## 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

A machine learning model is trained using the extracted features and ground truth labels.The model is trained to classify chest X-rays as either positive or negative for TB, COVID-19, and pneumonia.

### Sub Module 1: Covid Detection:

FE-1: Analyze the x-ray of the patients.

FE-2: Detecting and identifying Covid by matching the x-ray of the patient with the x-ray present in the datasets through ml.

FE-3: Generate the report of a patient suffering from Covid and send it to doctor.

### Sub Module 2: Tuberculosis Detection:

FE-1: Analyze the x-ray of the patients.

FE-2: Detecting and identifying TB by matching the x-ray of the patient with the x-ray present in the datasets through ml.

FE-3: Generate the report of a patient suffering from TB and send it to doctor.

### Sub Module 3: Pneumonia Detection:

FE-1: Analyze the x-ray of the patients.

FE-2: Detecting and identifying pneumonia by matching the x-ray of the patient with the x-ray present in the datasets through ml.

FE-3: Generate the report of a patient suffering from pneumonia 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.

## 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

## Application Feedback

FE-1:-This module will allow doctor and patient to give feedback of to an app.