SMART HEALTH MANAGEMENT SYSTEM USING DATA MINING

Submitted in partial fulfillment of the requirements
of the degree of

Bachelor ofEngineering

By

ANSARI ZAFAR	14DET71
CHAUS DANISH	14DET75
IDRISI SHABAN	14DET78
KHAN MUKEET	14DET85

GUIDED BY:

SAYYID ABRAR
Assistant Professor

(Electronics & Telecommunication)
AIKTC/Mumbai University
(2016-2017)

CERTIFICATE

This is to certify that the project entitled **"SMART HEALTH MANAGEMENT SYSTEM USING DATA MINING"** is the bonafide work carried out by

ANSARI ZAFAR	14DET71
CHAUS DANISH	14DET75
IDRISI SHABAN	14DET78
KHAN MUKEET	14DET85

B.E EXTC students ofAnjuman-I-Islam Kalsekar Technical Campus, Panvel, during the year 2016-17, in partial fulfillment of the requirements for the Bachelor of engineering in Electronics and telecommunication engineering and is submitted to the Mumbai University. The project report has been approved.

_____

(H.O.D) **(Examiner)** **(Guide)**

Prof. MujibTamboli **Prof. SayyidAbrar**

APPROVAL SHEET

Project Report Approval for B. E.

This project report entitled (***Smart Health Management System Using Data Mining***) by

ANSARI ZAFAR	14DET71
CHAUS DANISH	14DET75
IDRISI SHABAN	14DET78
KHAN MUKEET	14DET85

is approved for the degree of B.E EXTC.

Examiners

1.----------

2.----------

Supervisors

1.----------

2.----------

Chairman

Date:
Place: New Panvel

DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Ansari Zafar 14DET71)

(Chaus Danish14DET75)

(Idrisi Shaban14DET78)

(Khan Mukeet 14DET85)

Date:

ACKNOWLEDGEMENT

We appreciate the beauty of a rainbow, but never do we think that we need both the sun and the rain to make its colors appear. Similarly, this project work is the fruit of many such unseen hands. It's those small inputs from different people that have lent a helping to our project.

I also take this opportunity to express a deep sense of gratitude to **Prof. MujibTamboli**HOD of EXTC department for his cordial support, valuable information and guidance, which helped us in completing this task through various stages.

I take this opportunity to express my profound gratitude and deep regards to our guide **Asst.Prof.SayyidAbrar**for his exemplary guidance, monitoring and constant encouragement throughout the course of this project work. We also take this opportunity to thank our Lab Assistant **Mr. Imran Shaikh** of Signal processing lab and Supportive Incharge**Mr. Imran Pathan** for providing access to the lab and support.

I am obliged to the staff member of AIKTC, for the valuable information provided by them in the respective fields. I am grateful for their cooperation during the period of my project work.

ABSTRACT

Researchers all over the world are working in either multi agents or in ontologies for developing system in health care domain. It might have happened so many times that you or someone need doctor help but they are not available due to some reason. The health management system is an end user support and online consultation project. Here we propose a system that allows users to get guidance on their health issues through an intelligent health care online system. The system is fed with various symptoms and the disease/illness associated with those systems.

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CHAPTER 1

INTODUCTION

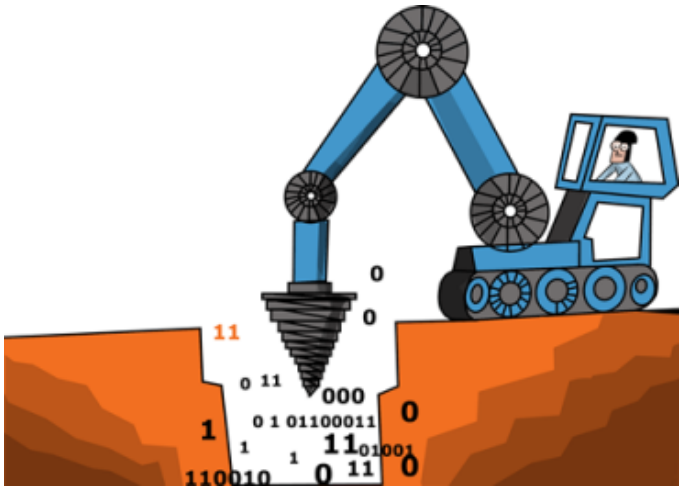
The Health Management system is an end user support and online consultation project. Here we propose a system that allows users to get guidance on their health issues through an intelligent health care system online. The system is fed with various symptoms and the disease/illness associated with those systems. The system allows user to share their symptoms and issues. It then processes user's symptoms to check for various illnesses that could be associated with it. In doctor module when doctor login to the system doctor can view his patient details and the report of that patient. Doctor can view details about the patient search what patient searched for according to their prediction. Doctor can view his personal details. Admin can add new disease details by specifying the type and symptoms of the disease into the database. Based on the name of the disease and symptom the data mining algorithm works. Admin can view various disease and symptoms stored in database. This system will provide proper guidance when the user specifies the symptoms of his illness.

1.1 DATA MINING:

Data mining (the analysis step of the "Knowledge Discovery in Databases" process, or KDD), an interdisciplinary subfield of computer science, is the computational process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems. The overall goal of the data mining process is to extract information from a data set and transform it into an understandable structure for further use. Aside from the raw analysis step, it involves database and data management aspects, data preprocessing, model and inference considerations, interestingness metrics, complexity considerations, post-processing of discovered structures, visualization, and online updating. The actual data mining task is the automatic or semi-automatic analysis of large quantities of data to extract previously unknown interesting patterns such as groups of data records (cluster analysis), unusual records (anomaly detection) and dependencies (association rule mining). These patterns can then be seen as a kind of summary of the input data, and may be used in further analysis or, for example, in machine learning and predictive analytics. For example, the data mining step might identify multiple groups in the data, which can then be used to obtain more accurate prediction results by a decision support system. Neither the data collection, data preparation, nor result interpretation and reporting are part of the data mining step, but do belong to the overall KDD process as additional steps.

Data mining consists of five major elements:

- Extract, transform, and load transaction data onto the data warehouse system.
- Store and manage the data in a multidimensional database system.
- Provide data access to business analysts and information technology professionals.
- Analyze the data by application software.
- Present the data in a useful format, such as a graph or table.



1.2 DATA BASE:

Database:

- Collection of data and it has placed in organized manner.
- It can easily access, managed and update.
- It is made up of tables.

Types of database:

- SQL server
- Oracle
- My SQL

My SQL:

- Open source
- Faster as compare to others

1.3 FEATURES:

- **Patient Login: -**Patient Login to the system using his ID and Password.
- **Patient Registration:-**If Patient is a new user he will enter his personal details and he will user Id and password through which he can login to the system.
- **My Details: -** Patient can view his personal details.
- **Disease Prediction: -**Patient will specify the symptoms caused due to his illness. System will ask certain question regarding his illness and system predict the disease based on the symptoms specified by the patient and system will also suggest doctors based on the disease.
- **Search Doctor:-**Patient can search for doctor by specifying name, address or type.
- **Doctor Login: -** Doctor will access the system using his User ID and Password.
- **Patient Details:** Doctor can view patient's personal details.
- **Notification:** Doctor will get notification how many people had accessed the system and what all are the diseases predicted by the system.
- **Admin Login:** Admin can login to the system using his ID and Password.
- **Add Doctor:** Admin can add new doctor details into the database.
- **Add Disease:** Admin can add disease details along with symptoms and type.

- **View Doctor:** Admin can view various Doctors along with their personal details.

- **View Disease:** Admin can view various diseases details stored in database.

- **View Patient:** Admin can view various patient details who had accessed the system.

CHAPTER 2

LITERATURE SURVEY

Sr no.	Name of paper	author	Y.O.P & Journal	Technology used	result	remark
1	Prediction model for a home based health care system	vikramadityaR.jakkula; Diane J. Cook; gauravjain	2007	Decision tree	Prediction tends to be wrong somethime	Not reliable
2	Improving System Health Monitoring With better Error processing	Brain kain;	2011	Error detection techniques	Probability of error decreases	relaible
3	Data base management System as a cloud service	Y vetteE.gelogo and sunguk lee	2012	Database technology	Collect and store the data	reliable
4	A study on clinical prediction using data mining technique	V.krishnaiah; G.narsimbha; N.Subhashchandra	2014	Decision tree &associated rule	Use of both technic prove to get more accurate result	More reliable And uses latest data mining technic

CHAPTER 3

PROBLEM STATEMENT

In today‘s world where changes are rapidly performed, human being needs to cope up with those changes to survive and live better. Everybody is in race with other people for moving ahead and tries to achieve more. In this race human has ignored one of the important part i.e. Human Life. To fulfill the needs for surviving, human has cost his precious life. To cope up with all these, human has started living into stress and depression, from that several diseases arise. In such situations healthcare comes into portrait. Now a days everybody needs help from healthcare domain, may be it advise for some disease or treating and consulting patients or fetching information regarding health issues

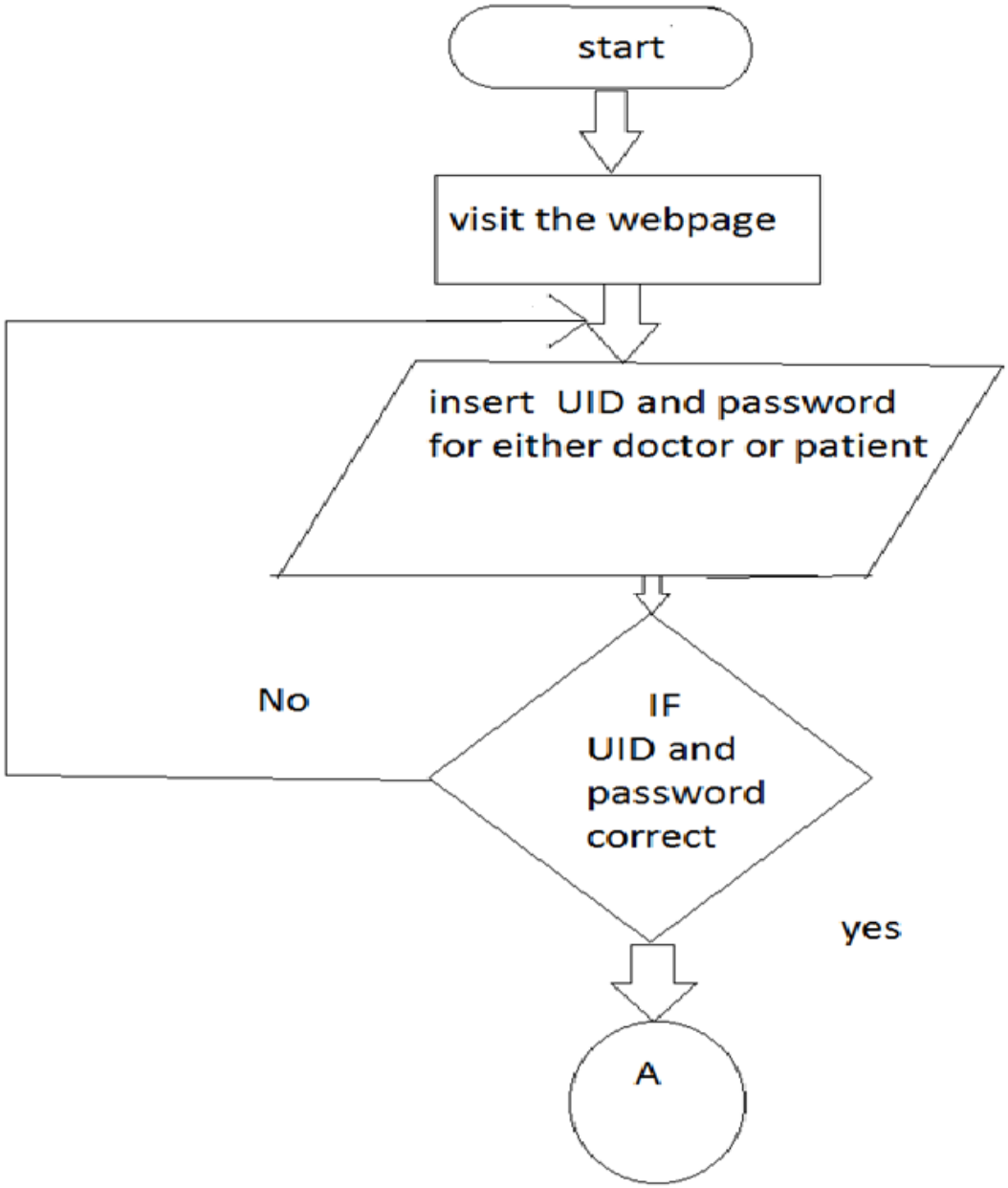
Healthcare is recognized various leading edge technologies and new scientific discoveries to enable better cures for diseases and better means to enable early detection of most life threatening diseases.

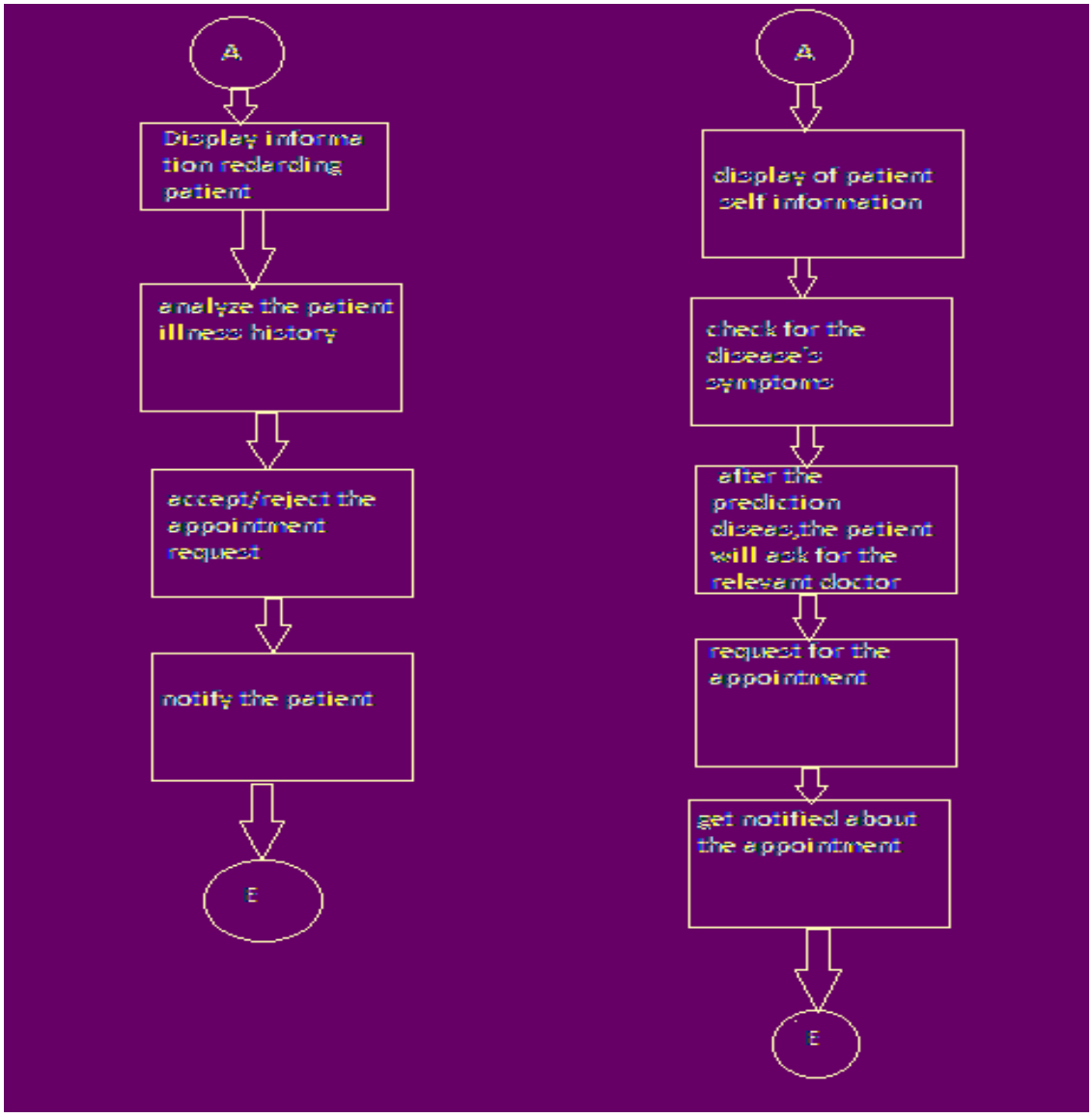
The smart health system focused for optimally reducing the healthcare costs. There are several functionalities remain untouched into health management system. So by living in the edge of technology and still if we are not able to utilize it in efficient and proper manner then there is no use of it. To tackle this, research is carried out in Health management system. There are several applications which use any one of the technology. This project shows the merging of both the technologies to achieve efficient result. In this project hospital activities are targeted for developing application.

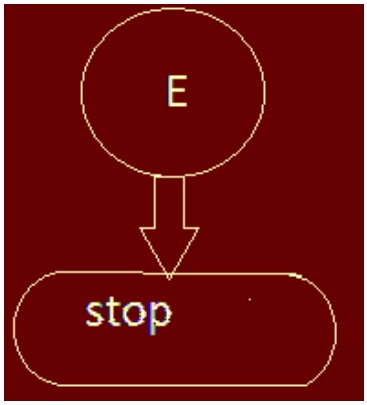
CHAPTER 4

METHODOLOGY

4.1 FLOW CHART:




A
Display information rederding patient
analyze the patient illness history
accept/reject the appointment request
notify the patient
E
A
display of patient self information
check for the disease's symptoms
after the prediction disease,the patient will ask for the relevant doctor
request for the appointment
get notified about the appointment
E


E
stop

4.2PROGRAM:

Registration program

```
<html>

<body>

<body style="background-color:powderblue;">


<div style="background-color:pink;#777;padding:60px 120px 60px 120px; display:inline-block;margin-left: 25%;margin-top: 10%; border-radius: 30px ">




<form action="registration_process.php" method="post" name="form1">


First Name:<br>

<input type="text" name="fname"><br>

Last Name:<br>

<input type="text" name="lname"><br>

Gender:<br>

<input type="radio" name="gender" value="male" > Male

<input type="radio" name="gender" value="female"> Female<br>

D.O.B.:<br>

<input type="date" name="dob"><br>

Address:<br>

<input type="text" name="address"><br>

Pincode:<br>

<input type="text" name="pincode"><br>
```

```
Contact NO.:<br>
<input type="text" name="contact"><br>
Email ID:<br>
<input type="email" name="emailid"><br>
Password:<br>
<input type="password" name="psw"><br>
city:<br>
<input type="text" name="city"><br>
<?php
$category = $_POST['category'];
if($category == "doctor")
{
?>
Qualification:<br>
<select name="Qualification">
<option value="M.B.B.S">M.B.B.S</option>
<option value="B.M.B.S">B.U.M.S</option>
<option value="M.D">M.D</option>
<option value="M.B.Ch.B">M.B.Ch.B</option>
<option value="M.B.B.Ch">M.B.B.Ch</option>
</select><br>
Speciality:<br>
<input type="text" name="speciality"><br>
Experience:<br>
<input type="text" name="experience"><br>

<?php
```

```
} else {
?>
Blood Group:<br>
<select name="bloodgroup">
<option value="a+">A+</option>
<option value="a-">A-</option>
<option value="b+">B+</option>
<option value="b-">B-</option>
<option value="ab+">AB+</option>
<option value="ab-">AB-</option>
<option value="o+">O+</option>
<option value="o-">O-</option>
</select><br>
Weight in KG :<br>
<input type="text" name="weight"><br>
Height in CM:<br>
<input type="text" name="height"><br>
Hereditary Diesease:<br>
<input type="text" name="heredis"><br>
Any Specific Diesease:<br>
<input type="text" name="specdis"><br>
Disability:<br>
<input type="text" name="disability"><br>
<?php
}
?>
<input type="hidden" value="<?php echo $category;?>" name="category">
```

```
<br><input type="submit" value="Submit">


</form>
</body>
</html>
```

Patient program

```
<?php
session_start();
$_SESSION['un'] = $_GET['un'];

?>
<html>
<head>

<script type="text/javascript" src="js/loadPage.js"></script>
<script type="text/javascript" src="js/changedropdown.js"></script>

<style>
body {font-family: "Lato", sans-serif;}
/* Style the tab */
div.tab {
overflow: hidden;
border: 1px solid #ccc;
background-color: #f1f1f1;
}
/* Style the buttons inside the tab */
div.tab button {
background-color: inherit;
float: left;
border: none;
outline: none;
cursor: pointer;
```

```
padding: 14px 16px;
transition: 0.3s;
font-size: 17px;
}
/* Change background color of buttons on hover */
div.tabbutton:hover {
background-color: #ddd;
}
/* Create an active/current tablink class */
div.tabbutton.active {
background-color: #ccc;
}
/* Style the tab content */
.tabcontent {
display: none;
padding: 6px 12px;
border: 1px solid #ccc;
border-top: none;
}
/* Style the close button */
.topright {
float: right;
cursor: pointer;
font-size: 20px;
}
.topright:hover {color: red;}
</style>
```

```
</head>

<body>

<body style="background-color:powderblue;">


<div class="tab">

<!--<input type="button" value="My Profile" class="tablinks"
onMouseover="load('anotherdiv', 'new1.php');">

                    <input type="button" value="Features" class="homebutton"
onMouseover="load('anotherdiv', 'Features.php');">

                    <input type="button" value="About Us" class="homebutton"
onMouseover="load('anotherdiv', 'About.php');">

                    <input type="button" value="Contact Us" class="homebutton"
onMouseover="load('anotherdiv', 'Contact.php');">

                    <input type="submit" value="Log in" class="homebutton">-->

<button class="tablinks" onclick="load('anotherdiv', 'myprofile_patient.php')"
id="defaultOpen">Myprofile</button>

<button class="tablinks" onclick="load('anotherdiv', 'Search.php')">Diagnose
disease</button>


<button class="tablinks" onclick="test1()">Logout</button>

</div>


<div id='anotherdiv'>

                    welcome to Patient Homepage

                </div>


<div id="Myprofile" class="tabcontent">

<span onclick="this.parentElement.style.display='none'" class="topright">x</span>

<h3>Myprofile</h3>
```

```
<p>opened Myprofile.</p>
</div>

<div id="Diagnose disease" class="tabcontent">
<span onclick="this.parentElement.style.display='none'" class="topright">x</span>
<h3>Diagnose disease</h3>
<p>opened Diagnose disease.</p>
</div>

<div id="Logout" class="tabcontent">
<span onclick="this.parentElement.style.display='block'" class="topright">x</span>
<h3>Logout</h3>
<p>opened Logout.</p>
</div>

<script type="text/javascript" src="js/changeDropDown.js"></script>
<script type="text/javascript" src="js/loadPage.js"></script>
<script type="text/javascript" src="js/changedropdown.js"></script>

</body>
</html>
```

Myprofile patient program

```
<?php

session_start();

?>

<html>

<body>

<body style="background-color:powderblue;">

<div style="background-color:lightpink;#777;padding:60px 120px 60px 120px;
display:inline-block;margin-left: 37%;margin-top: 14%; border-radius: 30px ">


HI Your Email


<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "health";


// Create connection

$conn =mysqli_connect("localhost","root","","health");

// Check connection

if ($conn->connect_error) {

die("Connection failed: " . $conn->connect_error);

}


echo $_SESSION['un'];

$sql = "SELECT * FROM patient where email='".$_SESSION['un']."'";
```

```
$result = $conn->query($sql);


if ($result=mysqli_query($conn,$sql))

  {

  $row = mysqli_fetch_array($result);


echo "<br> First Name: ". $row["fname"]. "<br> Last Name: ". $row["lname"]. "<br>
Gender: " . $row["gender"] .  "<br> Date of birth: " . $row["dob"] . "<br> Blood Group: " .
$row["bloodg"] .  "<br> Weight: " . $row["weight"] .  "<br> Height: " . $row["height"] .
"<br> Hereditary " . $row["hereditary"] .  "<br> Specific diesease: " . $row["specificdis"] .
"<br> Disability: " . $row["disability"] .  "<br> Address: " . $row["address"] .  "<br>
Contact: " . $row["contact"] .  "<br> City: " . $row["city"] . "<br>";


}

else {

echo "0 results";

}


$conn->close();

?>


</body>

</html>
```

Disease program

```
<html>

<body>

<body style="background-color:powderblue;">


<div style="background-color:pink;#777;padding:60px 120px 60px 120px; display:inline-block;margin-left: 25%;margin-top: 10%; border-radius: 30px ">




<?php

$con=mysqli_connect("localhost","root","","health");

$s1=$_POST['sym1'];

if(isset($_POST['sym2']))

        $s2=$_POST['sym2'];

if(isset($_POST['sym3']))

        $s3=$_POST['sym3'];

if($s1!="")

{

        $sql="SELECT * FROM `diesease` WHERE (Symptom1 = '$s1' OR Symptom2 = '$s1' OR Symptom3 = '$s1' OR Symptom4 = '$s1' OR Symptom5 = '$s1') ";



        if(isset($s2) && $s2!="")

                $sql = $sql." AND (Symptom1 = '$s2' OR Symptom2 = '$s2' OR Symptom3 = '$s2' OR Symptom4 = '$s2' OR Symptom5 = '$s2')";



        if(isset($s3) && $s3!="")

                $sql = $sql." AND (Symptom1 = '$s3' OR Symptom2 = '$s3' OR Symptom3 = '$s3' OR Symptom4 = '$s3' OR Symptom5 = '$s3')";
```

```
        echo $sql;
        $query = mysqli_query($con,$sql);

        $row = mysqli_fetch_array($query);

        echo "Disease is: ".$row['Disease'];
        $ds = $row['Disease'];

$sql1="SELECT * FROM `doctor1` WHERE category = (SELECT category FROM
`diesease` WHERE Disease = '$ds') ";

echo $sql1;
$query1 = mysqli_query($con,$sql1);
        $cnt = mysqli_num_rows(mysqli_query($con,$sql1));
        while($cnt>0){
        $row1 = mysqli_fetch_array($query1);

        echo "Doctor is: ".$row1['fname'];
        $cnt=$cnt-1;
        }
}

?>
<form name="frm1" action="disease_process.php" method="POST">
<input type="submit" value="submit" name="submit">
</form>
```

```
<script type="text/javascript" src="js/loadPage.js"></script>
<script type="text/javascript" src="js/changedropdown.js"></script>


</body>
</html>
```

Search program

```
<html>
<body>
<?php
$con=mysqli_connect("localhost","root","","health");
?>
<select name="sym1" id="sym1" onChange="change_dropdown()">
<option value="pick">Select</option>
<?php
$sql = mysqli_query($con, "SELECT
Symptom1,Symptom2,Symptom3,Symptom4,Symptom5 From diesease");
$row = mysqli_num_rows($sql);
while ($row = mysqli_fetch_array($sql)){
        if(isset($row['Symptom1']) && $row['Symptom1']!='')
                echo "<option value='".$row['Symptom1']."'>".$row['Symptom1']."</option>"
;
        if(isset($row['Symptom2']) && $row['Symptom2']!='')
                echo "<option value='".$row['Symptom2']."'>".$row['Symptom2']."</option>"
;
        if(isset($row['Symptom3']) && $row['Symptom3']!='')
                echo "<option value='".$row['Symptom3']."'>".$row['Symptom3']."</option>"
;
        if(isset($row['Symptom4']) && $row['Symptom4']!='')
                echo "<option value='".$row['Symptom4']."'>".$row['Symptom4']."</option>"
;
        if(isset($row['Symptom5']) && $row['Symptom5']!='')
                echo "<option value='".$row['Symptom5']."'>".$row['Symptom5']."</option>"
;
}
```

```
?>
</select>

<div id="symp2">

</div>

<div id="symp3">

</div>

<input type="submit" value="submit" name="submit">
</form>
</body>
</html>
```

Search2

```
<html>
<body>
<?php
$con=mysqli_connect("localhost","root","","health");
$name=$_GET['name'];
$naam=$_GET['naam'];
if($naam!="sym1")
        $name1=$_GET['name1'];
if($name!="" && $naam=="sym1")
{
```

```
	$query = mysqli_query($con,"SELECT distinct * FROM `diesease` WHERE
Symptom1 = '$name' OR Symptom2 = '$name' OR Symptom3 = '$name' OR Symptom4 =
'$name' OR Symptom5 = '$name' ");

	echo "<select name='sym2' id='sym2' class='form-control'
onChange='change_dropdown2()'>";

	while($row = mysqli_fetch_array($query))

	{

		if(isset($row['Symptom1']) && $row['Symptom1']!='' &&
$row['Symptom1']!=$name)

			echo "<option value='". $row['Symptom1'] .">" .$row['Symptom1']
."</option>" ;

		if(isset($row['Symptom2']) && $row['Symptom2']!='' &&
$row['Symptom2']!=$name)

			echo "<option value='". $row['Symptom2'] .">" .$row['Symptom2']
."</option>" ;

		if(isset($row['Symptom3']) && $row['Symptom3']!='' &&
$row['Symptom3']!=$name)

			echo "<option value='". $row['Symptom3'] .">" .$row['Symptom3']
."</option>" ;

		if(isset($row['Symptom4']) && $row['Symptom4']!='' &&
$row['Symptom4']!=$name)

			echo "<option value='". $row['Symptom4'] .">" .$row['Symptom4']
."</option>" ;

		if(isset($row['Symptom5']) && $row['Symptom5']!='' &&
$row['Symptom5']!=$name)

			echo "<option value='". $row['Symptom5'] .">" .$row['Symptom5']
."</option>" ;

	}

	echo "</select>";

}


if($name!="" && $naam=="sym2")
```

```
{
        $query = mysqli_query($con,"SELECT distinct * FROM `diesease` WHERE
(Symptom1 = '$name1' OR Symptom2 = '$name1' OR Symptom3 = '$name1' OR Symptom4
= '$name1' OR Symptom5 = '$name1') AND (Symptom1 = '$name' OR Symptom2 = '$name'
OR Symptom3 = '$name' OR Symptom4 = '$name' OR Symptom5 = '$name') ");
        echo "<select name='sym3' id='sym3' class='form-control'
onChange='change_dropdown3()'>";
        while($row = mysqli_fetch_array($query))
        {
                if(isset($row['Symptom1']) && $row['Symptom1']!='' &&
$row['Symptom1']!=$name)
                        echo "<option value='". $row['Symptom1'] .">" .$row['Symptom1']
."</option>" ;
                if(isset($row['Symptom2']) && $row['Symptom2']!='' &&
$row['Symptom2']!=$name)
                        echo "<option value='". $row['Symptom2'] .">" .$row['Symptom2']
."</option>" ;
                if(isset($row['Symptom3']) && $row['Symptom3']!='' &&
$row['Symptom3']!=$name)
                        echo "<option value='". $row['Symptom3'] .">" .$row['Symptom3']
."</option>" ;
                if(isset($row['Symptom4']) && $row['Symptom4']!='' &&
$row['Symptom4']!=$name)
                        echo "<option value='". $row['Symptom4'] .">" .$row['Symptom4']
."</option>" ;
                if(isset($row['Symptom5']) && $row['Symptom5']!='' &&
$row['Symptom5']!=$name)
                        echo "<option value='". $row['Symptom5'] .">" .$row['Symptom5']
."</option>" ;
        }
        echo "</select>";
}
```

```
?>


</body>
</html>
```

4.WAMP SERVER:

WampServer is a French-developed Apache Web server, PHP interpreter and MySQL database integration package. Eliminating the need for developers to spend time in the cumbersome configuration of the environment process, so as to free up more energy to do development. In the windows under the Apache + PHP + Mysql integrated environment, with a simple graphical and menu installation and configuration environment. PHP extension, Apache module, open / close the mouse to get, no longer have to modify the configuration file in person, and WAMP it will do. No longer ask PHP around the installation of the problem, wampserver everything get. This software is completely free and can be downloaded from the official website to the latest version. The version used in this article is WampServer 2.0f (dated December 16, 2008), which includes Apache 2.2.11, PHP 5.2.8, MySQL 5.1.30.

SOFTWARE INFORMATION:

Size of software:	25 MB
Software Language:	English
Operating	2000, XP, 2003, Win7

environment:	
The number of clicks:	2711
Software Rating:	Four star
Software version:	V1.6.1.33
Software category:	Source code
Developers:	Herv Leclerc (HeL)
Developer Website:	Http://www.wampserver.com/
Authorized way:	FREE

4.PHP MYADMIN:

phpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web. phpMyAdmin supports a wide range of operations on MySQL and MariaDB. Frequently used operations (managing databases, tables, columns, relations, indexes, users, permissions, etc) can be performed via the user interface, while you still have the ability to directly execute any SQL statement.

phpMyAdmin comes with a wide range of documentation and users are welcome to update our wiki pages to share ideas and howtos for various operations. The phpMyAdmin team will try to help you if you face any problem; you can use a variety of support channels to get help.

phpMyAdmin is also very deeply documented in a book written by one of the developers – Mastering phpMyAdmin for Effective MySQL Management, which is available in English and Spanish.

To ease usage to a wide range of people, phpMyAdmin is being translated into 72 languagesand supports both LTR and RTL languages.

phpMyAdmin is a eighteen-year-old project with a stable and flexible code base; you can find out more about the project and its history and the awards it earned. When the project turned 15, we published a celebration page.

The phpMyAdmin project is a member of Software Freedom Conservancy. SFC is a not-for-profit organization that helps promote, improve, develop, and defend Free, Libre, and Open Source Software (FLOSS) projects

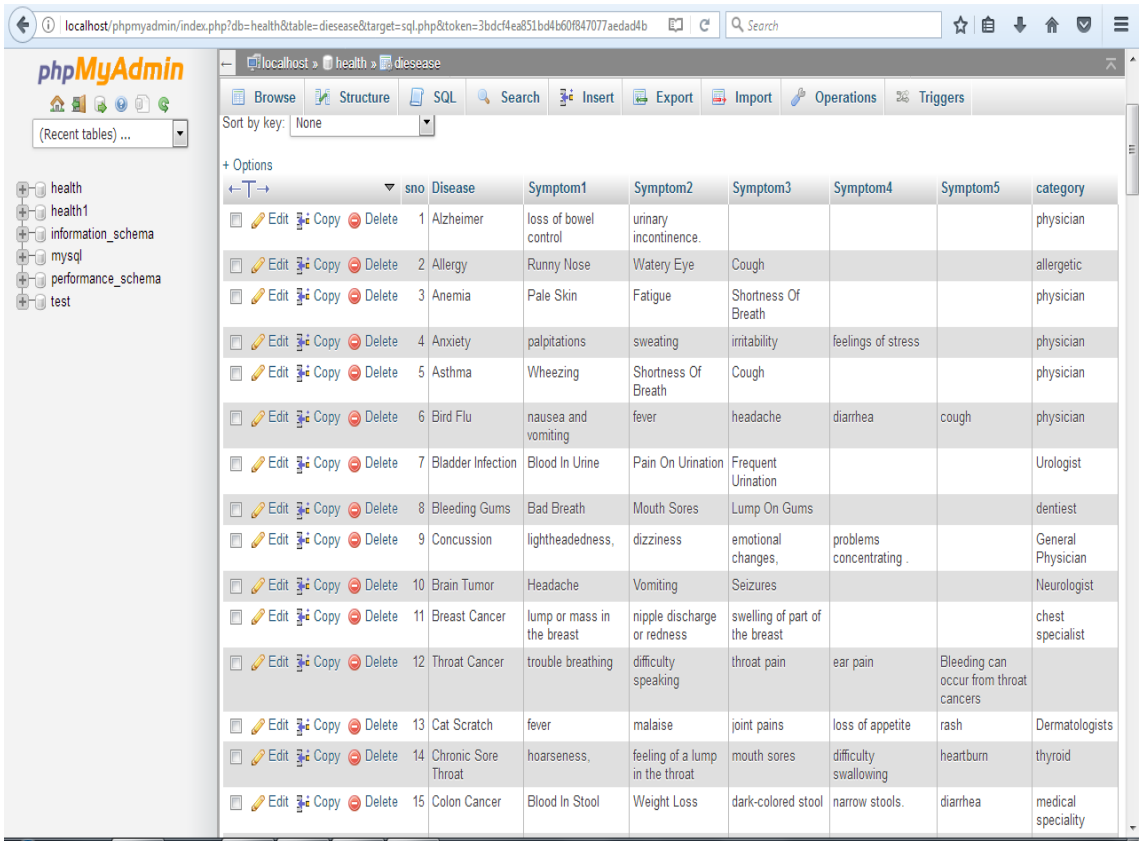
Features:

- Intuitive web interface
- Support for most MySQL features:
  - browse and drop databases, tables, views, fields and indexes
  - create, copy, drop, rename and alter databases, tables, fields and indexes
  - maintenance server, databases and tables, with proposals on server configuration
  - execute, edit and bookmark any SQL-statement, even batch-queries
  - manage MySQL user accounts and privileges

    - manage stored procedures and triggers
- Import data from CSV and SQL
- Export data to various formats: CSV, SQL, XML, PDF, ISO/IEC 26300 - OpenDocument Text and Spreadsheet, Word, LaTeX and others
- Administering multiple servers
- Creating graphics of your database layout in various formats
- Creating complex queries using Query-by-example (QBE)
- Searching globally in a database or a subset of it
- Transforming stored data into any format using a set of predefined functions, like displaying BLOB-data as image or download-link

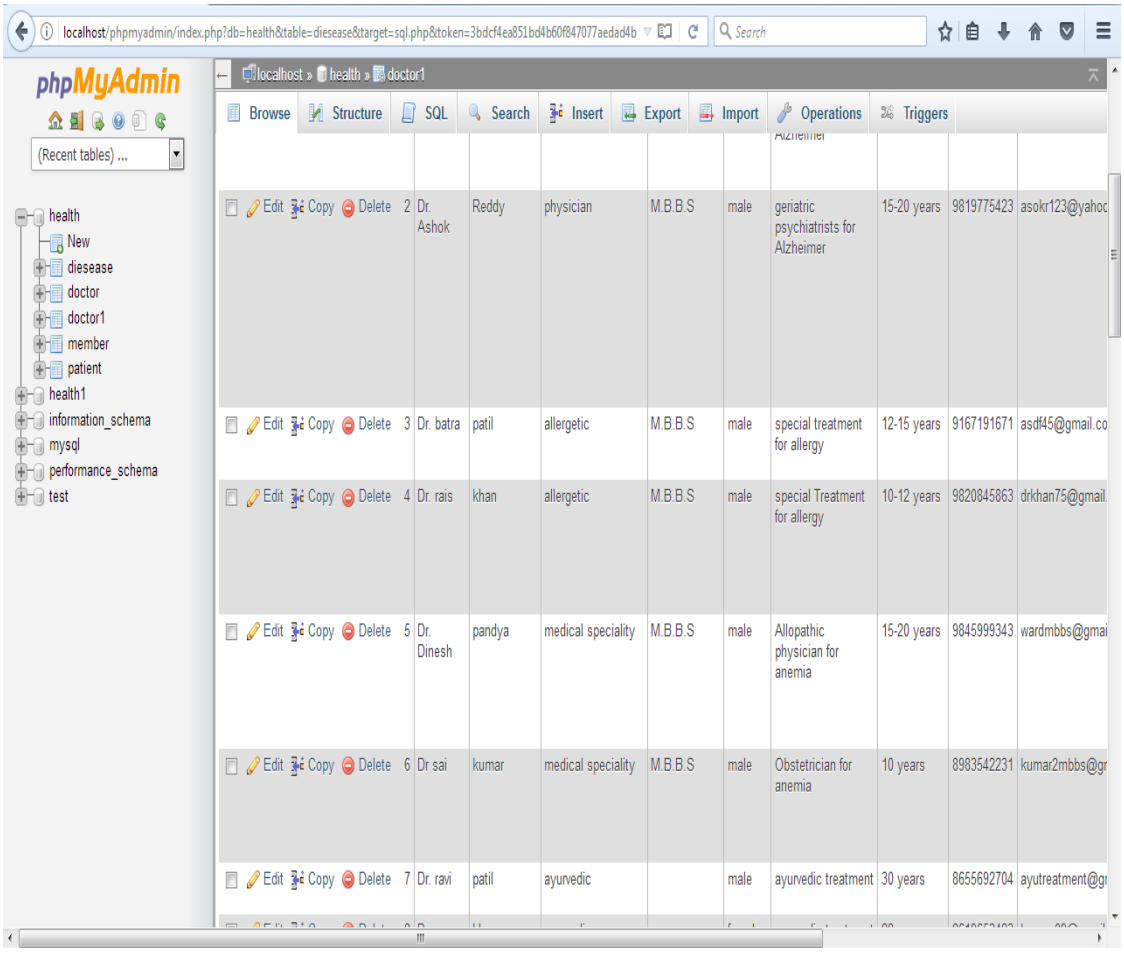
• IOREF. This pin on the Arduino/Genuino board provides the voltage reference with which the microcontroller operates. A properly configured shield can read the IOREF pin voltage and select the appropriate power source or enable voltage translators on the outputs to work with the 5V or 3.3V.

Disease database:

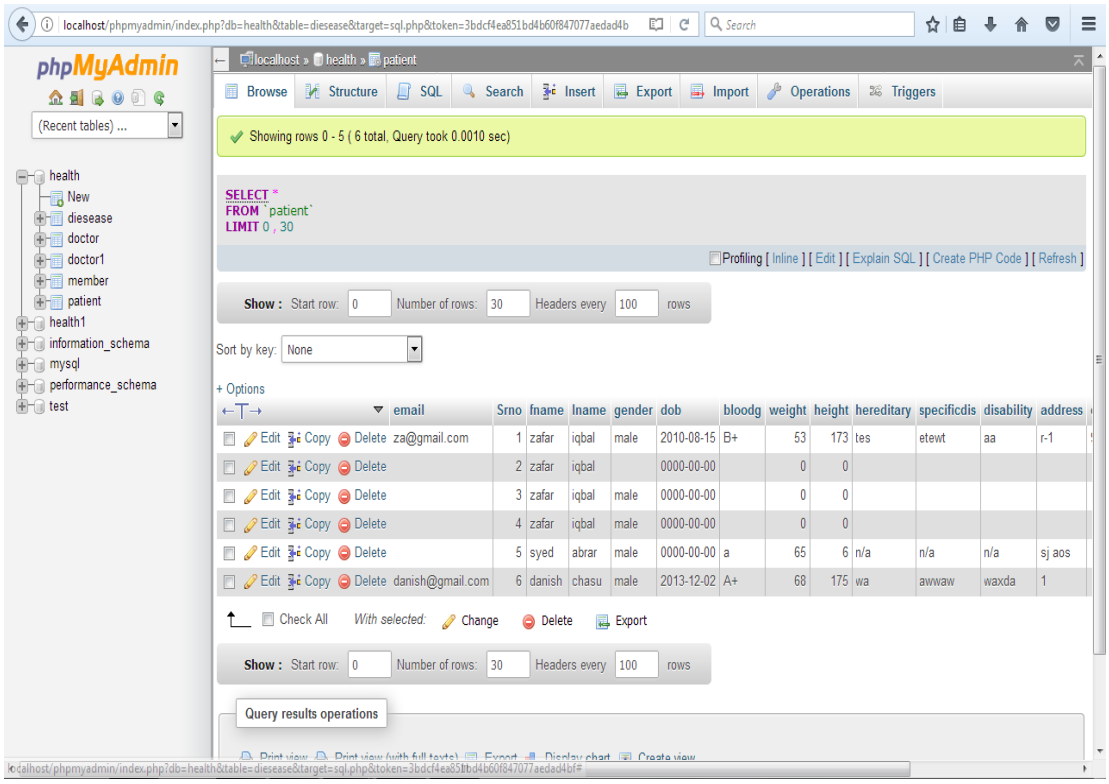


	sno	Disease	Symptom1	Symptom2	Symptom3	Symptom4	Symptom5	category
Edit Copy Delete	1	Alzheimer	loss of bowel control	urinary incontinence.				physician
Edit Copy Delete	2	Allergy	Runny Nose	Watery Eye	Cough			allergetic
Edit Copy Delete	3	Anemia	Pale Skin	Fatigue	Shortness Of Breath			physician
Edit Copy Delete	4	Anxiety	palpitations	sweating	irritability	feelings of stress		physician
Edit Copy Delete	5	Asthma	Wheezing	Shortness Of Breath	Cough			physician
Edit Copy Delete	6	Bird Flu	nausea and vomiting	fever	headache	diarrhea	cough	physician
Edit Copy Delete	7	Bladder Infection	Blood In Urine	Pain On Urination	Frequent Urination			Urologist
Edit Copy Delete	8	Bleeding Gums	Bad Breath	Mouth Sores	Lump On Gums			dentiest
Edit Copy Delete	9	Concussion	lightheadedness,	dizziness	emotional changes,	problems concentrating .		General Physician
Edit Copy Delete	10	Brain Tumor	Headache	Vomiting	Seizures			Neurologist
Edit Copy Delete	11	Breast Cancer	lump or mass in the breast	nipple discharge or redness	swelling of part of the breast			chest specialist
Edit Copy Delete	12	Throat Cancer	trouble breathing	difficulty speaking	throat pain	ear pain	Bleeding can occur from throat cancers	
Edit Copy Delete	13	Cat Scratch	fever	malaise	joint pains	loss of appetite	rash	Dermatologists
Edit Copy Delete	14	Chronic Sore Throat	hoarseness,	feeling of a lump in the throat	mouth sores	difficulty swallowing	heartburn	thyroid
Edit Copy Delete	15	Colon Cancer	Blood In Stool	Weight Loss	dark-colored stool	narrow stools.	diarrhea	medical speciality

Doctor database:



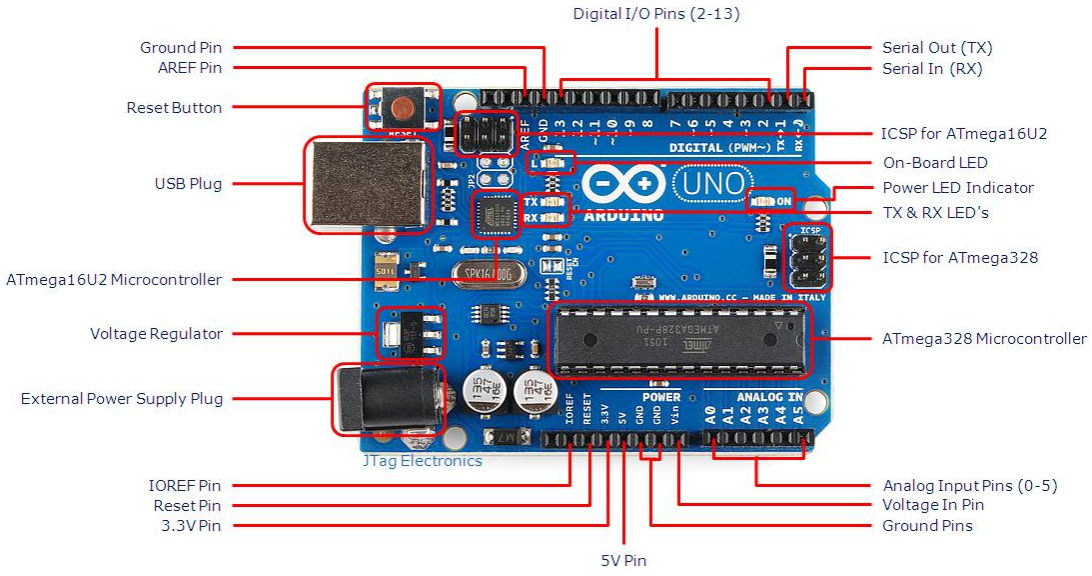
Patient database:



4.ARDUINO UNO:

Arduino is an open source, computer hardware and software company, project, and user community that designs and manufactures microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world. The project's products are distributed as open-source hardware and software, which are licensed under the GNU Lesser General Public License (LGPL) or the GNU General Public License (GPL), permitting the manufacture of Arduino boards and software distribution by anyone. Arduino boards are available commercially in preassembled form, or as do-it-yourself kits

The Arduino Uno is a microcontroller board based on the ATmega328 (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. The Uno differs from all preceding boards in that it does not use the FTDI USB-to-serial driver chip. Instead, it features the Atmega16U2 (Atmega8U2 up to version R2) programmed as a USB-to-serial converter. Revision 2 of the Uno board has a resistor pulling the 8U2 HWB line to ground, making it easier to put into DFU mode.



4.LM35

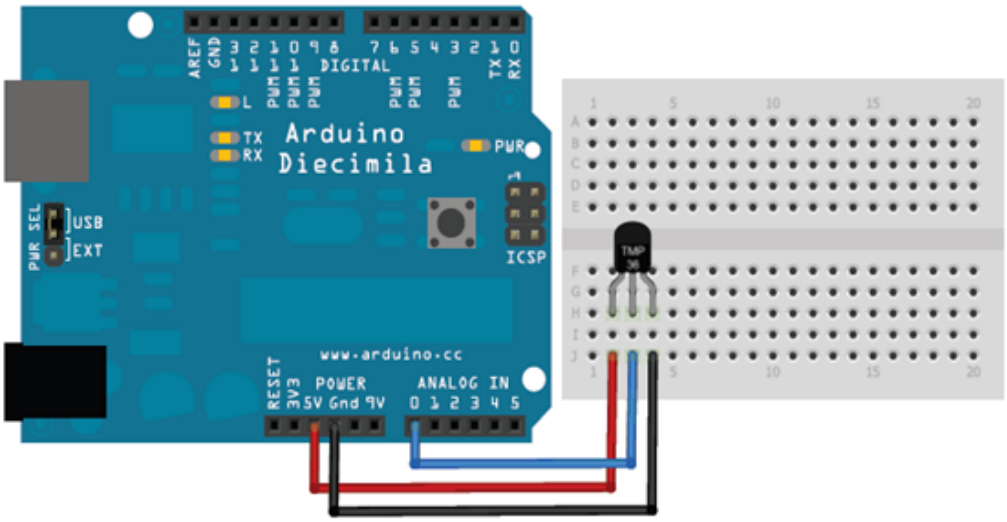
LM35 is a precision IC **temperature sensor** with its output proportional to the temperature (in ^{o}C). The sensor circuitry is sealed and therefore it is not subjected to oxidation and other processes. With **LM35**, temperature can be measured more accurately than with a thermistor. It also possess low self heating and does not cause more than 0.1 ^{o}C temperature rise in still air.

The operating temperature range is from -55°C to 150°C. The output voltage varies by 10mV in response to every ^{o}C rise/fall in ambient temperature, *i.e.,* its scale factor is 0.01V/ ^{o}C.

Pin Description:

Pin No	Function	Name
1	Supply voltage; 5V (+35V to -2V)	Vcc
2	Output voltage (+6V to -1V)	Output
3	Ground (0V)	Ground

4.CIRCUIT DIAGRAM:



TO PHP

CHAPTER 5

ADVANTAGE

- User can search for doctor's help at any point of time.
- User can talk about their illness and get diagnosis.
- Improved Outcomes of Treatment,
- Enhanced Patient Experience
- Doctors get more clients online.

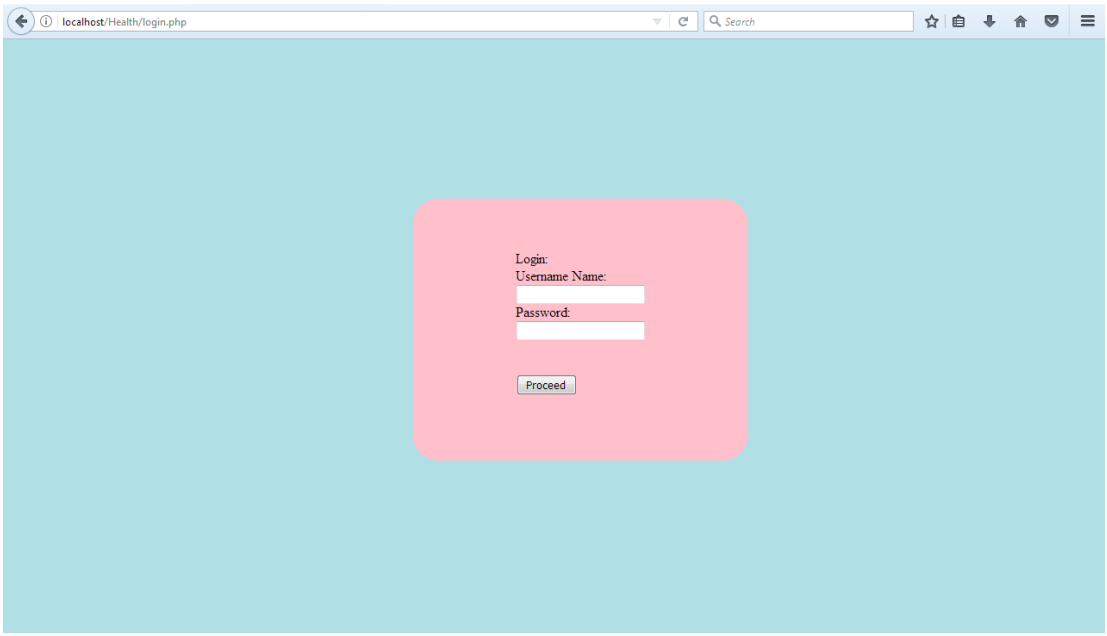
CHAPTER 6

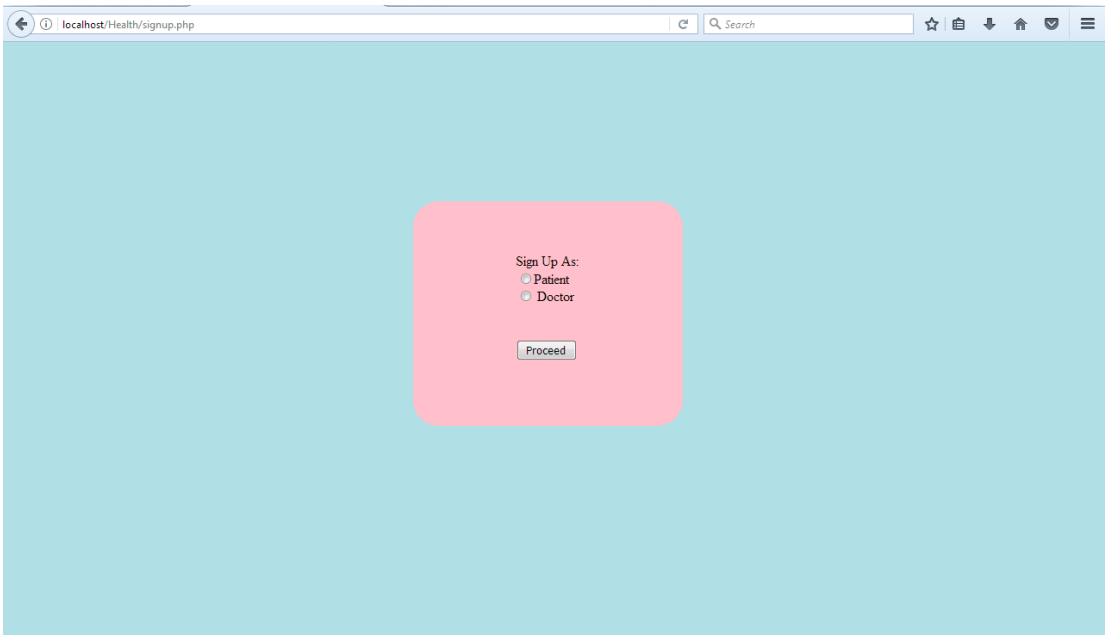
APPLICATION

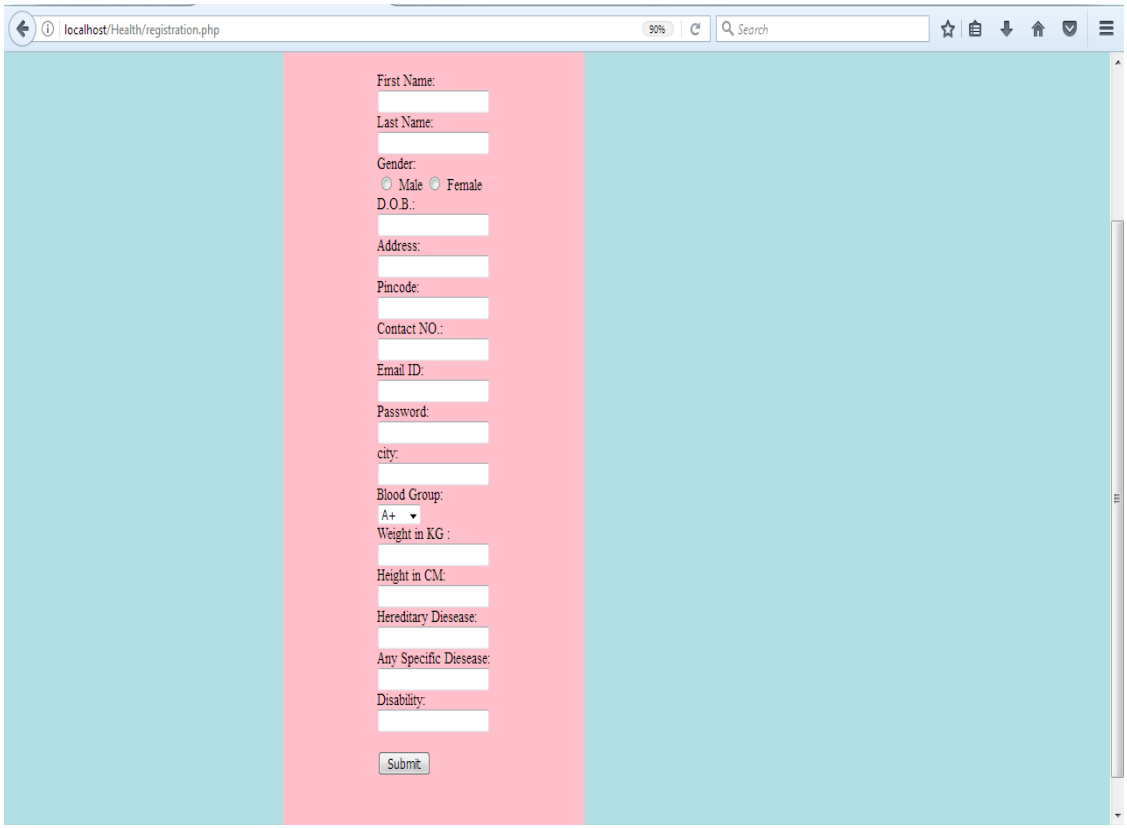
- This system can be used by all patients or their family members who need help of doctor.
- Hospital admission.
- Patient flow.
- Health problem detection.

CHAPTER 7

RESULT



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Search
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Last Name:
Gender:
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Female
D.O.B.:
Address:
Pincode:
Contact NO.:
Email ID:
Password:
city:
Blood Group:
A+
Weight in KG :
Height in CM:
Hereditary Diesease:
Any Specific Diesease:
Disability:
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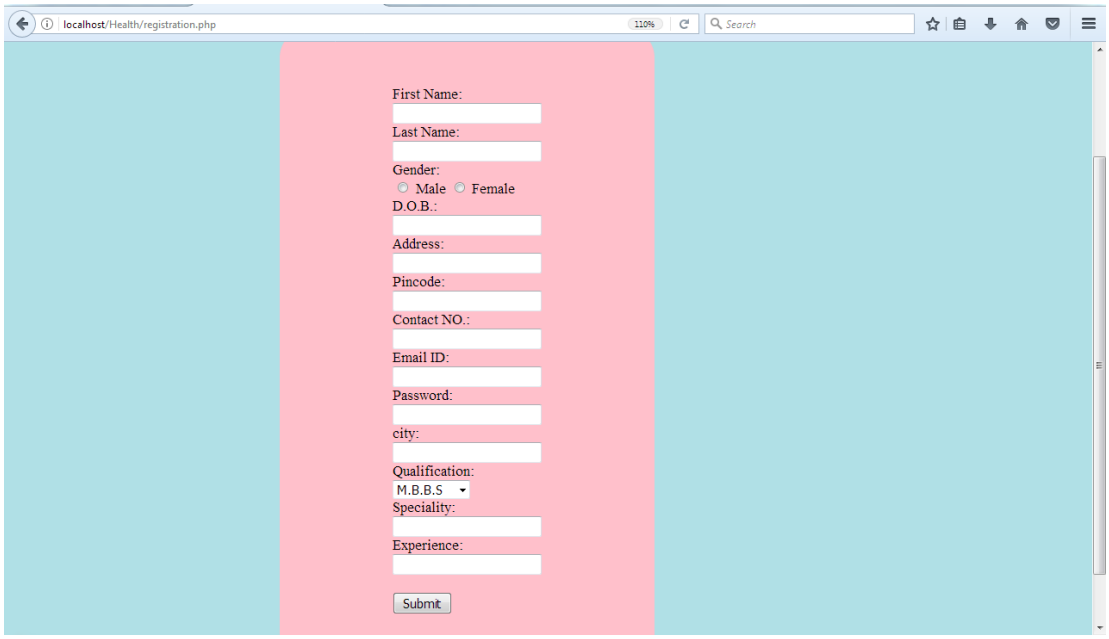
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Search
First Name:
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Gender:
Male
Female
D.O.B.:
Address:
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Email ID:
Password:
city:
Qualification:
M.B.B.S
Speciality:
Experience:
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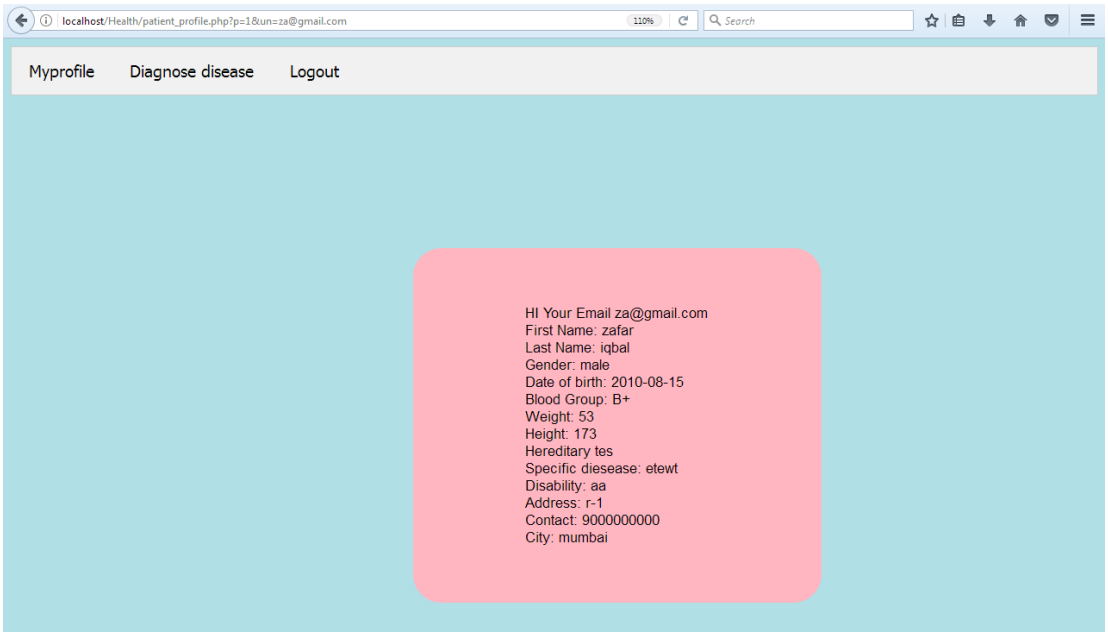
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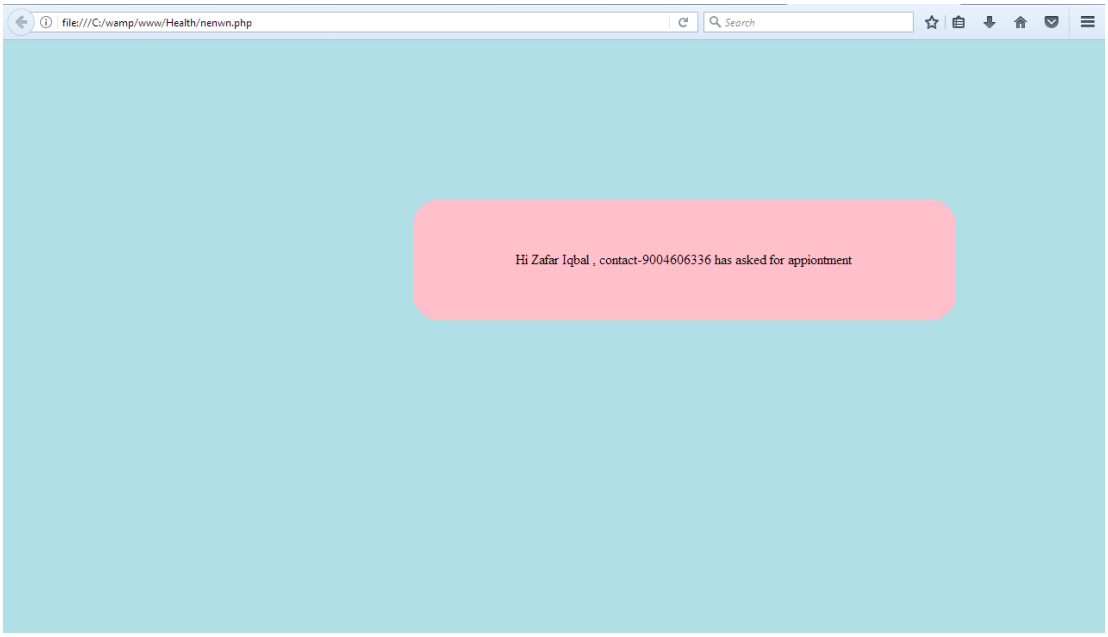
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Search
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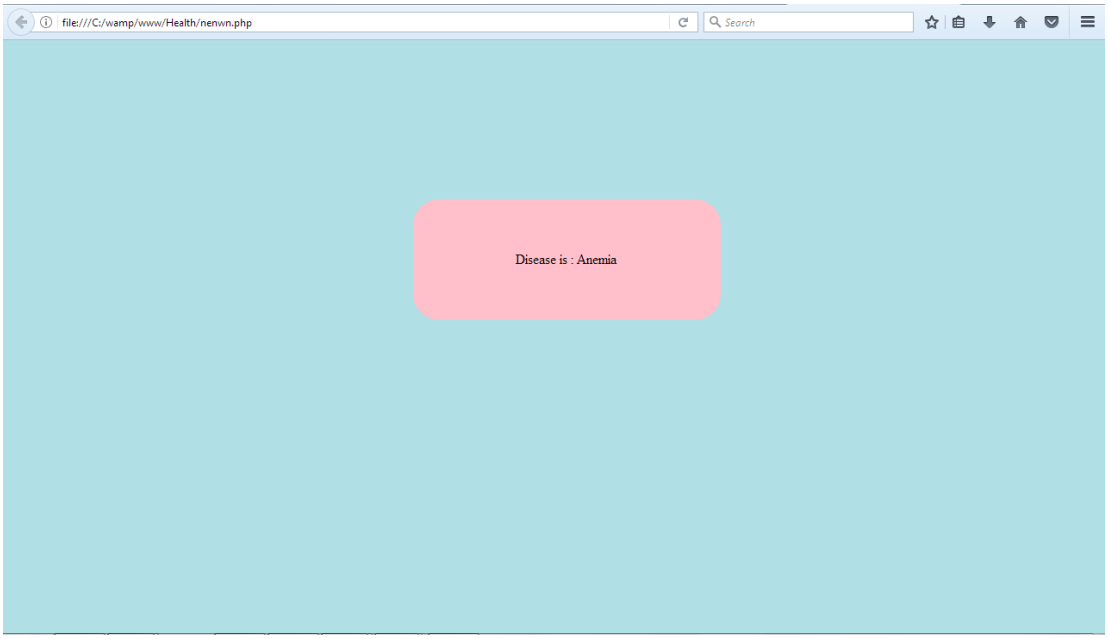

CHAPTER 8

CONCLUSION AND FUTURE SCOPE

Hence we have achieved smart health management system using data mining. The whole systems activities are divided into three major parts like patients, doctors, and admin. Each one has their own role to perform and system respond accordingly. Several agents have been created using web services and inter agent communication is done. phpMyadmin is used for storing data of patients,

doctors, and admin.For implementing the system PHP and HTML programming is used.

The system comprise of following features.

- Management of Doctors
- Management of Patients
- Management of Schedules of Doctor
- Management of Patients Appointments
- Management of Patient – Doctor Dialogs
- Searching Information

Future scope:

- Directly getting the images for CT Scan or X-Rays from connected device
- Mapped with Insurance Companies for claim processing
- Billing of patients
- Blood Bank Information Management
- Producing ECG using connected device
- Video Conferencing facility for remote areas for treatments
- Hangout for different doctors and patients at different locations

.CHAPTER 9

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