

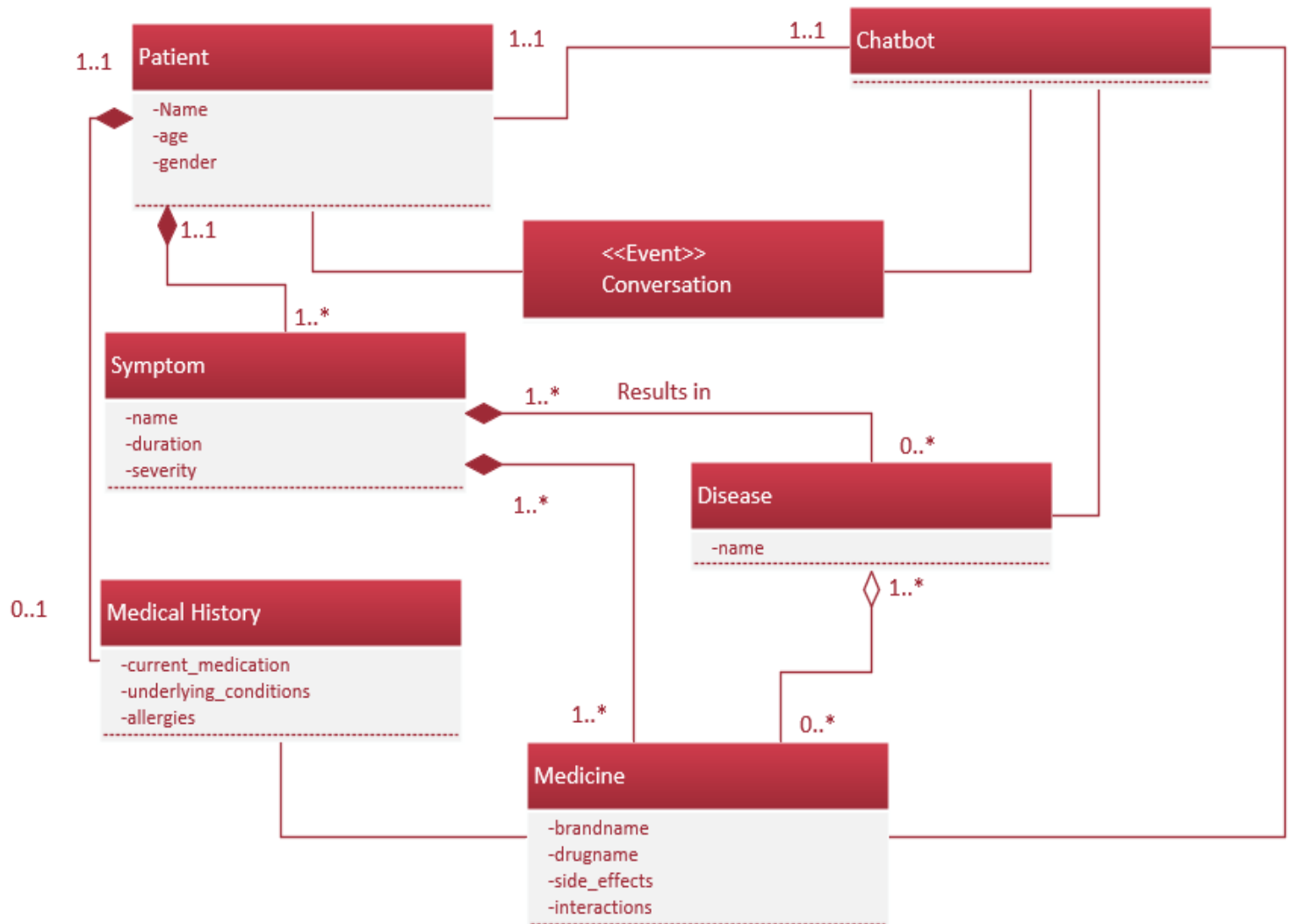
TABLE OF CONTENTS

Iteration Plan	2
DOMAIN MODEL DIAGRAM	3
USE CASE DIAGRAM.....	4
USE CASES.....	5
SYSTEM SEQUENCE DIAGRAMS.....	8
TEST CASES	10
DATASET DETAILS	12
MACHINE LEARNING ALGORITHM MODEL	13
NATURAL LANGUAGE PROCESSING MODEL	14

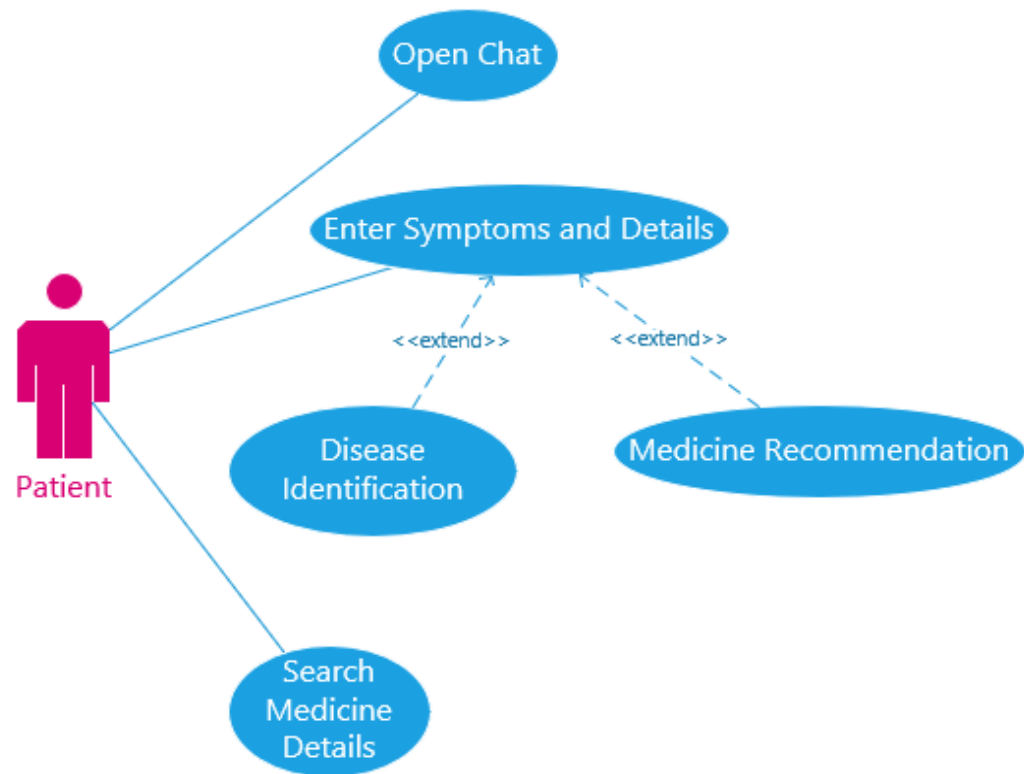
ITERATION PLAN

S.No.	Features	FYP-I Iterations			
		Monthly Iteration-I	Monthly Iteration-II	Monthly Iteration-III	Monthly Iteration-IV
F1	Plan	Requirements			
		Design			
		Implementation			
F2	DataSet	Requirements (25%)	Requirements (100%)		
			Design		
			Implementation(100%)		
F3	Chatbot NLP		Requirements (75%)	Requirements (100%)	
			Design (25%)	Design (100%)	
			Implementation (25%)	Implementation(100%)	
F4	Web UI			Requirements (100%)	
				Design (50%)	
					Implementation
					Testing
...
Output Features		F1,F2	F2, F3	F3,F4	F4

DOMAIN MODEL DIAGRAM



USE CASE DIAGRAM



USE CASES

(1.)

Name: **Open Chat**

Goal: This Use Case initiates Conversation between the User and the Chatbot.

Actor: User

Pre-conditions: ----

Triggers: When User enters the chat room.

Basic Course of Events:

User Action	System Response
1. User enters the chat room.	Chatbot greets.
2. User replies.	Asks to describe symptoms.

Alternate Path: N/A

Post-Condition: User will be asked to describe symptoms.

Author: Shayan-Ur-Rehman Siddiqui Date: 10/30/20

Exceptions:

- Back-End Server is Offline.

(2.)

Name: **Enter Symptoms and Details**

Goal: This Use Case lets the user to get his/her disease identified and get a medicine recommendation.

Actor: User

Pre-conditions:

- The greeting between chatbot and user is done.

Triggers: When User replies to the greetings from chatbot.

Basic Course of Events:

User Action	System Response
1. User describes symptoms.	Chatbot stores symptoms, asks relevant questions(one by one).
2. User replies to different questions.	Finds disease that matches user's details, finds appropriate medicine, then recommends it.

Alternate Path 1:

User Action	System Response
1A1) If User enters irrelevant information.	Chatbot asks user to reply again.
1A2) User replies.	

Alternate Path 2A:

User Action	System Response
2A1) If User enters symptoms that are severe or do not match any disease.	System recommends medicine to treat individual symptoms and a visit to doctor.

Alternate Path 2B:

User Action	System Response
2B1) If User enters symptoms and details that do not match any appropriate medicine.	System notifies and recommends a visit to doctor.

Post-Condition: System successfully identifies disease and recommends medicine.

Author: Esa Anjum Date: 10/30/20

Exceptions:

- Back-End Server is Offline.

Name: **Search Medicine Details**

Goal: This Use Case lets the user to find details about specific medicine by entering any one attribute related to drug(s) such as interactions, contraindications, brand-name, etc.

Actor: User

Pre-conditions:

- User is using the website's page dedicated to details about drugs.

Triggers: When the User goes to the page about drugs' details.

Basic Course of Events:

User Action	System Response
1. User enters details in different fields available and presses enter.	System searches for drugs related to that information and returns relevant drug(s)' details.

Alternate Path:

User Action	System Response
1. If User enters irrelevant information.	System returns no results.

Post-Condition: System returns drug(s)' information.

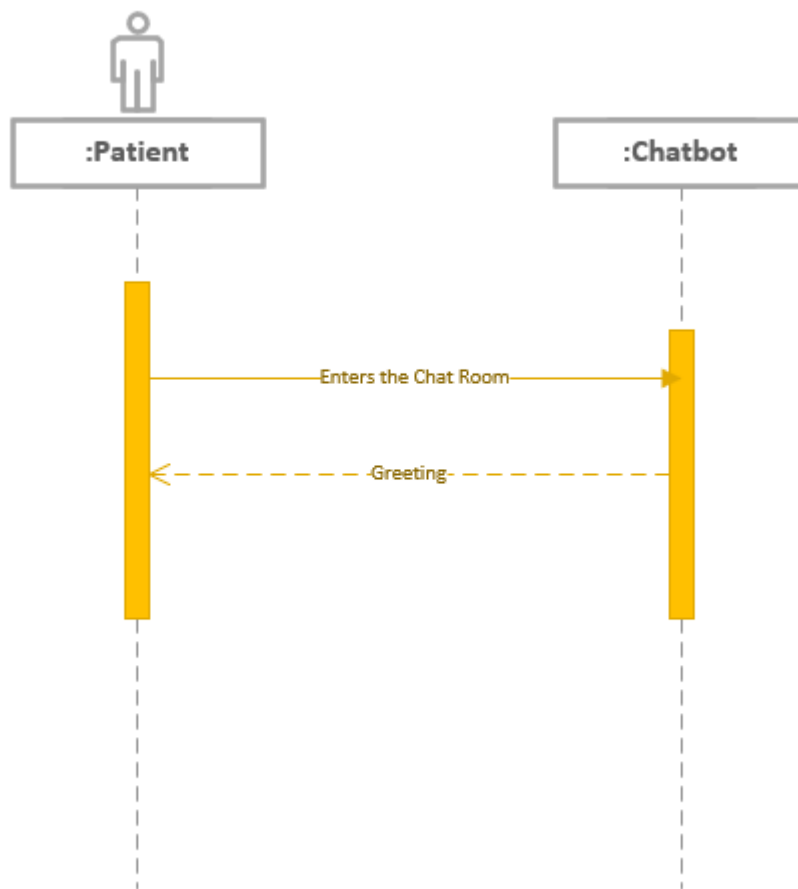
Author: Shayan-Ur-Rehman Siddiqui Date: 10/30/20

Exceptions:

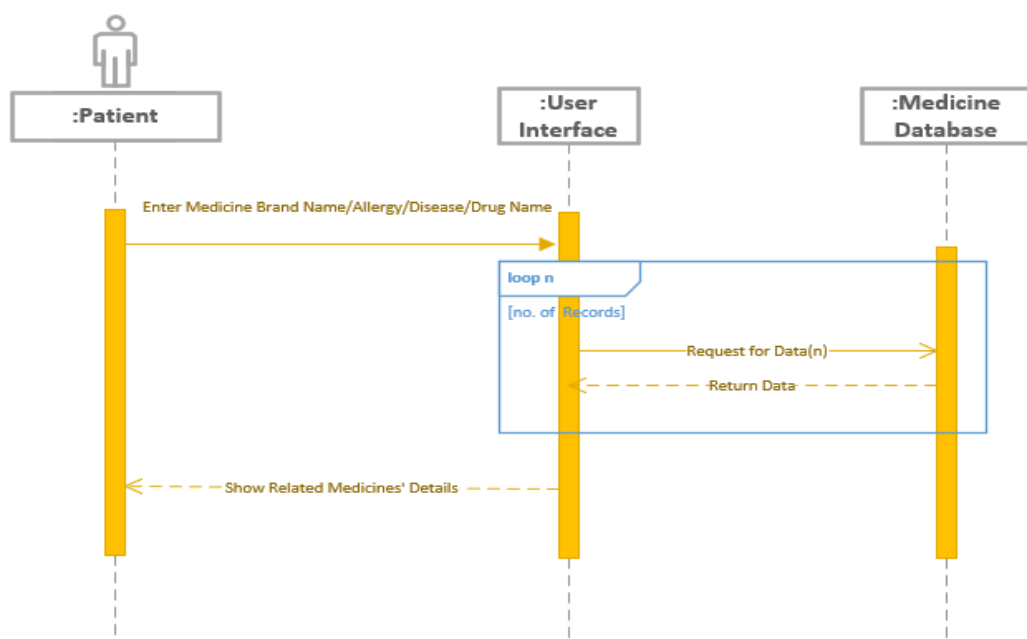
- Back-End Server is Offline.

SYSTEM SEQUENCE DIAGRAMS

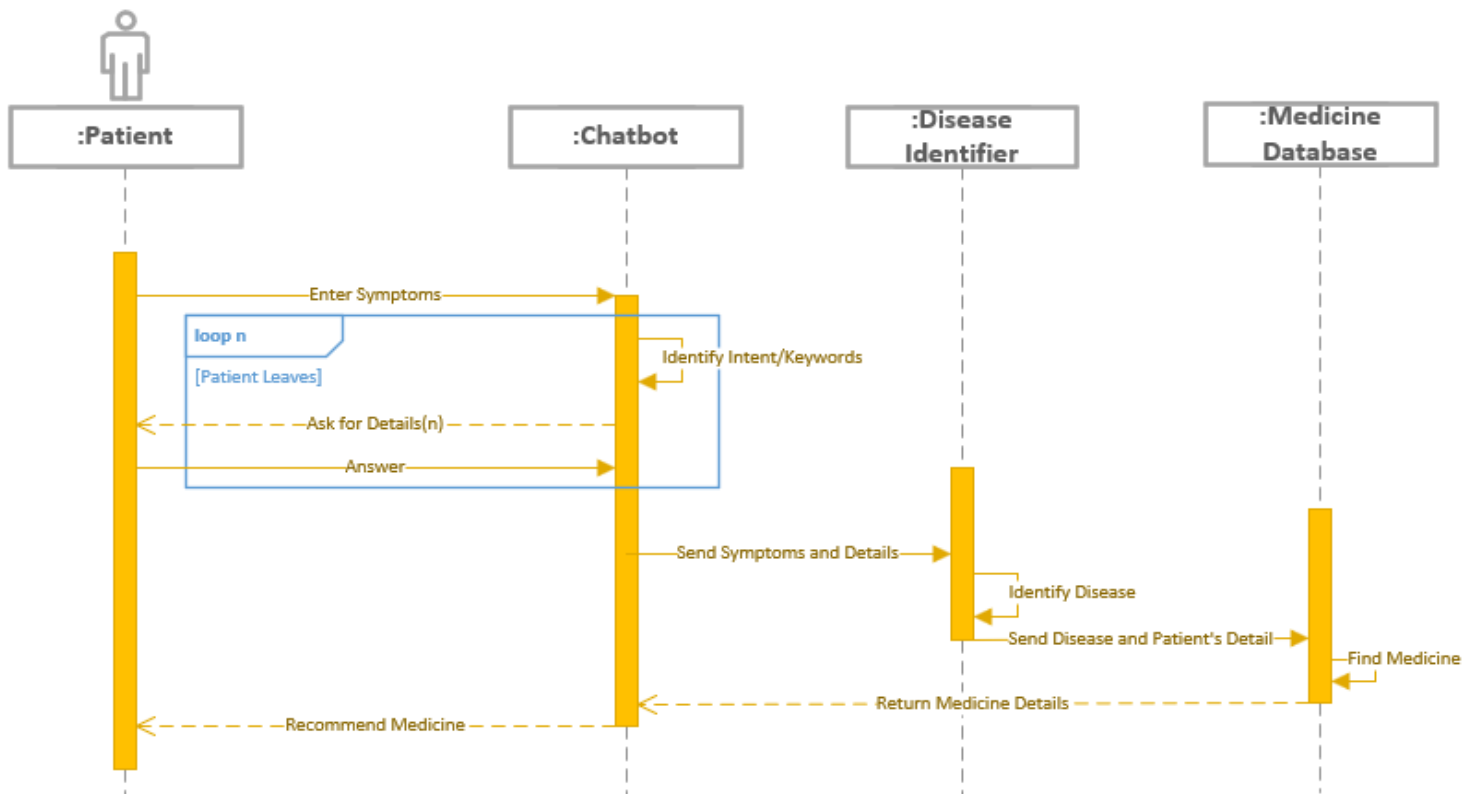
OPEN CHAT:



SEARCH DRUGS:



MEDICINE RECOMMEDATION AND DISEASE IDENTIFICATION:



TEST CASES

Test Case # 1

Test Case ID	Test Case Name	Test Case Summary	Test Case Steps	Expected Result
01	OPEN CHAT	Verifies if the chatbot greets as programmed and asks user to describe symptoms	User enter chat room	Chatbot greets User.
			User replies to the chatbot's greeting	Chatbot starts asking relevant questions
			User enter gibberish texts	Chatbot asks user to rephrase

Test Case # 2

Test Case ID	Test Case Name	Test Case Summary	Test Case Steps	Expected Result
02	SEARCH MEDICINE	In the search feature user will enter a keyword to be searched. It will search the keyword in the medicine database.	Enter correct keyword (present in database)	Searched record will be displayed
			Enter incorrect keyword (not present in database)	Display a message "No Record Found."

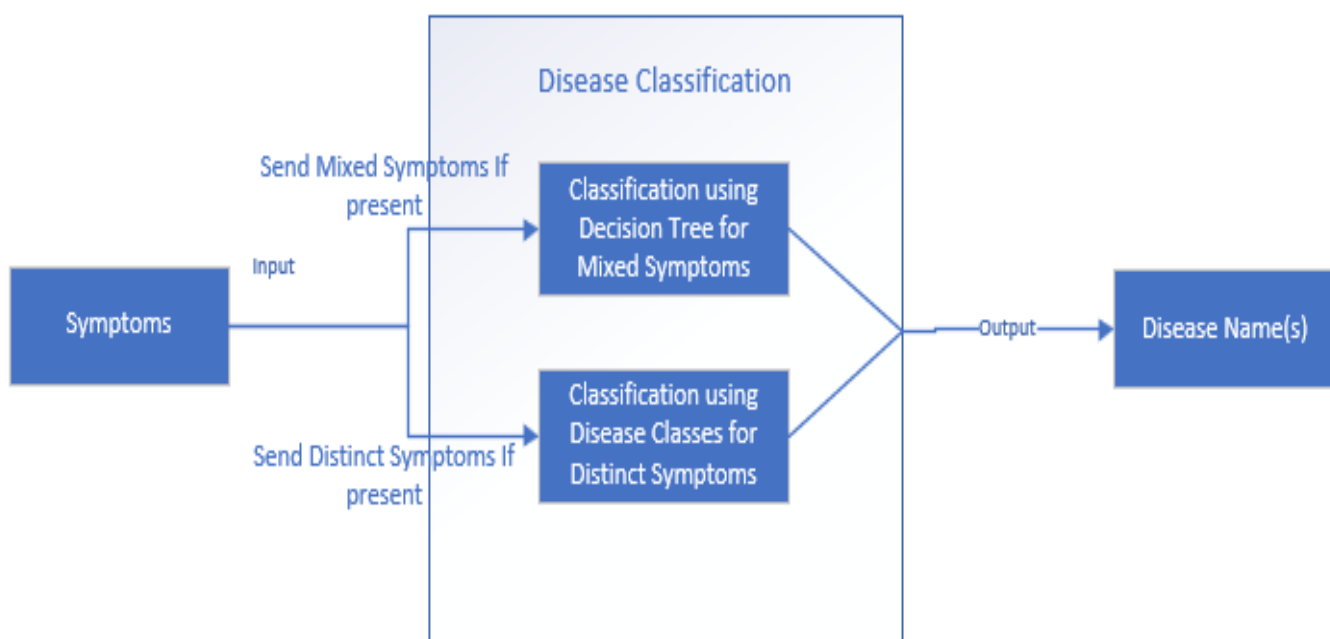
Test Case # 3

Test Case ID	Test Case Name	Test Case Summary	Test Case Steps	Expected Result
03	ENTER SYMPTOMS	This test case verifies whether the chatbot is able to understand user's query and asks relevant questions	User mentions symptoms he/she is experiencing.	Chatbot asks questions to extract details about symptoms as described by the user.
			User enters invalid text	Chatbot request user to precisely describe symptoms once again
			User describe symptoms being severe	Chatbot should advise caution after the conversation ends
			User give valid answers to the Chatbot questions	Chatbot should be able identify disease and recommend suitable medicine

DATASET DETAILS

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Aches	Chills	Fatigue	Sneezing	Chest_Dis	Stuffy_No	Sore_Thro	Wheezing	Painful_Th	Headache	loss_of_s	muscle_p	shivering	phlegm	throat_irri	redness_c	sinus_pre	runny_no	congestio	chest_pai	malaise	swelled_l	high_feve	TARGET
2	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0 Cold/Flu
3	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Cold/Flu
4	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Cold/Flu
5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Cold/Flu
6	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Cold/Flu
7	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Cold/Flu
8	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
9	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
10	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
11	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
12	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
13	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
14	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Allergy
16	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0 Cold/Flu
17	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 Cold/Flu
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1 Cold/Flu

MACHINE LEARNING ALGORITHM MODEL



NATURAL LANGUAGE PROCESSING MODEL

