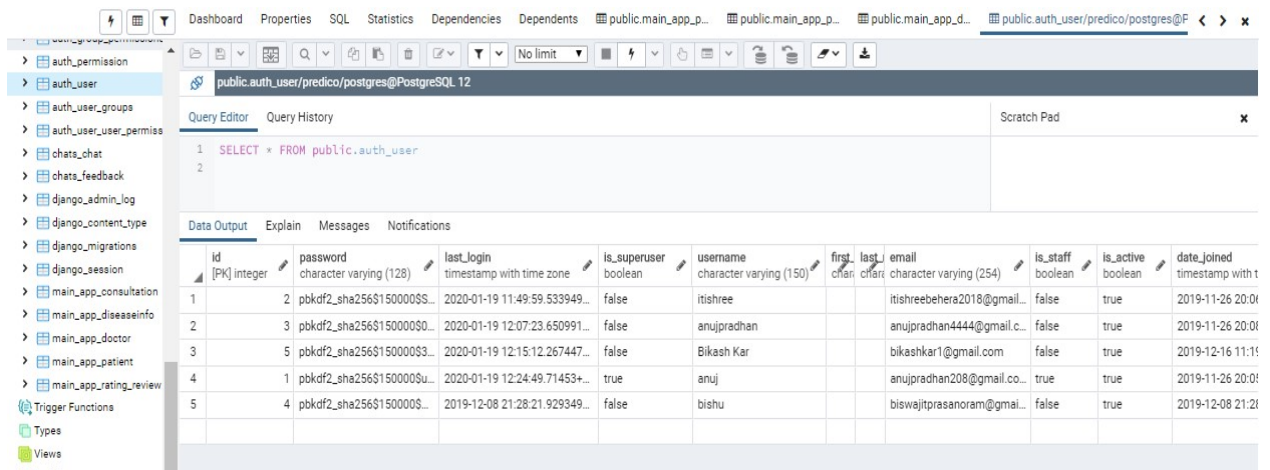
Recent actions

My actions

- ✖ Chat object (156)
Chat
- ✏ consultation object (2)
Consultation
- + Feedback object (13)
Feedback
- ✖ Feedback object (12)
Feedback
- ✖ Feedback object (1)
Feedback
- ✖ Feedback object (2)
Feedback
- ✖ Feedback object (3)
Feedback
- ✖ Feedback object (4)
Feedback
- ✖ Feedback object (5)
Feedback
- ✖ Feedback object (6)
Feedback

6. Database predico-

Users table-



Query Editor Query History Scratch Pad

```
1 SELECT * FROM public.auth_user
```

Data Output Explain Messages Notifications

id	password	last_login	is_superuser	username	first_name	last_name	email	is_staff	is_active	date_joined
1	pbkdf2_sha256\$150000\$S...	2020-01-19 11:49:59.533949...	false	itishree			itishreebehera2018@gmail...	false	true	2019-11-26 20:01
2	pbkdf2_sha256\$150000\$S...	2020-01-19 12:07:23.650991...	false	anujpradhan			anujpradhan4444@gmail.c...	false	true	2019-11-26 20:01
3	pbkdf2_sha256\$150000\$S...	2020-01-19 12:15:12.267447...	false	Bikash Kar			bikashkar1@gmail.com	false	true	2019-12-16 11:11
4	pbkdf2_sha256\$150000\$S...	2020-01-19 12:24:49.71453+...	true	anuj			anujpradhan208@gmail.co...	true	true	2019-11-26 20:01
5	pbkdf2_sha256\$150000\$S...	2019-12-08 21:28:21.929349...	false	bishu			biswajitprasanoram@gmai...	false	true	2019-12-08 21:21

Patient table-

</

Consultation table-

<ul style="list-style-type: none"> > django_admin_log > django_content_type > django_migrations > django_session > main_app_consultation > main_app_diseaseinfo > main_app_doctor > main_app_patient > main_app_rating_review Trigger Functions Types Views 	Data Output Explain Messages Notifications						
		id [PK] integer	consultation_date date	status character	diseaseinfo_id integer	doctor_id integer	patient_id integer
	8	34	2019-12-13	active	65	3	2
	9	35	2019-12-27	active	67	3	2
	10	36	2019-12-27	active	74	5	2
	11	37	2019-12-28	active	84	5	2
	12	38	2020-01-12	closed	88	5	2
	13	2	2019-11-26	active	8	3	2
	14	39	2020-01-19	active	93	5	2