## Module 1: User Profile Management

This module will users allow to perform all the operations related to their profile.

### Sub Module 1: Patient Profile Management

FE-1:-This module will allow patients to perform all the tasks related to their profiles such as giving his/her basic information which include id, name, address, phone number, birthdate, blood group.

FE-2:-This module will allow patient to select doctor from list of doctor available in system .

### Sub Module 2: Doctor Profile Management

FE-1:-This module will allow the doctor to login to system by providing his login credentials.

FE-2:- This module will allow doctor to manage his/her profile by providing his/her basic information and perform all the tasks related to their profiles

### Sub Module 3: Patient History

FE-1: This module will allow doctors to view the medical history of patient.

### Sub Module 4: Admin Profile

FE-1:- This module will handle number of patients and can access patient id like edit, remove, update etc.

FE-2:- This module will handle number of doctor and can access doctor id like edit, remove, update etc

FE-3:- This module will handle patient name and disease with which he/she is suffering from.

## Module 2: Chatbot

FE-1: Allow patient to send messages to the system which is an AI providing disease consultation.

FE-2: Allow the patient to give all the answers to his/her queries on the breath-related disease.

## Module 3: Data Preprocessing

FE-1: The collected dataset is preprocessed to remove any noise and inconsistencies in the images.

## Module 4: Feature Extraction

FE-1: The features of the chest X-ray images are extracted using convolutional neural networks (CNNs).

FE-2: The CNNs are trained on the dataset to learn the features of the chest X-rays associated with TB, COVID-19, and pneumonia.

## Module 5: Model Training and Detection

FE-1: Training a machine learning model using the extracted features and ground truth labels.

FE-2: The model is trained to classify chest X-rays as either positive or negative for TB,COVID-19, and pneumonia.

FE-3: This module will include all the detection features by analyzing chest x-rays using ml.

FE-4: This module will detect and identify Covid, Tuberculosis and pneumonia by matching x-ray of patient with the x-ray present in the datasets through ml. After detecting diseases it will also show level of disease at which patient is suffering like mild, normal or extreme. This module will also generate report of patient and send it to doctor

## Report Generation

FE-1: Generate a full fledge report depending on the outcome of Machine Learning techniques used on the x-ray scan

FE-2: This module will also manage all the reports that include uploading the report on the respective patient profile.

## Appointment:

FE-1: This module will allow patients to search for doctors to book appointment.

FE-2: Patients can request to book appointment.

FE-3: Patients can cancel appointment.

## Prescription

FE-1: Doctor can upload the prescription after seeing the report

FE-2: Patient can view uploaded Prescription

## Infobox

FE-1: Give info about a breath-related disease like symptoms, precautions, cure, and suggestions.

## Medicine Reminder

FE-1: Patient can set alarms for desired medicines at specific time and days