

Hospital Management System

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Brief Introduction:

Hospital Management System is a health informatics tool that focuses mainly on the administrative needs of hospitals as well as providing support for patients.

The main objective of HMS is to computerize the maintenance details of patients and appointment section in the hospital.

The project is a comprehensive, integrated information system designed to manage all the aspects of a hospital's operation, such as medical, administrative, Consultation, appointment, information on diseases. Also, it promises to make the work environment paperless and thus, is a green technological approach.

System Requirements (Software and hardware used)

Hardware -

- Running windows/linux or any other OS
- Have 100mb storage for project
- Supports browser

Software

- Xampp/Wamp
- Browser (chrome/edge/firefox)

Module Description:

User Login: Administration has the user-name and password which can be accessed by the staff.

Patients : the patient needs to fill the consultation form before consulting with the doctor. He/She can also get an appointment for the next morning.

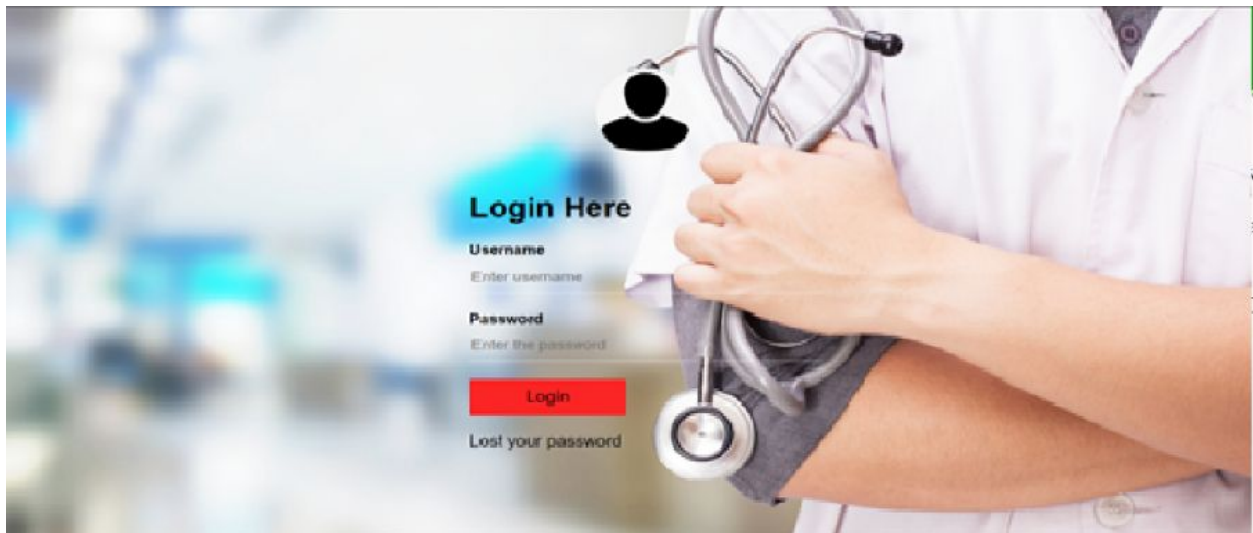
Staff: they need to fill every details of the patient and write a short description on the symptom faced by the patient while filling the consultation form.

General information: This is general information on diseases and their treatment and cure, it also contains a human body which will show the parts of the organ located in a human body.

System Architecture

Output screenshots

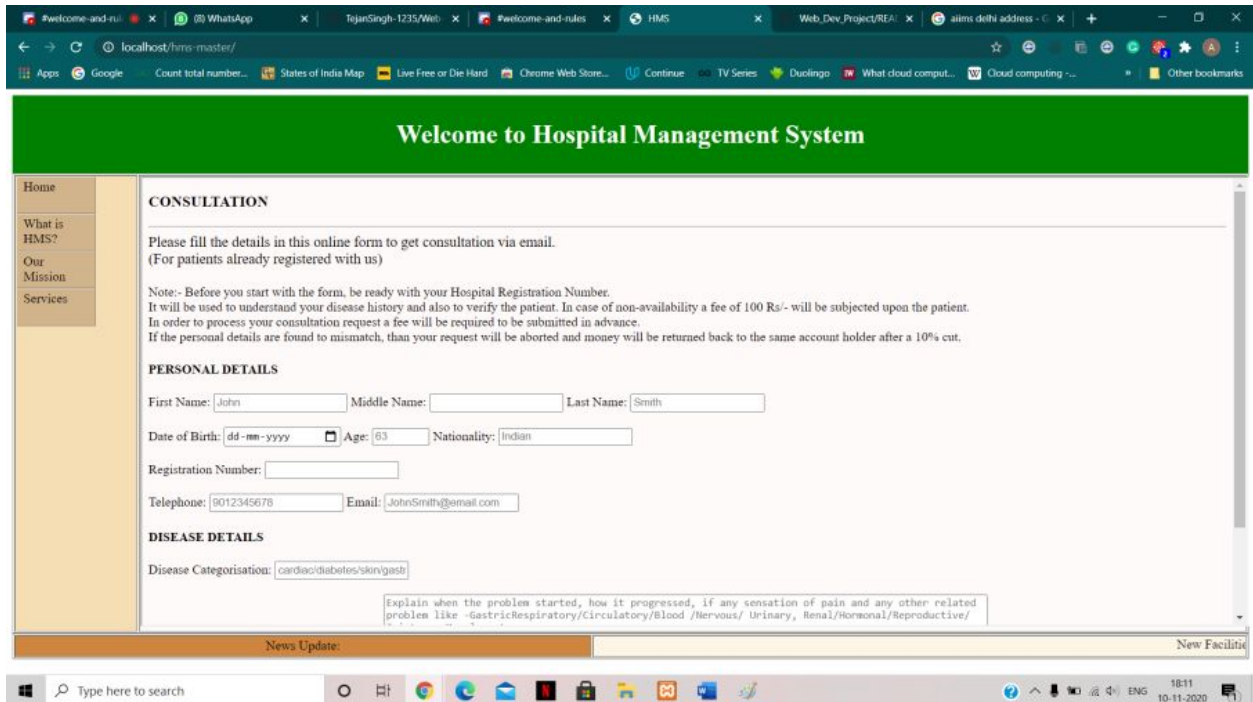
Login Page:



Welcome page

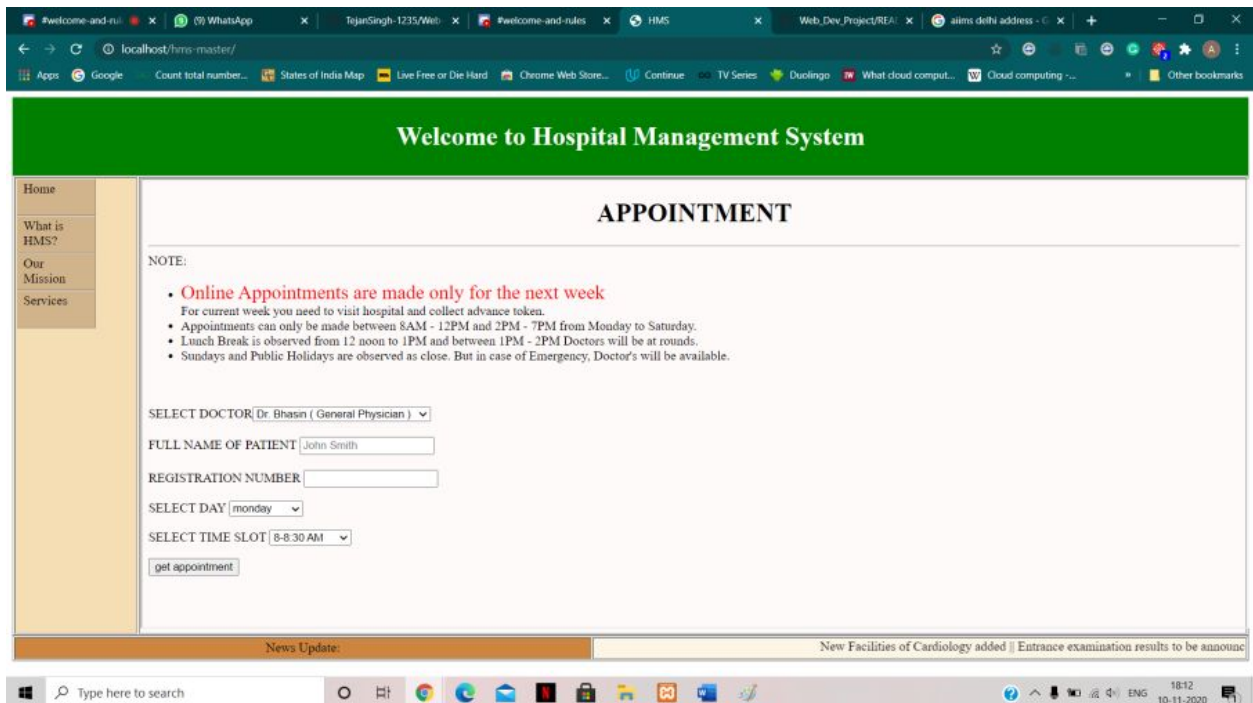


Consultation Form



The screenshot shows a web browser window with multiple tabs. The active tab is 'HMS' (Hospital Management System). The browser address bar shows 'localhost/hms-master/'. The page has a green header with the text 'Welcome to Hospital Management System'. On the left, there is a sidebar with links: 'Home', 'What is HMS?', 'Our Mission', and 'Services'. The main content area is titled 'CONSULTATION'. It contains a paragraph: 'Please fill the details in this online form to get consultation via email. (For patients already registered with us)'. Below this is a note: 'Note:- Before you start with the form, be ready with your Hospital Registration Number. It will be used to understand your disease history and also to verify the patient. In case of non-availability a fee of 100 Rs/- will be subjected upon the patient. In order to process your consultation request a fee will be required to be submitted in advance. If the personal details are found to mismatch, than your request will be aborted and money will be returned back to the same account holder after a 10% cut.' The form is divided into two sections: 'PERSONAL DETAILS' and 'DISEASE DETAILS'. The 'PERSONAL DETAILS' section includes input fields for 'First Name' (John), 'Middle Name' (empty), 'Last Name' (Smith), 'Date of Birth' (dd-mm-yyyy), 'Age' (63), 'Nationality' (Indian), 'Registration Number' (empty), 'Telephone' (9012345678), and 'Email' (JohnSmith@gmail.com). The 'DISEASE DETAILS' section includes a 'Disease Categorisation' dropdown menu (cardiac/diabetes/skin/gash) and a text area for 'Explain when the problem started, how it progressed, if any sensation of pain and any other related problem like -Gastric/Respiratory/Circulatory/Blood /Nervous/ Urinary, Renal/Hormonal/Reproductive/'. At the bottom of the form, there is a 'News Update' section with the text 'New Facilities'.

Appointment Form



The screenshot shows a web browser window with multiple tabs. The active tab is 'HMS' (Hospital Management System). The browser address bar shows 'localhost/hms-master/'. The page has a green header with the text 'Welcome to Hospital Management System'. On the left, there is a sidebar with links: 'Home', 'What is HMS?', 'Our Mission', and 'Services'. The main content area is titled 'APPOINTMENT'. It contains a 'NOTE:' section with the following text: 'Online Appointments are made only for the next week'. Below this is a list of bullet points: 'For current week you need to visit hospital and collect advance token.', 'Appointments can only be made between 8AM - 12PM and 2PM - 7PM from Monday to Saturday.', 'Lunch Break is observed from 12 noon to 1PM and between 1PM - 2PM Doctors will be at rounds.', and 'Sundays and Public Holidays are observed as close. But in case of Emergency, Doctor's will be available.' The form includes a 'SELECT DOCTOR' dropdown menu (Dr. Bhasin (General Physician)), a 'FULL NAME OF PATIENT' input field (John Smith), a 'REGISTRATION NUMBER' input field (empty), a 'SELECT DAY' dropdown menu (monday), and a 'SELECT TIME SLOT' dropdown menu (8-8:30 AM). At the bottom of the form, there is a 'get appointment' button. At the bottom of the page, there is a 'News Update' section with the text 'New Facilities of Cardiology added || Entrance examination results to be announce'.

DataBase

The screenshot shows the phpMyAdmin interface with the 'Structure' tab selected for the 'appointment' table. The table structure is displayed as follows:

Table	Action	Rows	Type	Collation	Size	Overhead
appointment	Browse Structure Search Insert Empty Drop	InnoDB	utf8mb4_general_ci	16 K.B	-	
department	Browse Structure Search Insert Empty Drop	InnoDB	utf8mb4_general_ci	16 K.B	-	
2 tables	Sum					

Below the table structure, there is a 'Create table' section with a 'Name' field and a 'Number of columns' field set to 4. A 'Go' button is located at the bottom right of this section.

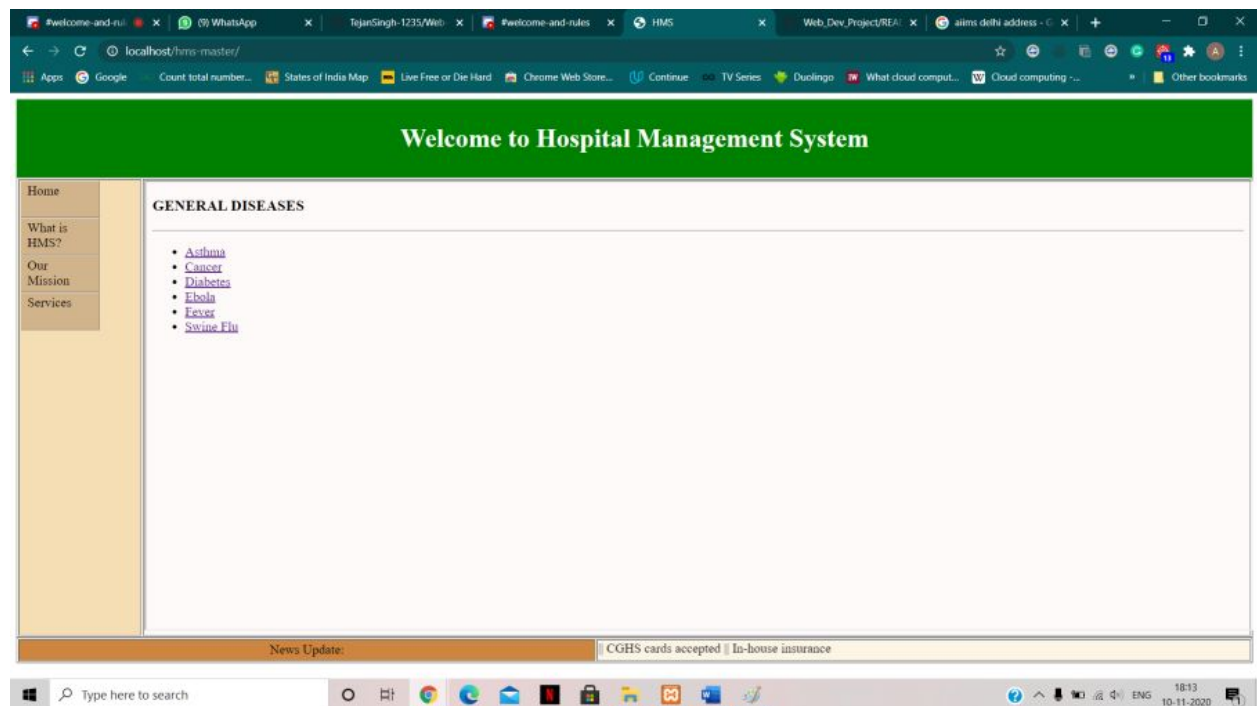
The screenshot shows the phpMyAdmin interface with the 'Browse' tab selected for the 'appointment' table. The table data is displayed as follows:

Options	doctor	patient	registrationNumber	day	time
	Dr. Bhasin (General Physician)	Abhinav Rana	23	monday	0000-00-00 00:00:00
	Dr. Bhasin (General Physician)	Abhinav Rana	34	monday	0000-00-00 00:00:00
	Dr. Gupta (Cardiologist)	Abhinav Rana	12456	monday	0000-00-00 00:00:00
	Dr. Sharma (General Physician)	Michael	6789	monday	0000-00-00 00:00:00
	Dr. Gupta (Cardiologist)	Heith	567	thursday	0000-00-00 00:00:00

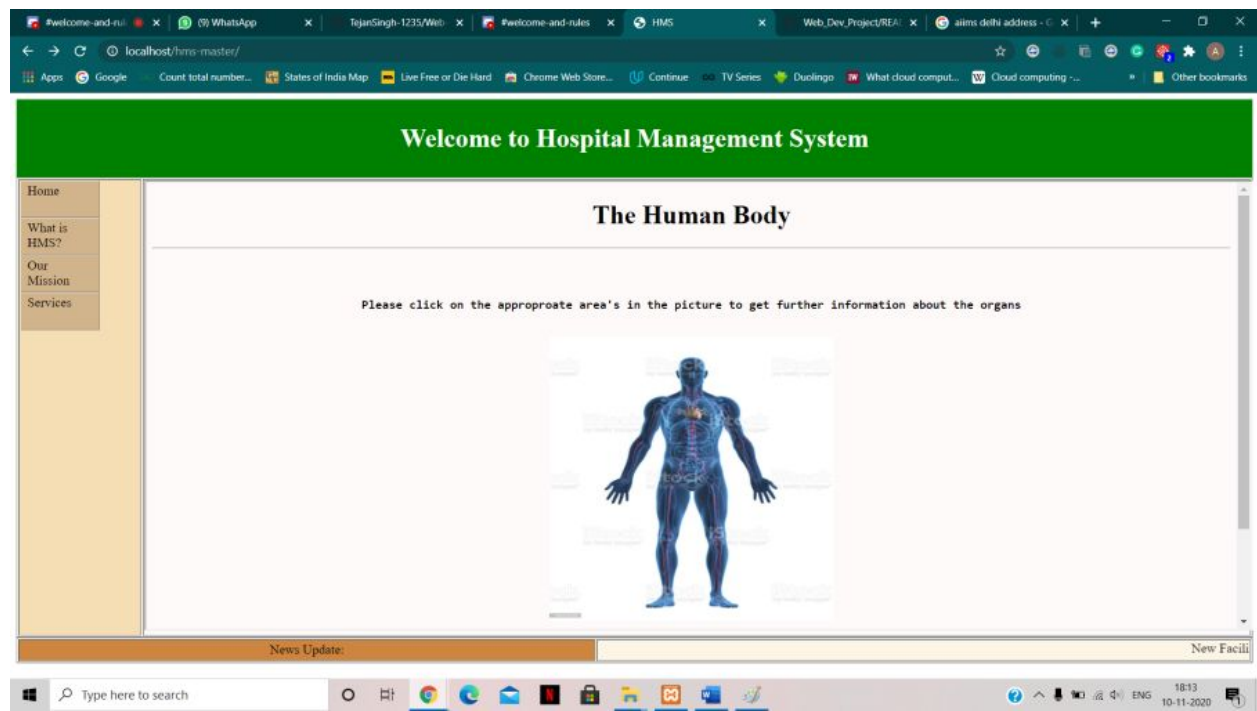
Below the table data, there is a 'Query results operations' section with buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. There is also a 'Bookmark this SQL query' section with a 'Label' field and a checkbox 'Let every user access this bookmark'.

Information

General diseases



Human Body



Some Codes with the file names

Index.php

```
<!DOCTYPE html>
<html>

<head>
<link rel="icon" href="images/HMS-Logo.jpg" type="image/jpg" sizes="16x16">
<title>HMS</title>
<!-- <script src="http://code.jquery.com/jquery-1.11.0.min.js"></script> -->
<script src="jquery-1.11.0.min.js"></script>

<script>
function updateFrame(src) {
    document.getElementById("hmsFrame").src = src;
}

function serviceRequest(value) {
    var openServiceFrame = 'services/'+value+'.php';
    updateFrame(openServiceFrame);
}

$("#menu a").click(function(e) {
    e.preventDefault();
    var src = $(this).attr('href');

    $('#hmsFrame').fadeOut(1000,function(){
        $('#hmsFrame').attr('src',src ).load(function(){
            $(this).fadeIn(1000);
        });
    });
});
</script>

<style>
header {
    background-color:green;
    color:white;
    text-align:center;
    padding:5px;
}

footer {
```

```

background-color:black;
color:white;
clear:both;
text-align:center;
padding:5px;
}

nav a {
    height:40px;
    width:80px;
    border-color: ButtonHighlight ButtonShadow ButtonShadow ButtonHighlight;
    display: inline-block; padding: 2px 8px;
    border-style: solid; border-width: 1px;
    background: ButtonFace; color: ButtonText;
    background-color:tan;
}

nav a:link, a:visited {
    text-decoration: none;
    cursor: auto;
}

nav a:link:active, a:visited:active {
}

</style>
</head>

<body>

<header>
<table align="center">
<tr>
<td><h1>Welcome to Hospital Management System</h1></td>
</tr>
</table>
</header>

<table width="100%" height="435px" border="1">
<tr>
<td width="10%" valign="top" bgcolor="wheat">
<nav id="menu">
<a href="menu/home.php" target="hmsFrame">Home</a>
<a href="menu/what-HMS.php" target="hmsFrame">What is HMS?</a>

```

```

<a href="menu/mission.php" target="hmsFrame">Our Mission</a>
<a href="menu/services.php" target="hmsFrame">Services</a>

</nav>
</td>
<td bgcolor="snow">
<iframe name="hmsFrame" id="hmsFrame" width="100%" height="550px" frameborder="5"
src="images/hospital.jpg"></iframe>
</td>
</tr>
</table>

<table width="100%" border="1">
<tr>
<td bgcolor="peru" align="center">News Update: </td>
<td bgcolor="oldlace" color="yellow" width="800px"><marquee>New Facilities of Cardiology
added || Entrance examination results to be announced || CGHS cards accepted || In-house
insurance</marquee></td>
</tr>
</table>
</body>
</html>

```

Login.html

```

<!DOCTYPE.html>
<html>
<head>
<title> Login page</title>
<link rel="stylesheet" href="style.css">
</head>

<body>
<div class="loginbox">


<h1>Login Here</h1>
<p>Username</p>
<input type="text" name="" placeholder="Enter username">
<p>Password</p>
<input type="password" name="" placeholder="Enter the password">
<input type="submit" name="" value="Login"><br>
<a href="#">Lost your password</a><br>
</div></body></html>

```


Style.css

```
body{
    margin:0;
    padding: 0;
    background: url(1.jpg);
    background-size: cover;
    background-position: center;
    font-family: sans-serif;
}
.loginbox{
    width: 320px;
    height: 420px;
    background : none;
    color: #000;
    top: 20%;
    left:35%;
    position: absolute;
    transform: :translate(-50%,-50%);
    box-sizing: border-box;
    padding: 70px 30px
}
.avatar{
    width: 100px;
    height: 100px;
    border-radius: 50%;
    position: absolute;
    top:-50px;
    left:38%;
}
.h1{
    margin: 0;
    padding: 0 0 20px;
    text-align: center;
    font-size: 22px;
}
.loginbox p{
    margin: 0;
    padding: 0;
    font-weight: bold;
}
.loginbox input{
    width: 100%;
    margin-bottom: 20px;
}
```

```

.loginbox input[type="text"],input[type="password"]
{
    border: none;
    border-bottom: 1px solid #fff;
    background: transparent;
    outline: none;
    height: 40px;
    color: #000;
    font-size: 16px;
}
.loginbox input[type="submit"]
{
    border: none;
    outline: none;
    height: 40px;
    width: 160px;
    background: #fb2525;
    #fff#fff;
    font-size: 18px;
    border-radius: 20px;
}
.loginbox input[type="submit"]:hover
{
    cursor: pointer;
    background: #ffc107;
    color: #000;
}
.loginbox a{
    text-decoration: none;
    font-size: 18px;
    line height: : 20px;
    color: black;
}
.loginbox a:hover{
    color:#ffc107;
}

```

Service.php

```

<!DOCTYPE html>
<html>
<head>
<style>

```

```

button {
    height:70px;
    width:180px;
    font: 20px Arial;
    margin:5px 5px 10px 25px;
    display: inline-block;
    background-color:cadetblue;
    text-align:center;
}
</style>
</head>
<body>
<button onclick="parent.serviceRequest('reception')">Reception</button>
<button onclick="parent.serviceRequest('emergency')">Emergency</button>
<button onclick="parent.serviceRequest('ambulance')">Ambulance</button>
<button onclick="parent.serviceRequest('department')">Departments</button>
<button onclick="parent.serviceRequest('admin')">Administration</button>
<button onclick="parent.serviceRequest('consultation')">Consultation</button>
<button onclick="parent.serviceRequest('appointment')">Appointment</button>
<button onclick="parent.serviceRequest('humanBody')">Human Body</button>
<button onclick="parent.serviceRequest('generalDiseases')">General Diseases</button>
</body>
</html>

```

Consultation form

```

<!DOCTYPE html>
<html>
<body>
<h3>CONSULTATION</h3><hr />
<font size="4">Please fill the details in this online form to get consultation via email.
<br />
(For patients already registered with us)

<br /><br />

</font>
Note:- Before you start with the form, be ready with your Hospital Registration Number. <br />
It will be used to understand your disease history and also to verify the patient. In case of
non-availability a fee of 100 Rs/- will be subjected upon the patient.<br />
In order to process your consultation request a fee will be required to be submitted in advance.
<br />
If the personal details are found to mismatch, then your request will be aborted and money will
be returned back to the same account holder after a 10% cut.

```

```
<form id="consultForm" name="consultForm" method="POST" enctype="multipart/form-data"
action="submitConsultation.php" autocomplete="on">
```

<h4>PERSONAL DETAILS</h4>

First Name: <input type="text" name="fname" placeholder="John" id="textfield" />

Middle Name: <input type="text" name="mname" id="textfield2" />

Last Name: <input type="text" name="lname" placeholder="Smith" id="textfield3" />

Date of Birth: <input type="date" name="dob" placeholder="31-12-1950" required id="textfield4" />

Age: <input type="number" name="age" placeholder="63" min="1" max="120" required id="textfield6" />

Nationality: <input type="text" name="nation" placeholder="Indian" required id="textfield7" />

Registration Number: <input type="number" name="registration" maxlength="10" required id="textfield8" />

Telephone: <input type="number" name="phone" placeholder="9012345678" maxlength="10" required id="textfield9" />

Email: <input type="email" name="email" placeholder="JohnSmith@email.com" required id="textfield10" />

<h4>DISEASE DETAILS</h4>

Disease Categorisation: <input type="text" name="disease" placeholder="cardiac/diabetes/skin/gastric/etc." required id="textfield11" />

Main Symptoms (not more than 500 words): <textarea rows="5" cols="100" maxlength="500" name="symptoms"

placeholder="Explain when the problem started, how it progressed, if any sensation of pain and any other related problem like -GastricRespiratory/Circulatory/Blood /Nervous/ Urinary, Renal/Hormonal/Reproductive/ Joints or Muscles etc."

id="textfield12" ></textarea>

Diagnostic Reports (only in PDF format supported) : <input type="file" name="report" accept="application/pdf">

<input type="submit" name="button" id="button" value="Submit" />

</form>

</body>

</html>

Appointment form

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
</style>
</head>
<div align="center">
  <h1 class="style1">APPOINTMENT</h1><hr />
</div>
NOTE:
<ul>
<li><font size="5" color="red">Online Appointments are made only for the next week</font> <br
/> For current week you need to visit hospital and collect advance token.</li>
<li>Appointments can only be made between 8AM - 12PM and 2PM - 7PM from Monday to
Saturday.</li>
<li>Lunch Break is observed from 12 noon to 1PM and between 1PM - 2PM Doctors will be at
rounds.</li>
<li>Sundays and Public Holidays are observed as close. But in case of Emergency, Doctor's will
be available.</li>
</ul>
<br /> <br />

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

  <?php
      $servername = "localhost";
      $username = "root";
      $password = "";
      $dbname = "hms";
      $tablename = "department";

      // Create connection
      $con = new mysqli($servername, $username, $password, $dbname);
      // Check connection
      if ($con->connect_error) {
          die("Connection failed: " . $con->connect_error);
      }

      $sql = "SELECT name, field FROM $tablename ORDER BY name";
      $result = $con->query($sql);
      echo "<label>SELECT DOCTOR";
```

```

        echo "<select name='doctor' id='select'>";
        while($row = $result->fetch_assoc()){
            echo "<option value='' . $row['name'] . " ( " . $row['field'] . " ) " . ">" .
$row['name'] . " ( " . $row['field'] . " ) </option>";
        }
        echo "</select>";
        echo "</label>";

    ?>
<br /><br />

```

```

FULL NAME OF PATIENT <input type="text" name="patient" placeholder="John Smith"
required id="patient" />
<br /><br />
REGISTRATION NUMBER <input type="number" name="registration" maxlength="10"
required id="registration" />
<br />

```

```

<p>
<label>SELECT DAY
<select name="day" id="select2">
    <option value="monday">monday</option>
    <option value="tuesday">tuesday</option>
    <option value="wednesday">wednesday</option>
    <option value="thursday">thursday</option>
    <option value="friday">friday</option>
    <option value="saturday">saturday</option>
</select>
</label>
</p>
<p>
<label>SELECT TIME SLOT
<select name="time" id="select3">
    <option value="8-8:30 AM">8-8:30 AM</option>
    <option value="8:30-9 AM">8:30-9 AM</option>
    <option value="9-9:30 AM">9-9:30 AM</option>
    <option value="9:30-10 AM">9:30-10 AM</option>
    <option value="10-10:30 AM">10-10:30 AM</option>
    <option value="10:30-11 AM">10:30-11 AM</option>
    <option value="11-11:30 AM">11-11:30 AM</option>
    <option value="11:30-12 PM">11:30-12 PM</option>
    <option value="2-2:30 PM">2-2:30 PM</option>
    <option value="2:30-3 PM">2:30-3 PM</option>
    <option value="3-3:30 PM">3-3:30 PM</option>
    <option value="3:30-4 PM">3:30-4 PM</option>

```

```

        <option value="4-4:30 PM">4-4:30 PM</option>
        <option value="4:30-5 PM">4:30-5 PM</option>
        <option value="5-5:30 PM">5-5:30 PM</option>
        <option value="5:30-6 PM">5:30-6 PM</option>
        <option value="6-6:30 PM">6-6:30 PM</option>
        <option value="6:30-7 PM">6:30-7 PM</option>
    </select>
</label>
</p>
<p>
    <label>
        <input type="submit" name="button" id="button" value="get appointment" />
    </label>
</p>
</form>
</html>

```

getAppointment.php

```

<?php
$con = mysqli_connect("localhost","root","","hms");
if (!$con)
{
    die('Could not connect: ');
}

$sql="INSERT INTO appointment(doctor,patient,registrationNumber,day,time)
VALUES
('$_POST[doctor]','$_POST[patient]','$_POST[registration]','$_POST[day]','$_POST[time]')";

if (!mysqli_query($con,$sql))
{
    die('Error: ');
}
echo " <h3>APPOINTMENT DETAILS</h3><hr />
        Thank You for having the appointment. We are here to help you.<br /><br />
        <u><b>Appointment Details:</b></u><br />
        <b>Patient:</b> $_POST[patient]<br />
        <b>Doctor:</b> $_POST[doctor]<br />
        <b>Day:</b> Next Week's $_POST[day]<br />
        <b>Time Slot Booked:</b> $_POST[time]
    ";
mysqli_close($con);
?>

```

Generaldiseases.html

```
<!DOCTYPE html>
<html>
<body>
<h3>GENERAL DISEASES</h3><hr />
<ul>
<li><a href="https://www.medicalnewstoday.com/articles/323523"/>Asthma</li>
<li><a href="https://www.medicalnewstoday.com/articles/323648"/>Cancer</li>
<li><a href="https://www.medicalnewstoday.com/articles/323627"/>Diabetes</li>
<li><a href="https://www.medicalnewstoday.com/articles/280598"/>Ebola</li>
<li><a href="https://www.medicalnewstoday.com/articles/168266"/>Fever</li>
<li><a href="https://www.medicalnewstoday.com/articles/147720"/>Swine Flu</li>

</ul>
</body>
</html>
```

Humanbody.html

```
<!DOCTYPE html>
<html>
<body>
<h1><center>The Human Body</center></h1>
<hr />
<br />
<br />
<pre>
<center><h3>Please click on the appropriate area's in the picture to get further information
about the organs</h3></center>
<center></center>
<map name="humanbody">
    <acronym title="Head Portion"><area shape="rectangle" coords="140,30,200,80"
alt="head portion" href="body/head.php"></acronym>
    <acronym title="Chest Portion"><area shape="rectangle" coords="140,90,200,135"
alt="chest portion" href="body/chest.php"></acronym>
    <acronym title="Stomach Portion"><area shape="rectangle" coords="140,160,200,180"
alt="stomach portion" href="body/stomach.php"></acronym>
    <acronym title="Legs Portion"><area shape="rectangle" coords="140,200,200,300"
alt="legs portion" href="body/legs.php"></acronym>
</map>
</body>
</html>
```


Conclusion & Future Work

The Project was successfully completed and executed. In future there can be certain things that can be improved like:

- Emergency form
- Connecting it with a pharmacy department avoiding the misunderstanding.
- Connecting it with insurance company's
- Routine-check form

References

- | | |
|---------------|--------------|
| • Youtube | • W3School |
| • W3Resources | • Phptpoint |
| • github | • javatpoint |