IDENTIFICATION OF TUBERCULOSIS

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering.

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APPROVAL

This Project/internship titled **"Identification Of Tuberculosis"**, submitted by Anika Tahsin & Tanima Afrin Simul, ID No: 161-15-6798 & 161-15-7361 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 05 December.

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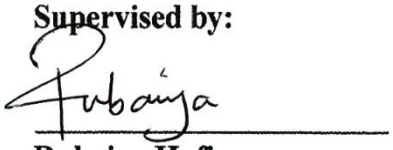

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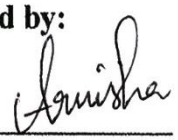

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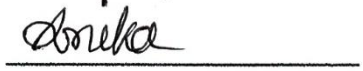

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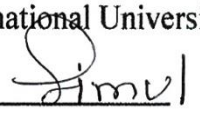

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Finally, we must acknowledge with due respect the constant support and patients of our parents.

ABSTRACT

Here we are writing a report on “Identification of Tuberculosis”. So what is tuberculosis? Tuberculosis is a disease caused by bacteria called Mycobacterium tuberculosis and the bacteria usually attack lungs and the bacteria can also damage other parts of the body. In our project we are identifying which type of tuberculosis is the patient suffering from. This website will help users to instantly identify the reason of their symptom. Normally people don’t go for a checkup to a doctor for a normal cough. That results in severe problem in the long run. In this system user input their symptoms and this website gives a result whether the user have a risk of TB or not. Admin will provide hospital list, doctor list division wise so that users can easily find out their nearest hospital and also get immense information about doctor details. User can contact with the admin if they have any kind of queries or problems. Smokers and children are more affected by tuberculosis than non-smokers. The people who live in countryside area suffer much for distance. As they don’t have doctor’s or hospital near them. This website will be much beneficial for them.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This is a website where users can easily check whether user are affected by tuberculosis or not inputting user's current symptoms. User can also check their cough is usual cough or not. If user have a tuberculosis it can check by which tuberculosis users are attacked which test do users need and in which stage users are running through. Admin will provide hospital list, doctor list division wise so that users can easily find out their nearest hospital and also get immense information about doctor details.

1.2 Motivation

Those who lives away from city face difficulties to consult skilled doctors frequently. It takes long time to get specialized doctor's appointment. In user's busy life they ignore frequent cough that can be symptom of talent tuberculosis. This website detects tuberculosis at a primary stage.

1.3 Objective

As Tuberculosis is a slow process when user have normal cough they don't feel urgency to go to doctor and this website helps identifying tuberculosis at the very primary stage. Administrator will provide hospital's information. They will provide doctor details. It will save user time.

1.4 Survey Questions

There are some sample questions:

- Gender?
- Your age?
- Your Occupation?
- Any previous severe diseases?
- Have you ever had a tuberculosis attack?
- Do you have any following symptoms?
- Which tests were taken for tuberculosis?
- Do you usually go to the doctor if you have cough?

- Are you a smoker?

1.5 Expected Outcome

A person can easily inquire which tests they need step by step to identify their disease without any doctor's consultation, simply just inputting their symptoms. They will get hospital information which nearby to them and also get doctor information which are nearby to them and also get doctor information which will help them to contact doctor easily.

1.6 Related Layout

We are arranging further discussions in several chapters in our report, which are:

In chapter 1, we are trying to say about our project what actually it about like as introduction, motivation, research questions, expected out-come, report layout.

In chapter 2 we are discussing background of our project like as related work which was previously done, summary of our research, the challenges and the reason why we are building this system.

In chapter 3, we are trying to display the steps we have done to do our research. Like as business process modeling, requirement collections and analysis, how it will work and how people will connect with it, use case modeling and description, logical data model, design requirements and specification that are actually represent our web application.

In chapter 4, we will show our experimental results through different graphs, tables, diagrams and descriptive analysis.

In chapter 5, we are summarizing our report and discussing about further development.

CHAPTER 2

BACKGROUND

2.1 Background

Before starting a project, it is needed to search about what works have been done yet on this topic. The topic is "Identification of Tuberculosis". We have gone to several hospitals, consulted with doctors, talked to many patients about tuberculosis, symptoms and many other things. There are some healthcare websites in the internet.

2.2 Related Works

To make our website, we observed several websites which were related to tuberculosis. Such as "Centers for Disease Control and Prevention(CDC)" where TB basics, Latent TB Infection, Drug Resistant TB are mentioned.

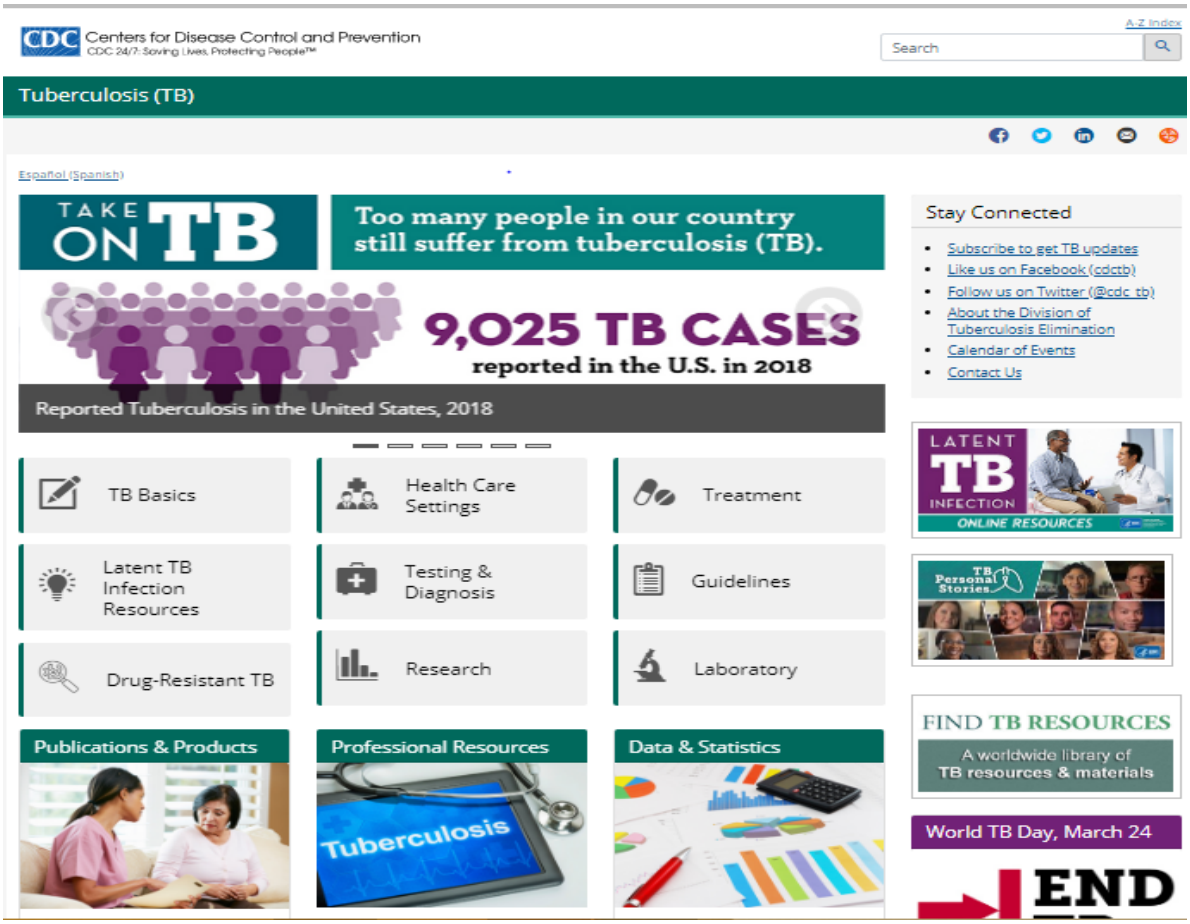


Figure 2.1: CDC webpage

2.3 Research Summary

In this project there are several steps. Some of them are following:

- Online survey.
- Gone through several research paper.
- Observed some websites which are related to tuberculosis.
- Gone TB hospital to collect information.
- Consulted with doctors and inquiring some questions.
- Talked with patients about their problems.

Thus we completed our research and collected more data which are helpful for our projects.

2.4 Scope of The problem

The scope of study basically all of the things will be developing this site that means all the opportunity to study this site will be developed. In order to create a better future opportunity, this study must be clearly defined. Now our next target is to add a feature thus user can check their test report. In future, we will update our system with the user requirement with add or response features. We always believe one thing "Problem is the turning point of success if it can be handle by a good driver".

2.5 Challenges

It's very common that in every step new challenges will always wait for us. At first we didn't understand how to start our work. But we were determined to make our project completed. So, day by day we able to overcome many problems.

So some difficult problems during build our web application are,

- Collect initial data during research.
- Patients hesitate to share their personal information.
- Meeting a skilled doctor for gathering information is challenging here because they rarely get free times.
- It's related to database directly. So it's difficult to control a huge amount of data.
- As there are several websites on internet in the same topic, we need to make a better

one.

So, these are the main challenges, we faced during build this system and we overcome all problem slowly and we will also find out others problems which are not occurred never.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

We completed many research before starting our project and we observed some websites which were related to tuberculosis and also surveyed in online. We got more hundred responses from online. We went some hospitals to collect data and we got more data from those hospitals. That were really useful for us. After collecting all data, we started our work and that are connected in database.

3.2 Research Subject & Instrumentation

To write a report on any topic firstly we need to find out the research subjects from where we can collect data needed to write the report. Here the research subjects are

- What is Tuberculosis?
- Symptoms of Tuberculosis
- Types of Tuberculosis
- Which tests are needed to identify TB?

Instrumentation is the instruments that are needed to collect data. Such as

- Survey form
- Research papers
- Journals

3.3 Data Collection Procedure

Data collection is the main part to make a system without collecting data we can't go forward. So. first we made a procedure how can we collect data and where we will get data. After studying we got solution then we started collecting data from different ways such as

- Online survey.
- Consulted with doctors.
- Collecting reports, documents from hospital.
- Talked with patients about their symptoms.

- Gone through several research papers.

3.4 Statistical Analysis

Graphical representation of how many patients are affected by tuberculosis among all. We got this data from our online survey. In figure 3.1, we can see that our results where yes = affected people (17.8%) and no = not affected people (82.2%). So affected people are very few.

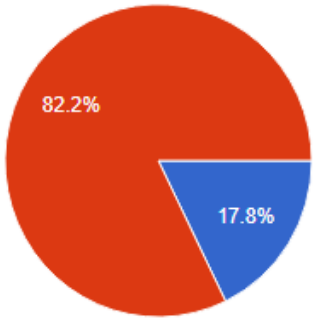


Figure 3.1: Graph 1

In figure 3.2, graphical representation of how many people go to the doctor if they have cough. Most of the time we don't go to doctor if we have normal cough. Here yes = go to doctor (25.6%) and no = don't go to doctor (7.4%).

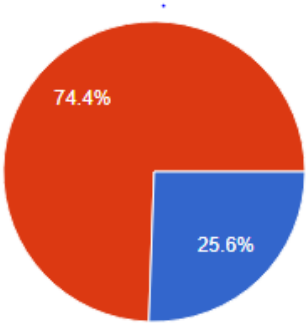


Figure 3.2: Graph 2

In figure 3.3, percentage of smoker of all patients where yes = smoker (57.8%) and no = nonsmoker (42.2%).

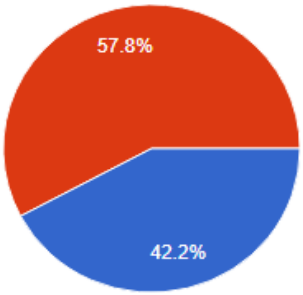


Figure 3.3: Graph 3

3.5 Requirements Implementation

We compared certain some social media related web application to implement the projects such as Facebook, Twitter, LinkedIn, Instagram etc. We are studying so many times how we can make that application different. When we study and compare those application on each other, we are facing a few deficiencies. We also gathered more information from hospitals, doctors, patients and other websites. That's why we decided to create a platform that would actually solve some problems that is useful for users.

Our system is working in two processes one is user part and another is admin part.

Admin Part:

- Login.
- Set query for identifying TB for the user.
- Insert hospital information.
- Insert Doctor details.
- Managing database part.

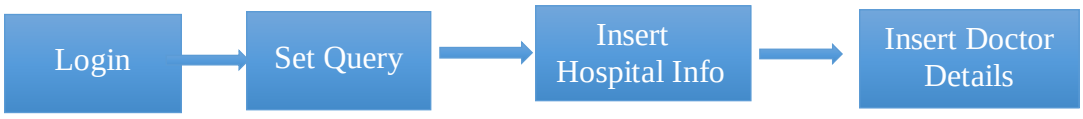


Figure 3.4: Admin Diagram.

The another user part is given below as the diagram figure 3.5:

User Part:

- Register
- Login
- Doctor Details.
- Hospitals Information
- Suggested Food
- Diet Chart
- Treatment Details
- Logout.

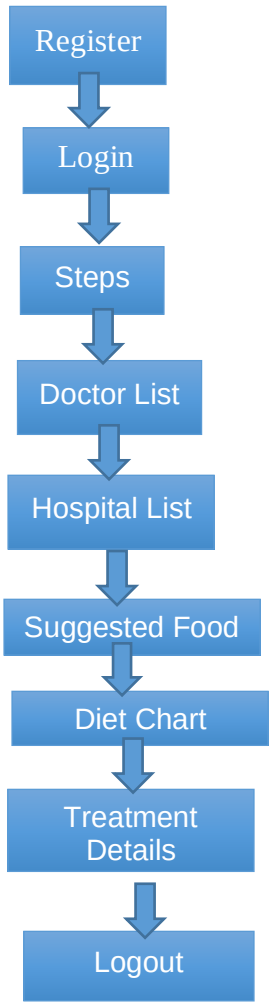


Figure 3.5: User Diagram

Above figure 3.4 & figure 3.5 described all the activities of admin part as well as the user part.

Here is the use case diagram of our website:

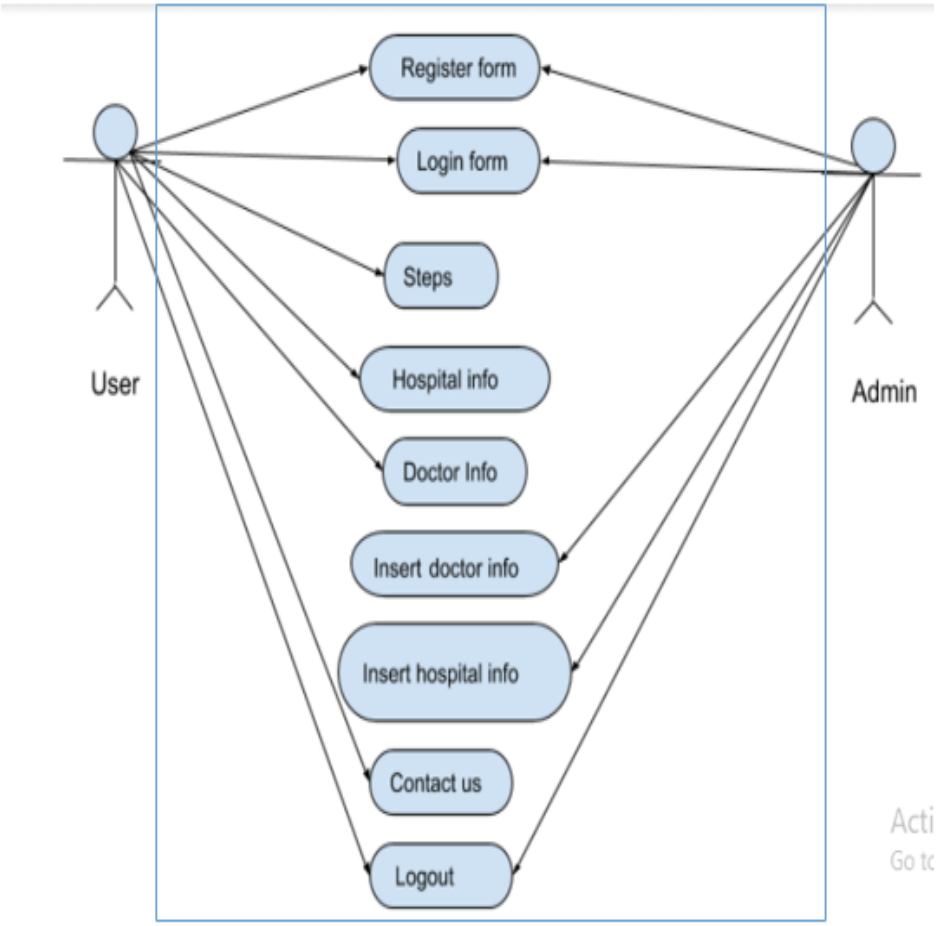


Figure 3.6: Use case diagram

Back-End:

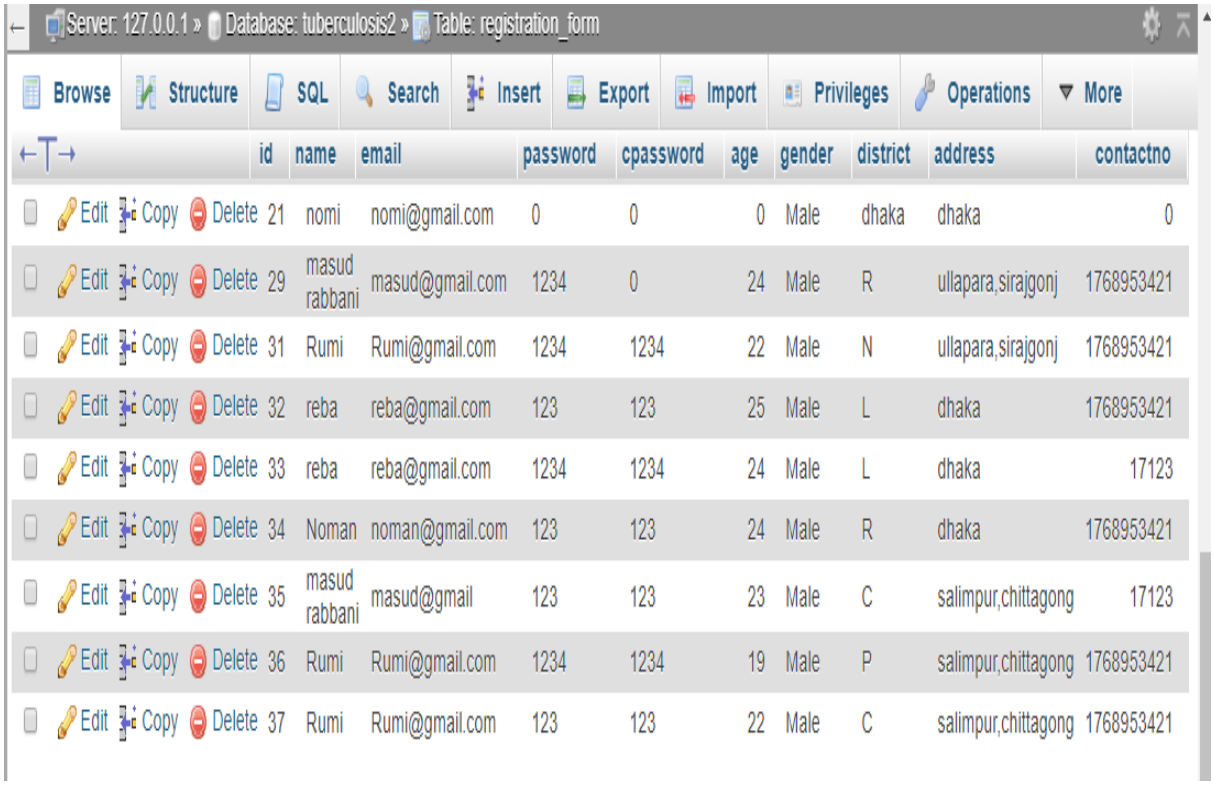
The backend of this system is the device operating a site that admin can able to control the full site and the customer does not see or communicate straight with as with the technology on the user side, but it constantly operates in background. We make our database using those parts such as

XAMPP: It is the main part to manage the site because a website security and handling depend on its database and it makes transitioning from a local test server to a live server possible. We gave our best effort on database to make our website more secure.

PHP: In the script language PHP is the one of the best back end development server. It is the most powerful language for the server scripting. So it is fully open source programming and task to generate dynamic webpage. And we used for database connection, user verification, function handling, mailer etc.

SQL: Present time, websites appear to be relying more and more complicated database system. This system stores all of their critical records and permits for effortless protection in some cases. The structured query language is very famous for this.

This is table of registered patients where store all patient's information.



	id	name	email	password	cpassword	age	gender	district	address	contactno
Edit Copy Delete	21	nomi	nomi@gmail.com	0	0	0	Male	dhaka	dhaka	0
Edit Copy Delete	29	masud rabbani	masud@gmail.com	1234	0	24	Male	R	ullapara,sirajgonj	1768953421
Edit Copy Delete	31	Rumi	Rumi@gmail.com	1234	1234	22	Male	N	ullapara,sirajgonj	1768953421
Edit Copy Delete	32	reba	reba@gmail.com	123	123	25	Male	L	dhaka	1768953421
Edit Copy Delete	33	reba	reba@gmail.com	1234	1234	24	Male	L	dhaka	17123
Edit Copy Delete	34	Noman	noman@gmail.com	123	123	24	Male	R	dhaka	1768953421
Edit Copy Delete	35	masud rabbani	masud@gmail	123	123	23	Male	C	salimpur,chittagong	17123
Edit Copy Delete	36	Rumi	Rumi@gmail.com	1234	1234	19	Male	P	salimpur,chittagong	1768953421
Edit Copy Delete	37	Rumi	Rumi@gmail.com	123	123	22	Male	C	salimpur,chittagong	1768953421

Figure 3.7: Registration-Form Table(Database)

Front-End Design:

To design a website, some features are must needed to work it properly like as index, home, registration, login, logout, contact us. We primarily used

HTML: HTML means hypertext markup language and it is the standard language for using documents design to display in a webpage. We used HTML to make a site creation and to utilize to make our pages on the internet viewable

CSS: It is the integral part to make a website unique and attractive. We use it for a page layout, adjusting colors and fonts, adding images.

JavaScript: JavaScript is a scripting and interpreted language and it uses on the web. It renders web pages in an interactive and dynamic pages We used it to enhance HTML pages and embedded in HTML code.

JQuery: It is a JavaScript library and It is used for CSS control, utilities, animations, HTML

control and occasion techniques, JSON parsing, documentation handling and manipulation etc. That's why we used it in our system.

And we also used other different internet techniques to implement front-end design.

Web Page Details

- Home page
- Registration page
- Login Page
- Contact us Page
- Steps Page
- Input Symptoms Page
- Output Page
- Doctors Information
- Hospitals Details

Index:

This is our index. It is the first page of our website. We have homepage, registration form page, login page and contact us page only.

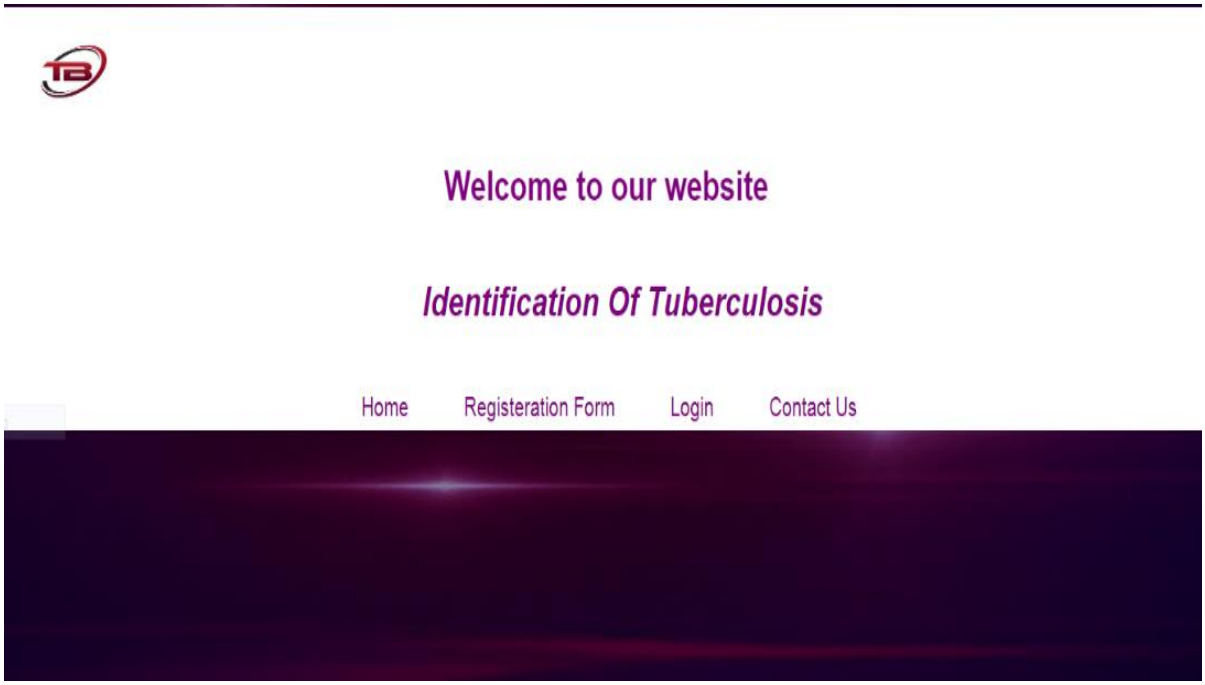


Figure 3.8: Index

Registration Page:

First of all, for login to the system user had to need register to the system and must input all information. Admin will confirm their registration and all user's data are stored in database and only admin will see the data.

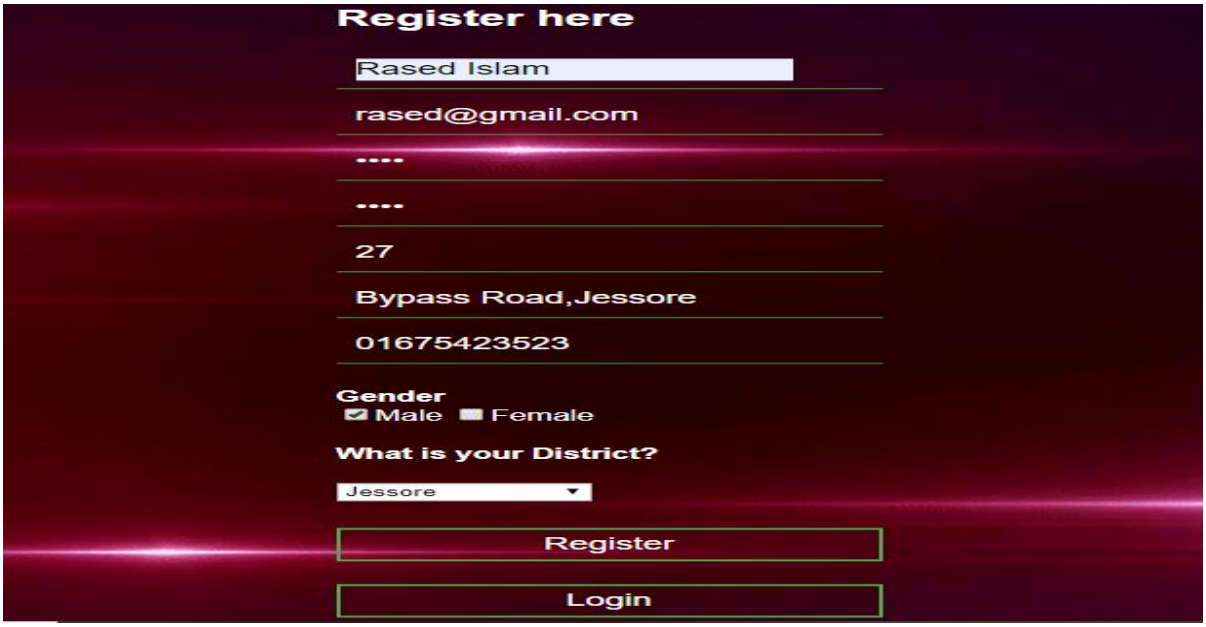


Figure 3.9: Registration Page

Login-Page:

After completing the registration successfully, they will login in the site by email and password. And login page is used for two kinds of people one is user and another is admin.

Figure 3.10: Login page.

Admin-Page:

After log in admin will insert hospital and doctor information and admin can easily update, delete and add any information.

Figure 3.11: Admin page.

Insert-Page:

This is an insert page where admin can easily insert information which can be seen by user.

Figure 3.12: Insert hospital information(Admin)

User-Page:

After log in user will see this page then they can choose in which section they want to enter.

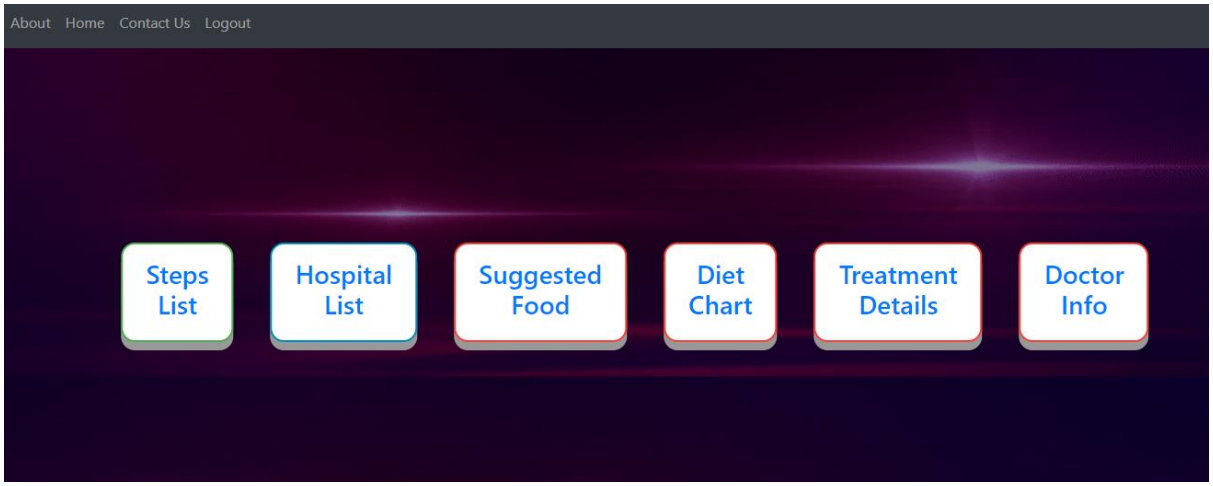


Figure 3.13: User page

Input Section:

In this section user can input their symptoms and identify if they are affected by tuberculosis or not and users must fill up all the query then they will see their results.

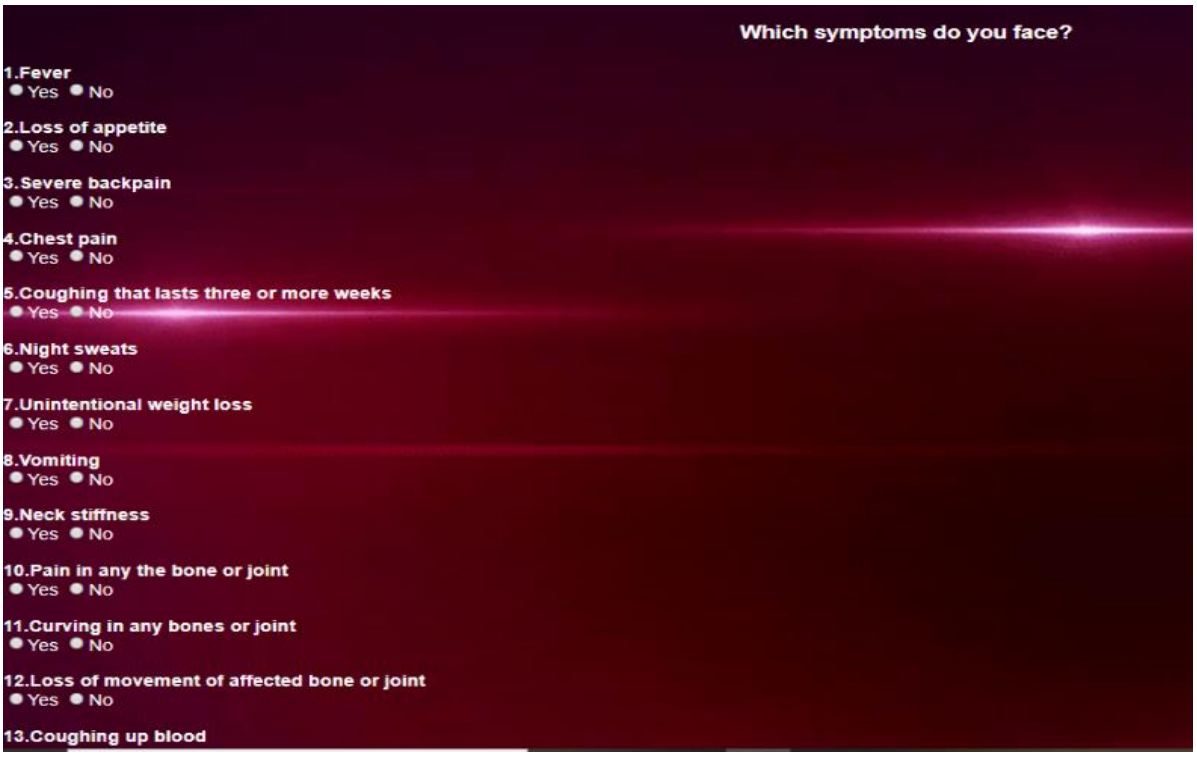


Figure 3.14: Input section

Output:

Here is a picture of output. After inserting user's symptoms, it is giving such an output. Three

types of tuberculosis are occurred most such as Lung TB, Gland TB, Bone TB. When user's symptoms are matched with input symptoms then it will show the percentage and also show what should they do in next steps.

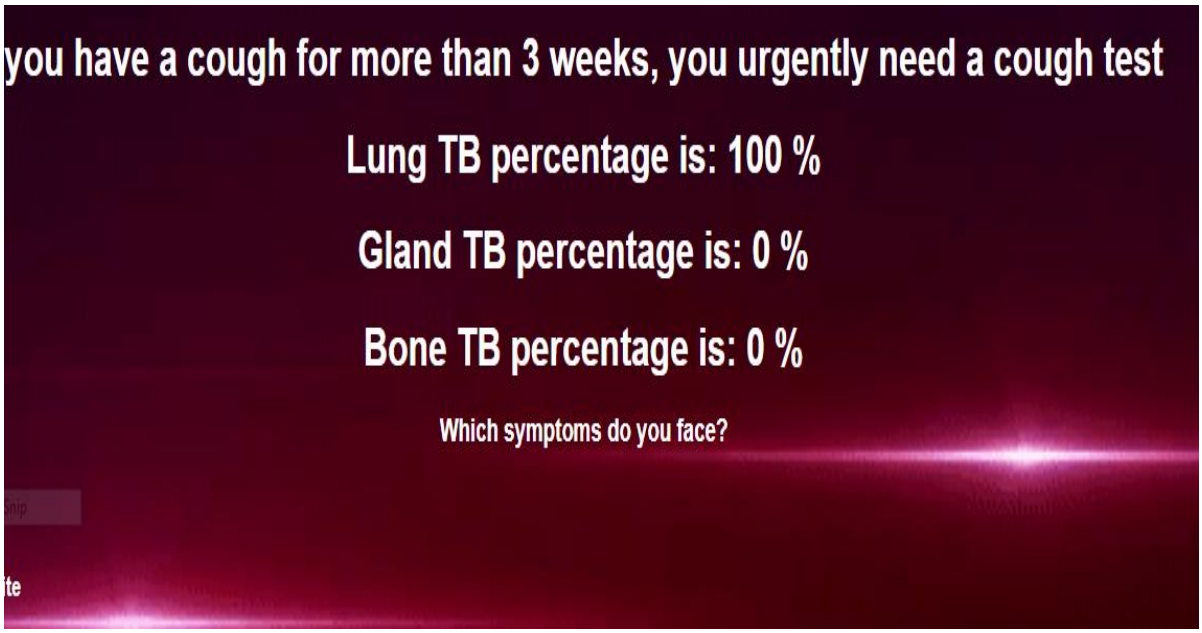


Figure 3.15: Output 1

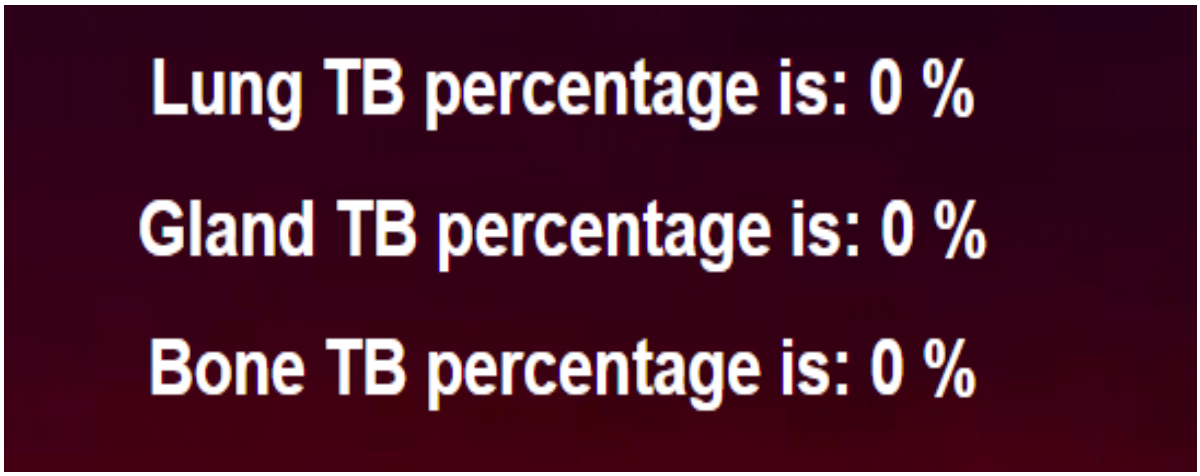


Figure 3.16: Output 2

In figure 3.16 here shown as, bone, lungs, gland all TB results are 0%. So there is no possibility to occur any tuberculosis because all are zero percentage. So they are free from TB and they will not need any test

Hospital List:

After selecting hospital button, they will see division names then user will choose in which division they want to search. After selecting the division, they will show hospital name, address and contact no hospital and it is very effective for them and they will easily appoint and book doctor serial by their contact no.

Dhaka Info

Hospital Name	Hospital Address	Contact No
TB Hospital (250 Bed) (Asthma Center)	Shyamoli, Dhaka	01711-811512
National Institute of Diseases of the Chest and Hospital	Dhaka 1212	02-8811910
icddr,b dhanmondi TB Screening Centre	Rd No. 7, Dhaka 1205	01779-600600
National Chest Department	Dhaka 1212	01718-529346
icddr,b TB Screening & Treatment Centre (Uttara)	31 Gareeb-e-Nawaz Ave, Dhaka 1230	01766-667629
National Ashtma Center	TB Gate Rd, Dhaka 1212	02-55067131
Kuwait Bangladesh Friendship Government Hospital	319 Isakha Ave, Dhaka 1230	01999-956290
ICDDDR,B TB SCREENING CENTER MIRPUR	Road 1, Rd 1, Dhaka 1216	01766-667617

Figure 3.17: Hospital list (User)

Doctor List:

After selecting doctor list button user will see doctor list as well as all the details. Doctor's name, address, contact number are included here So they can easily find out their nearest

doctors and it will save their time and they will not wait for a month to appoint a doctor and not to suffer more to find best doctor.

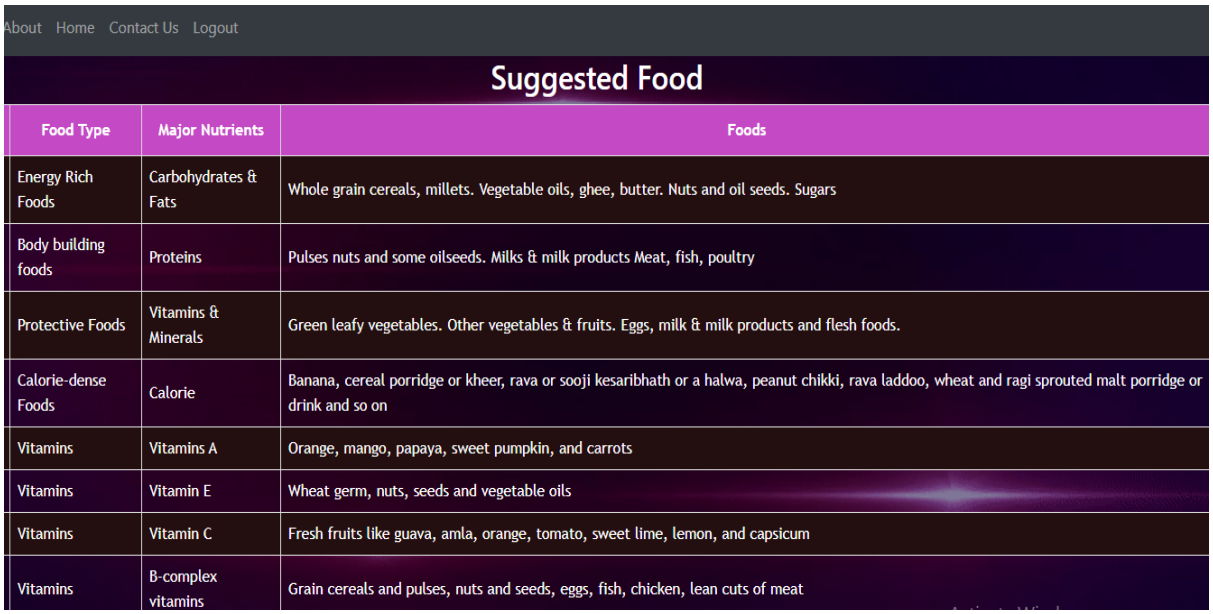
ID	Doctor Name	Hospital Address	Contact No
1	Dr. Abdul Wadud	Ibn Sina Diagnostic & Consultation Center, Savar.	01937224569
2	Dr. Arefin Khan	Ibn Sina Diagnostic & Consultation Center, Savar.	0186721356
3	Dr. A.K. Md. Ahsan Ali	National Institute of Diseases of Chest and Hospit	1987267098
4	Dr. A.K.M. Mostofa Hossain	Medinova Medical Services Hosaf Tower, 6/9 Outer Circular Road,Malibag,Dhaka-1217,Bangladesh	+8802833338113
5	Professor Dr. Mirza Mohammad Hiron	Ibn Sina Diagnostic & Imaging Center House # 48, Road # 9/A, Dhanmondi, SAtmasjid Road, Dhaka ♦ 1209, Bangladesh	880 1717351631
6	Professor Dr. AKM Mosharraf Hossain	LabAid Specialized Hospital Road # 4, House # 6, Dhanmondi, Bangladesh	+880-2-9676356
7	Dr. Syed Rezaul Huq	Aysha Memorial Specialised Hospital 74 /G/ 75, Peacock Square, New Airport Road, Mohakhali, Dhaka -1215, Bangladesh	+880-2-9122689
8	Professor Dr. Md. Atiqur Rahman	Lab-Aid Gulshan House # 13/A, Road # 35, Gulshan ## 2, Dhaka-1212	+880 152463101
9	Dr. Mohammad Enamul Haque	he Medical Centre House # 84, Road # 7/A, ShaMasjid Road, Dhanmondi, Dhaka	+880-2- 9118219
10	Dr. Md. Zakir Hossain Sarker	Aysha Memorial Specialised Hospital 74 G/ 75, Peacock Square, New Airport Road, Mohakhali, Dhaka -1215, Bangladesh	01919372647
11	Dr. Kazi Saifuddin Bennoor	Medinova Medical Services Ltd. House # 71/A, Road # 5/A, Dhanmondi R/A, Dhaka	+880-2-8620353-6
12	Dr. S M Abdullah Al Mamun	Apollo Hospital Dhaka Plot # 81, Block # E, Basudhara R/A,Dhaka 1229	+880 1841276556
13	Dr. Chandra Prakash Dokwal	Apollo Hospital Dhaka Plot # 81, Block # E, Basudhara R/A, Dhaka ♦ 1229	+880 1841276556
14	Dr. Adnan Yusuf Chowdhury	United Hospital Limited Plot # 15, Road # 71, Gulsan♦ 2, Dhaka ♦ 1212, Bangladesh	+880-2-8836000
15	Dr. Md. Shafiqur Rahman	Islami Bank Central Hospital 30, Anjuman-e-Mofidul Islam Road, Kakrail, Dhaka ♦ 1000	+880-2-9355801-2
16	Dr. Abdul Hamid	City Hospital Ltd. 1/8, Block-E, Lalmatia, Sat Masjid Road, Dhaka ♦ 1217	+880-2-8143312
17	Dr. K.C Ganguly	Popular Diagnostic Centre Ltd - Dhanmondi Branch	+880-2-9662741

Activate Windows
Go to Settings to activate

Figure 3.18: Doctor list (User).

Suggested Food:

Suggested food means which food is necessary or not for tuberculosis patients and which food is good for their health .This chart is given below:



Food Type	Major Nutrients	Foods
Energy Rich Foods	Carbohydrates & Fats	Whole grain cereals, millets. Vegetable oils, ghee, butter. Nuts and oil seeds. Sugars
Body building foods	Proteins	Pulses nuts and some oilseeds. Milks & milk products Meat, fish, poultry
Protective Foods	Vitamins & Minerals	Green leafy vegetables. Other vegetables & fruits. Eggs, milk & milk products and flesh foods.
Calorie-dense Foods	Calorie	Banana, cereal porridge or kheer, rava or sooji kesaribhath or a halwa, peanut chikki, rava laddoo, wheat and ragi sprouted malt porridge or drink and so on
Vitamins	Vitamins A	Orange, mango, papaya, sweet pumpkin, and carrots
Vitamins	Vitamin E	Wheat germ, nuts, seeds and vegetable oils
Vitamins	Vitamin C	Fresh fruits like guava, amla, orange, tomato, sweet lime, lemon, and capsicum
Vitamins	B-complex vitamins	Grain cereals and pulses, nuts and seeds, eggs, fish, chicken, lean cuts of meat

Figure 3.19: Suggested Food(User)

Diet Food:

Diet food refers to any food or beverage whose recipe is altered to reduce fat, carbohydrates, and/or sugar in order to make it part of a weight loss program or diet. These foods are necessary for the body to function properly for tuberculosis affected patients.

ID	Day	Breakfast (8:00-8:30AM)	Mid-Meal (11:00-11:30AM)	Lunch (2:00-2:30PM)	Evening (4:00-4:30PM)	Dinner (8:00-8:30PM
1	Saturday	Wheat dosa-2 + Tofu curry 1 cup	1 cup grilled vegetables with Cottage cheese.	1/2 cup rice+ 1-2 chapati + Kidney beans curry 1/2 cup + Palak paneer sabji 1/2 cup	1 cup boiled black eye beans	Broken wheat upma 1 cup+ 1/2 cup green beans sabji
2	Sunday	Cottage Cheese sandwich(2 slice bread) + 1 cup skimmed milk.	1 cup boiled green gram sprouts	Veg pulav rice 1 cup+ 1 cup Soy Chunk curry	1 cup Almond milk	2 chapati + Lady's finger sabji 1 cup
3	Monday	chapati-3+ Paneer sabji 1 cup	1 cup grilled vegetables with Cottage cheese.	2 Roti+ Mushroom curry 1 cup + 1 cup moong dal	1 apple + 1/2 cup cottage cheese	2 chapati + arhar dal 1 cup
4	Tuesday	Soy flour Uthappam 2 + coconut chutney + 1 glass skim milk.	1 cup boiled black chana	1 cup rice + Kidney beans curry 1 cup + cucumber salad+ cottage cheese vegetable 1 cup.	Brown rice flakes poha with nuts 1 cup	2 paneer stuffed capsicum +2 chapati
5	Wednesday	Paneer Paratha 2+ 1 cup skim milk	1 cup grilled paneer	2 chapati + Black eyed beans curry 1 cup + cucumber salad	1 cup soy milk	Broken wheat upma 1 cup+ 1/2 cup green beans sabji
6	Thursday	Mushroom Paratha 2 +1 cup skim milk	1 cup boiled green gram sprouts	1/2 cup rice + 1-2 chappati + Chickpeas spinach curry 1/2 cup + Snake gourd sabji 1/2 cup	1 cup boiled channa	2 chapati+ 1 cup mix veg curry
7	Friday	Moong dal cheela with paneer filling- 2 + 1 cup skim milk	1 cup boiled black chana	1 cup rice+ Soy chunk curry1/2 cup+ Lady's finger sabji 1/2 cup	1 glass almond milk	2 chapati+Ridge gourd sabji 1 cup

Figure 3.20: Diet Food(User)

Treatment:

Several tests are needed to diagnose tuberculosis. Firstly, we need blood test or skin test then if the result is positive doctors give further tests. There is also Genexpert test which is molecular test for TB.

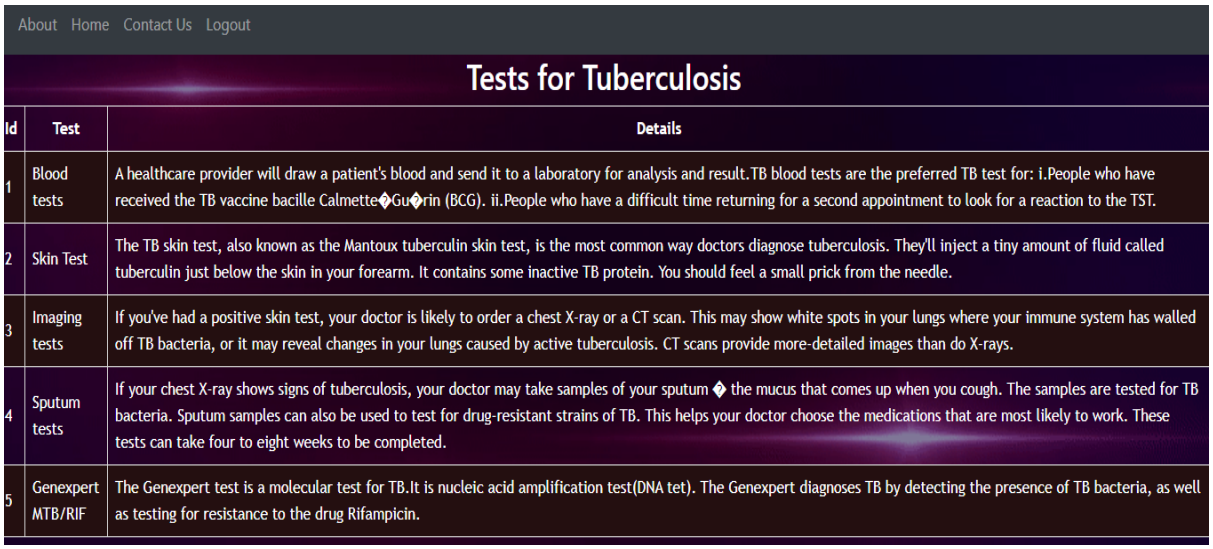


Figure 3.21: Treatment(User)

Contact Us:

Registered users can contact admin through this page if they have any kind of query. They need to just give the name and mail id and write the problem or query then after sending message admin will get his/her message.

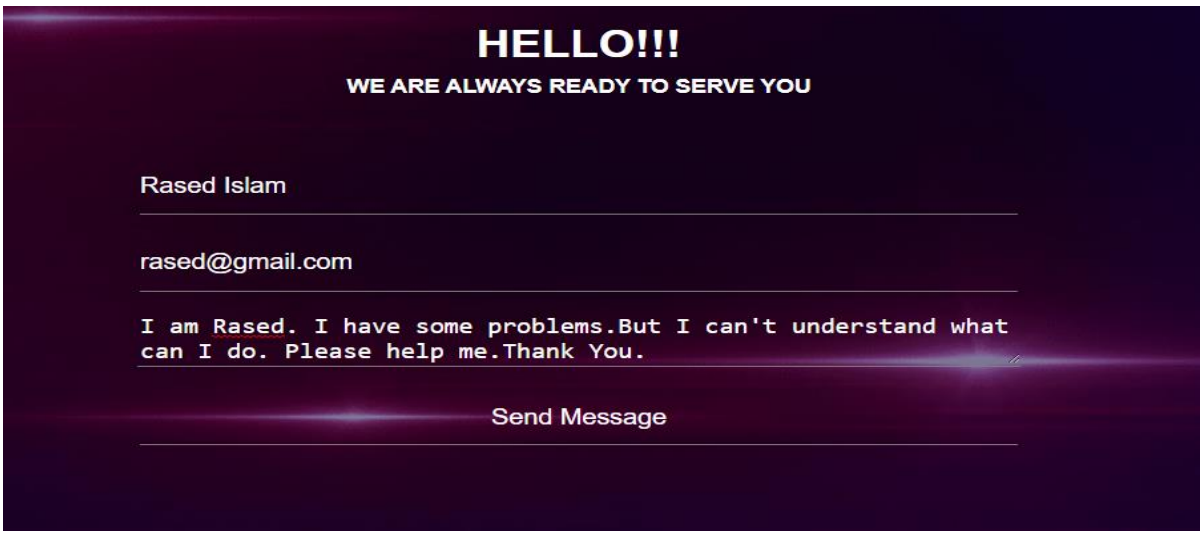


Figure 3.22: Contact us page.

CHAPTER 4

EXPERIMENTAL RESULTS AND DISCUSSION

4.1 Introduction

Experimental result is useful for any website because it helps us to compare among normal and experimental data so that we can easily realize what should we do in next step. Here we have shown experimental results in various graphs, charts and tables. We have collected those results from different hospitals, doctors, patients, online surveys etc.

4.2 Experimental Results

For getting a result we need to run an experiment. We also have done some surveys.

Here is a table where we have shown how many people are being affected by tuberculosis among all the patients come to the hospital. We collected data from 2009 to 2017. Doctors helped us very much to collect data and also helped us how we will collect data. Several hospitals gave us their patients test documents and symptoms. Every day if hundred people come to the TB hospitals about 15 of them is seen being affected tuberculosis. Here are some experimental results

Here is a table given below where it has been illustrated that

- Here shown after being affected how many people recover after getting treatment.
- Here shown how many people died
- Here shown how many treatments failed
- Here shown how many people transferred at the time of getting treatment

Table 4.1 Child TB

Year	All Cases	TB	Proportion
2010	254	87	34.23%
2011	215	23	11%
2014	176	25	14%
2013	146	49	12%
2015	200	26	13%
2016	190	48	25.26%
2017	120	19	15.83%

Here is a table where it has been illustrated that

- Here shown the treatment outcome from 2009 to 2017.
- Here shown how many treatments were succeeded.
- Here shown how many treatments were failed.
- Here shown how many people died at the time (2009 -2017).
- We collected those data from several hospitals documents and reports.

Table 4.2: Treatment Outcome

Year	Treatment Success	Died	Failure	Transfer Out
2009	88%	0%	1	6
2010	82%	4%	0	11
2012	89%	1%	1	9
2012	86%	1%	1	11
2013	91%	1%	1	7
2014	82%	·.66%	0	10
2015	89%	2%	2	13
2016	95%	.5%	0	5
2017	93%	0%	1	6

4.3 Descriptive Analysis

We have collected a large data of several years and manipulated them. After analysis these data we got the percentage of how many of them are male and how many of them are female. The right pillar is for female patients and the left pillar is for male patients.

In this chart the ratio of male and female patient affected by tuberculosis from 2009 to 2014 is

displayed. We can see that 2014 the ratio of male and female were same.

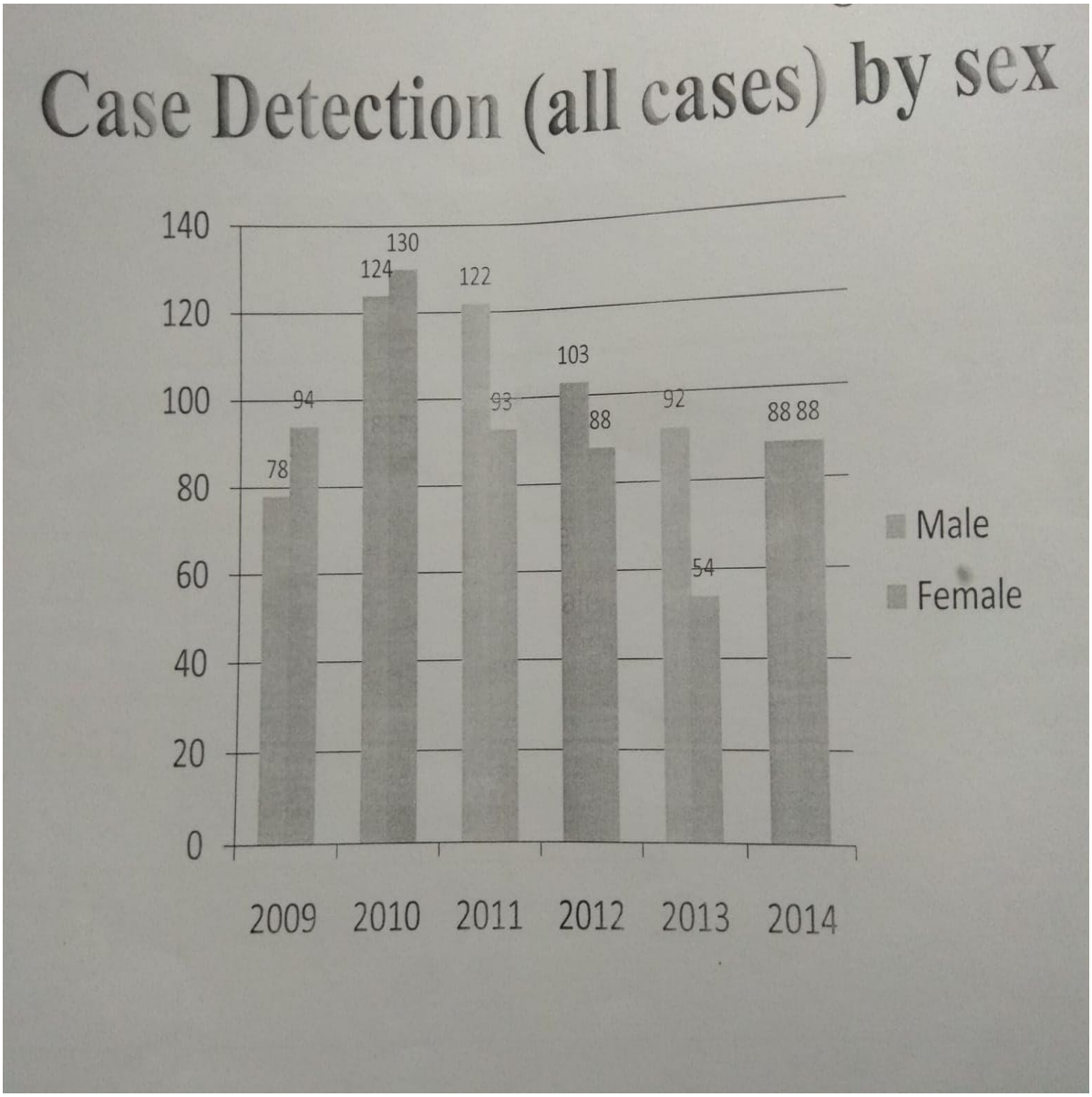


Figure 4.1: Case Detection by Sex.

A descriptive graphical representation of how many people died, how many people recovered and representation of treatment success (%) from 2012 to 2013:

A descriptive graphical representation of how many people died, how many people recovered and representation of treatment success (%) from 2012 to 2013:

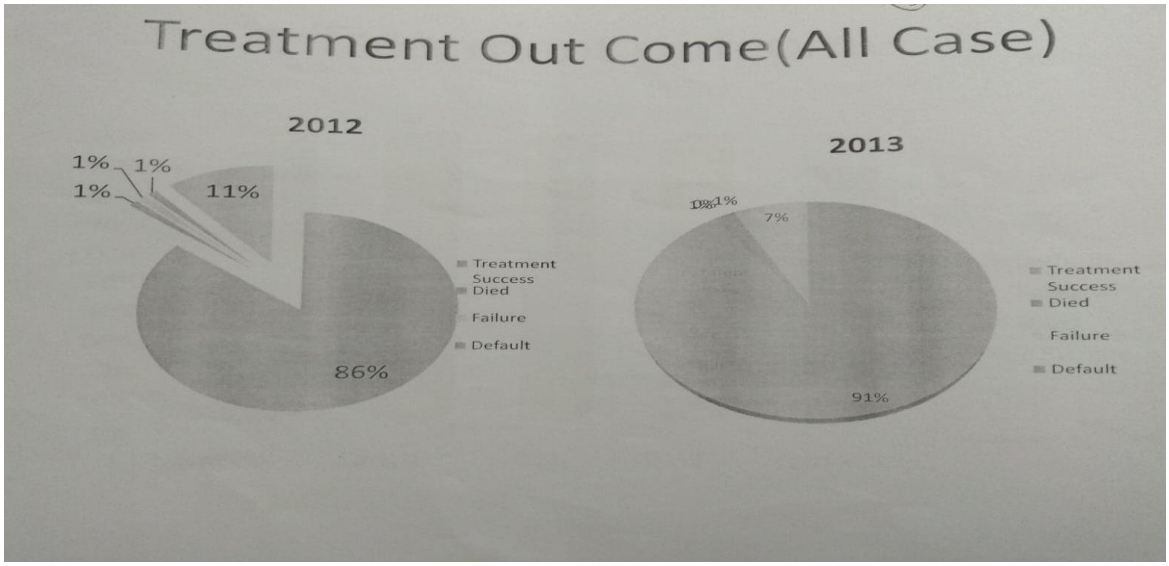


Figure 4.2: Treatment Outcome.

4.4 Summary

Here we have experiments on large number of data and got different types of output. Like

- How many patients are affected by tuberculosis among all?
- How many people go to doctor if they have cough?
- We also find out that the smokers and children are more affected by TB.
- From Fig 4.3.2 we can say that success rate is increasing day by day such as 2012 = 86% and 2013 = 91%.
- By which tuberculosis patients are being affected most?

CHAPTER 5

SUMMARY, CONCLUSION, RECOMMENDATION AND IMPLICATION FOR FUTURE RESEARCH

5.1 Summary of The Study

"Identification of Tuberculosis" identifies if user is affected with Tuberculosis or not by inputting their symptoms. Users will get more features like doctor information, hospital information of different places. User can contact with the admin if they have any kind of queries or problems. Smokers and children are more affected by tuberculosis than non-smokers. Among all the tuberculosis people are being mostly affected by lung TB, bone TB and gland TB.

5.2 Conclusions

This will make Identification of tuberculosis (a sensitive disease) easy and less time consuming. We can call it one kind of automation. The people who live in countryside area can't contact with the doctor instantly. As a result, the small health problem become a big health issue. This website will be more beneficial to them. We have tested our website to some of our users. They appreciated our effort and suggested us some more features. And we will try to add those features as soon as possible for user's betterment. Those are the more effective that time.

5.3 Recommendations

Our website aim is to provide the relevant features finding out only the useful data from a large data set. At the time of collecting data we met different users and discovered their demands. Considering the user demands we are trying to arrange our website and in future we will update and add more features.

5.4 Implication for Further Study

We have many scopes to develop our project in future. Scope of the project is given below:

- The project will more efficient and useful in the future.
- Manipulating test reports by inputting the test report values in this website.
- We will provide more security in our website.
- We will add more data to give more accurate answer.
- Updated features can be added to the interface design.
- More features and functionalities will be added to keep the app up to date.
- Reliability of the application should be increased

  That will make our website more automated.

References

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[9]"Github", available at <<github.com>>, Last Accessed on 18 October 2019.

APPENDICES

Appendix A

Login:

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta charset="utf-8">
    <title></title>
    <link rel="stylesheet" href="stylelogin.css">
     <link rel="stylesheet" href="c1.css">
  </head>
  <body>
<div class="login-box">
  <h2>Login</h2>
  <form action="login.php" method="POST">
  <div class="textbox">
    <i class="fas fa-user"></i>
    <input type="email" name="email" placeholder="Email">
  </div>

  <div class="textbox">
    <i class="fas fa-lock"></i>
    <input type="password" name="password" placeholder="Password">
  </div>

  <input type="submit" name="submit" class="btn" value="Sign in">

```

```
<?php


session_start();

include_once("dbconnection.php");

if(isset($_POST['submit']))
{
  $email=$_POST['email'];
  $password=$_POST['password'];

  $result=mysqli_query($mysqli, "Select password from registration_form where email='$email'");


  foreach ($result as $res){

  if($password==$res['password'])
  {
    $_SESSION['email']=$email;

    if( $password=="admin123")
    {
      echo "</br>login successfully";

      header ("location:admin.php");
    }
    else
    {
      header ("location:user.php");
    }
  }
  else
  {
    echo "Invalid Password";
  }
}
}


?>
</form>
</div>
  </body>
</html>
```

Registration:

```php
<?php
include_once ("dbconnection.php");

if(isset($_POST['submit']))
{
  $name= $_POST['name'];
  $email= $_POST['email'];
  $password= $_POST['password'];
  $cpassword= $_POST['cpassword'];
  $age= $_POST['age'];
  $gender= $_POST['gender'];
  $address= $_POST['address'];
  $district= $_POST['district'];
  $contactno= $_POST['contactno'];

  if($password==$cpassword)
  {
    $query="SELECT * FROM registration_form WHERE email='$email'";
    $query_run=mysqli_query($mysqli,$query);

    if(mysqli_num_rows($query_run)>0){

      echo '<script type="text/javascript"> alert("This mail is already exists.Try with another email") </script>';
    }
    else
    {

    $query = "INSERT INTO registration_form (name,email,password,cpassword,age,gender,address,district,contactno) VALUES('$name','$email','$password','$cpassword','$age','$gender','$
      address','$district','$contactno')";

    $query_run=mysqli_query($mysqli,$query);

  if($query_run)
  {
    echo '<script type="text/javascript"> alert("You are successfully registered") </script>';
  }
  else
  {

    echo '<script type="text/javascript"> alert("Registration failed") </script>';
  }
  }
```

Activate Win
Go to Settings to

```html
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <title></title>
    <link rel="stylesheet" href="stylelogin.css">
  <style type="text/css">
      a:link, a:visited {
        text-decoration: none;
        color: white;
      }
    </style>
  </head>
  <body>
<div class="login-box">
  <h2>Register here</h2>
  <form action="tbregistration.php" method="POST">

    <div class="textbox">
    <input type="text" name="name" placeholder="Name">
  </div>

  <div class="textbox">
   <input type="email" name="email" placeholder="Email">
  </div>

  <div class="textbox">
   <input type="password" name="password" placeholder="Password">
  </div>

   <div class="textbox">
   <input type="password" name="cpassword" placeholder="Confirm Password">
  </div>

  <div class="textbox">
 <input type="number" name="age" placeholder="Age">
  </div>


  <div class="textbox">
 <input type="text" name="address" placeholder="Address">
  </div>

<div class="textbox">
 <input type="number" name="contactno" placeholder="Contactno">
  </div><br>
  <label for="gender"><b>Gender</b></label><br>
```

Appendix B

Abbreviations and Acronyms:

TB: Tuberculosis

CSS: Cascading Style Sheets.

PHP: Hypertext Preprocessor.

HTML: Hypertext Markup Language.

XAMPP: Cross-Platform(X), Apache (A), MySQL (M), PHP (P) and Perl(P).

SQL: Structured Query Language.

Anika

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