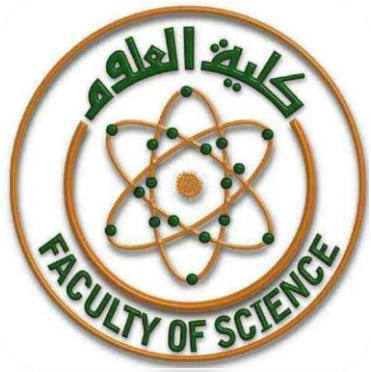

Research Article on:

Comp206 (Heart Rate Scoring)

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Introduction:

Keeping Monitoring our health become required thing nowadays, cause of what we are passing through of diseases and environmental problems that affects our health, One of the most important things we should be tracking on its rate of change is the heart score rate, As known the pulse of heart is the wave generated in the arteries and veins as result of systole, pulse rate was first measured by ancient Greek physicians and scientists. However, it was not until the invention of the "Physician's Pulse Watch" in 1707 that changes in pulse rate could be accurately assessed. Stephen Hales (1733) was the first to note that pulse varied with respiration and in 1847 Carl Ludwig was the first to record respiratory sinus arrhythmia. With the measurement of the ECG (1895) and advent of digital signal processing techniques in the 1960s, investigation of HRV "heart rate variability" and its relationship to health and disease has exploded. As chest pain become one of the most common, potentially serious presenting complaints for adult emergency department visits at most of hospitals. And with the appearance of web sites appeared a lot of web applications that help you to keep tracking your health as an "E-doctor" electronic doctor.

Problem Description:

While exercising or doing effort you can use a heart rate monitor to watch your heart rate score and see that it stays within a safe range, But here is the question , What is the safe range for my heart scoring rate and when it's higher or lower than the safe range !!?

Here comes the role of our web application.

Specification:

Hardware

- Server(host)
- Internet Connection
- Computer/Laptop/Smart Phone

Software

- Web Browser
- Editor/IDE
- PHP & MySQL

Web Application

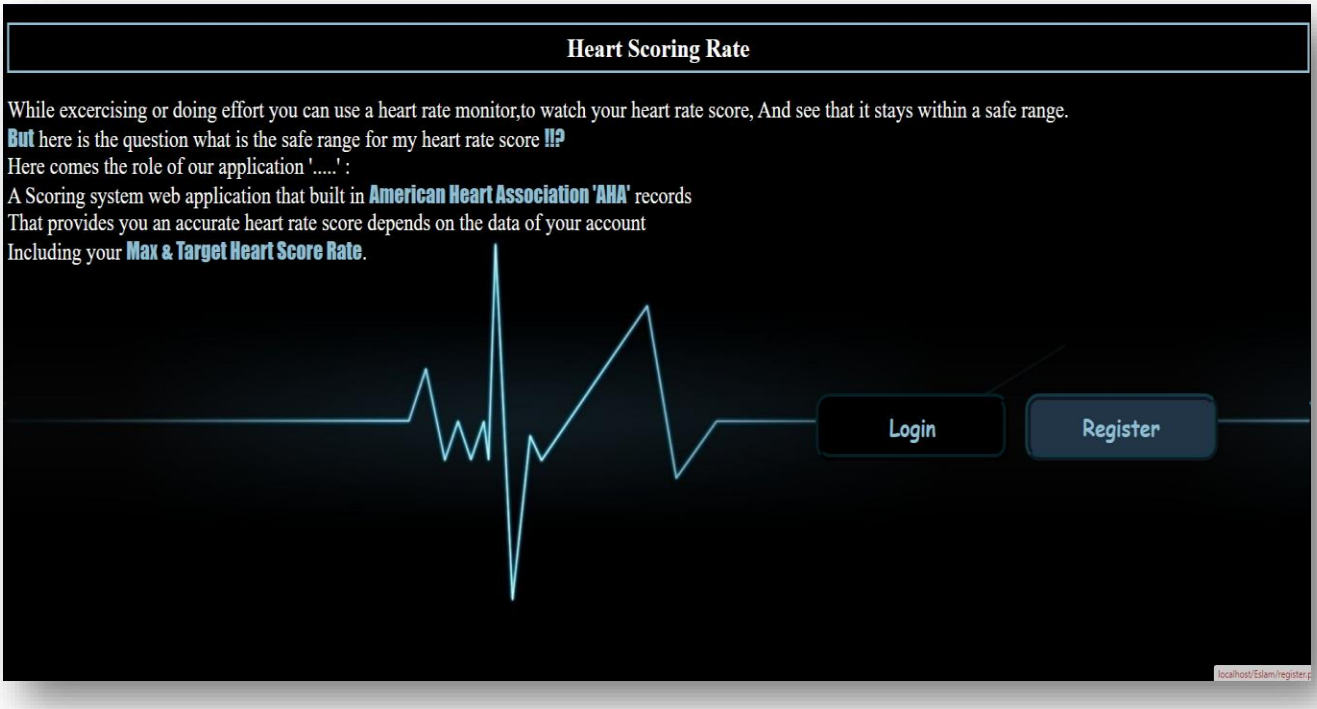
A scoring system web application that is built in the "AHA" American Heart Association records, that provides you an accurate heart scoring rate analysis depends on the data of your account.

Stake Holder:

- Admin / Statics Analyst
- User

User Interaction & Webpage code explanation:

The journey of the user starts with the main page of the web application and we made sure to make it attractive and simple enough for him, as shown at screen shot.



Once the user opens the main page ,he will find a simple header,

brief explanation and fast introduction to the web application as we explained before,

now he have 2 choices either Registration or login if he already have an account on the system, both are clear at the screen with interactive buttons lighten when mouse cursor moves on.

Now let’s go to the main webpage (heart.html) code explanation.

heart.html

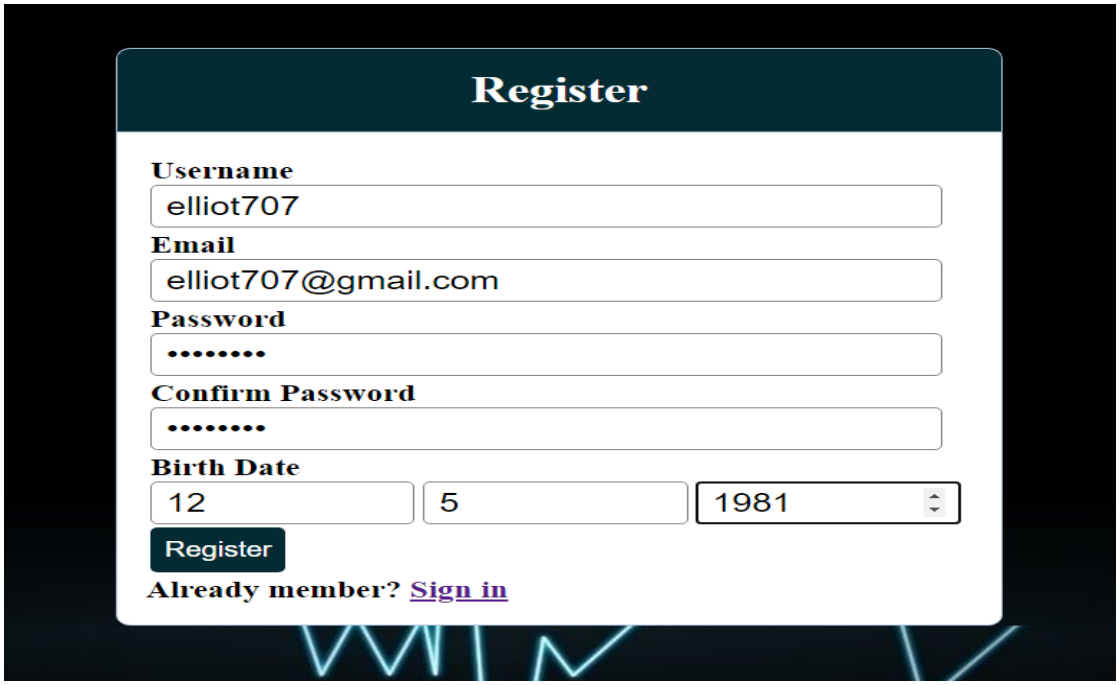
```
<!Doctype html>
<html>
<head>
    <meta charset="utf-8">
    <meta name="Heart Score Rate" content="Do you want to know
your heart rate score !!?">
    <title>Heart Rate Score</title>
    <link rel="stylesheet" href="heart.css" >
    <!--linked to external style sheet, we prepared to make the page attractive -->

</head>
<body>
    <h1>Heart Scoring Rate</h1>
    <p><span id="sanaoll"> </span> </p>
    <div>
            <a href="login.php"><button>Login</button></a>
            <a href="register.php"><button>Register</button></a>
      <!--on clicking any button, it will redirect you to the meant page-->
    </div>
            <script type="text/javascript" src="heart.js"></script>
      <!--linked to java script file to load the rest of page contents -->
</body>
</html>
```

because of style sheets are only for making the web application more coordinated and not required as a main part of the article and it doesn't affect the work of the web application we will be satisfied attaching images for the used code at the end of explaining the required parts (html , Js , php) as mentioned at the project mail.

heart.js

```
document.getElementById("sanaoll").innerHTML=
    "While exercising or doing effort you can use a heart rate monitor, to watch your heart rate score, " +
 "And see that it stays within a safe range.<br>" +
"<span class='text2'>But</span> here is the question what is the safe range for my heart rate score <span class='text2'>!!?</span> <br>" +
"Here comes the role of our application '....' : <br>" +
"A Scoring system web application that built in <span class='text2'>American Heart Association 'AHA'</span> records <br>" +
"That provides you an accurate heart rate score depends on the data of your account <br>" +
"Including your <span class='text2'>Max & Target Heart Score Rate</span>. ";
```

Let's suppose I'm the user and I want to Register at this application for example my name is Elliot, so all I will do is clicking on the registration button at the main page and filling the required data at the form appeared as shown.



Don’t worry of leaving any empty input or entering the data in wrong way because there is a warning will appear for you about each mistake, once you correct it all, just hit the Register button and your form will be sent successfully.

Moving to the web page code explanation.

Register.php

```
<?php include('server.php'); ?>

<!--here we are including php file we considering it as a main server for all
processes that needs to access to the data base which we will explain later-->

<!Doctype html>
<html>
<head>
   <meta charset="utf-8">
   <meta name="Heart Score Rate" content="Do you want to know what your heart rate
score means!!?">
   <title>Registration</title>
   <link rel="stylesheet" href="register.css" >
</head>
```

```
<body>
   <div class="header">
       <h2>Register</h2>
   </div> <!--the following form will be sent to the server to handle the date -->
   <form method="post" action="register.php">
    <?php include('errors.php'); ?>
    <!--this included php file will validate the errors to appear as shown before
     we will explain it later when viewing its code -->
    <div class="iputg">
       <label>Username</label>
       <input type="text" name="username" class="fullin">
    </div>
    <div class="iputg">
       <label>Email</label>
       <input type="text" name="email" class="fullin">
    </div>
    <div class="iputg">
       <label>Password</label>
       <input type="password" name="password_1" class="fullin">
    </div>
    <div class="iputg">
       <label>Confirm Password</label>
       <input type="password" name="password_2" class="fullin">
    </div>
    <div class="iputg">
       <label>Birth Date</label><br>
     <input type="number" name="day" placeholder="Day" min="1" maxlength="2"
                                    max="31" class="halfin">
     <input type="number" name="month" placeholder="Month" min="1" maxlength="2"
                                    max="12" class="halfin">
     <input type="number" name="year" placeholder="Year" min="1900" maxlength="4"
                                   max="2020" class="halfin"><br>
   </div><div class="iputg">
       <button type="submit" name="register" class="btn">Register</button>
   </div>
    <p> Already member? <a href="login.php">Sign in</a>
 </form></div>
</body>
</html>
```

Once you hit the register button the server(server.php) will handle the data as the following code says:

server.php

```
<?php
{
            //error reporting
            //defined variables needed along server work
                session_start();
                $username="";
                $email="";
                $day="";
                $month="";
                $year="";
                $lastcheck="";
                $rate="";
                $old="";
                $nresult="";
                $lnresult="0";
                $hnresult="0";
                $nnnresult="0";
                $errors=array();
                $db = mysqli_connect('localhost','root','','registration');
              // this db variable represent a connection to the data base
  if(isset($_POST['register']))
  {
       //when the button of registration hit the following happens
        $username = mysqli_real_escape_string($db,$_POST['username']);
        $email = mysqli_real_escape_string($db,$_POST['email']);
        $password_1 = mysqli_real_escape_string($db,$_POST['password_1']);
        $password_2 = mysqli_real_escape_string($db,$_POST['password_2']);
        $day = mysqli_real_escape_string($db,$_POST['day']);
        $month = mysqli_real_escape_string($db,$_POST['month']);
        $year = mysqli_real_escape_string($db,$_POST['year']);

      // the entered data saved at the variables and now time to check it
```

```
 if(empty($username))
{
array_push($errors,"User name is required");
}
if(empty($email))
{
array_push($errors,"Email is required");
}
if(empty($password_1))
{
array_push($errors,"Password is required");
}
if(empty($day))
{
array_push($errors,"day of birth required");
}
if(empty($month))
{
array_push($errors,"month of birth is required");
}
if(empty($year))
{
array_push($errors,"year of birth is required");
}
if($password_1 != $password_2)
{
array_push($errors,"The password don't match ");
}


/*if any input is empty warning message will be saved into the array
  of errors and it will appear to the user without registering*/

/*if the array of errors is empty then entered values will be
 saved into the data base as following*/
```

```
            if (count($errors) == 0)
            {
             $old = 2020 - $year;
             $password=md5($password_1);
                  //we encrypt the password before saving for security reasons
          $sql="INSERT INTO users (username,email,password,day,month,year,old)
          values ('$username','$email','$password',$day,$month,$year,$old)";
              mysqli_query($db,$sql);
               //now the data saved into the data base by the previous query
              $_SESSION['username'] = $username;
              $_SESSION['success'] = "you are logged in successfully";
               /*saved the username into session variable as cookie
                 to stay logged in if its value didn't changed*/
              header('location: index.php');
                //redirecting into the home page of the user after registered
             }
              /*there is continuous for the server's code, but we will explain each
               part at its suitable time*/
 }
?>
```

In case the errors array wasn't empty the following happen.

errors.php

```
<?php if(count($errors) > 0): ?>
    <div class="error">
        <?php foreach ($errors as $error): ?>
        <p><?php echo $error; ?></p>
    <?php endforeach ?>
    </div>
<?php endif ?>
```

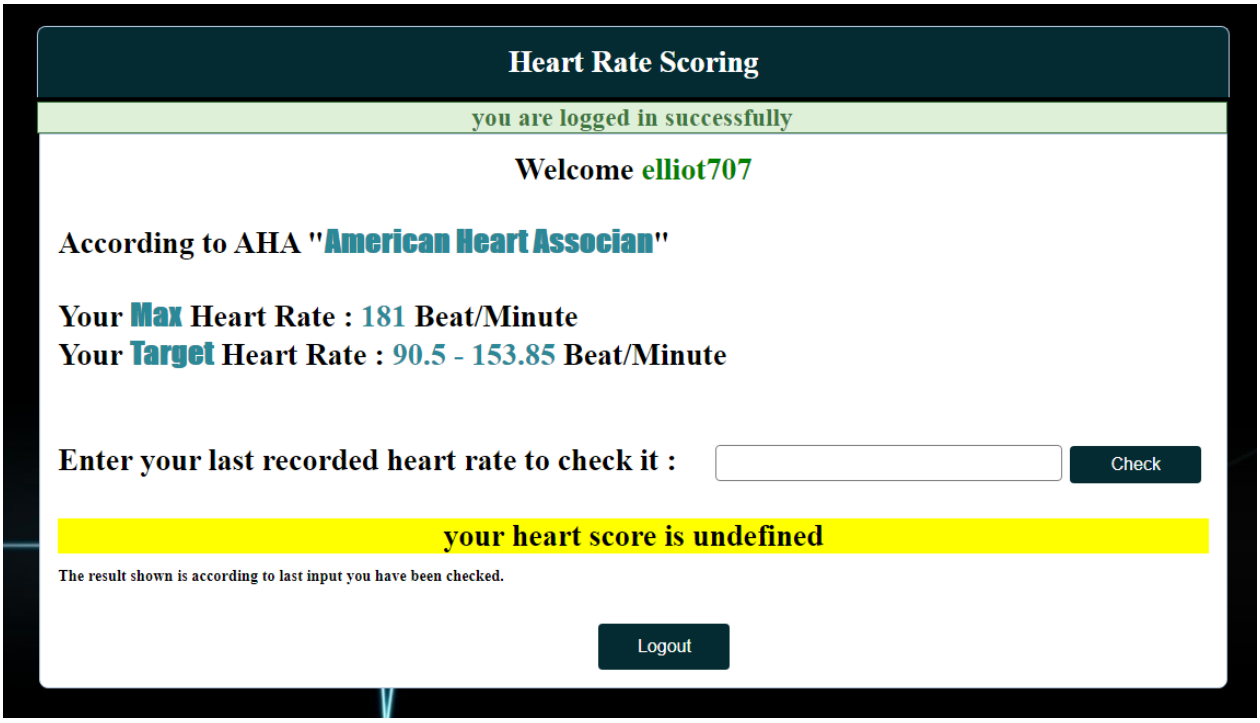
Its main idea is a foreach loop that views the saved elements at the errors array.

After registering and everything works ok our data will be saved at the database as shown, at the last row,

	id	username	email	password	day	month	year	lastcheck	rate	old
Edit Copy Delete	59	hoda	hoda17@yahoo.com	6efa240fc47e3f882ae16d163ca26f91	12	3	1960	150	high	60
Edit Copy Delete	60	hema	hema215@gmail.com	b59b119b153826a62f5c0be365ed716f	15	5	1955	60	low	65
Edit Copy Delete	61	kamal	kamal19@crazymail.ru	aa63b0d5d950361c05012235ab520512	26	8	1959	170	high	61
Edit Copy Delete	62	test17	test17@gmail.com	fcb1a7bbe091b4ee78748946cb762a84	12	2	1998	0		22
Edit Copy Delete	63	elliot707	elliot707@gmail.com	aba4919fe10dcc0be841a39a48d360ce	12	5	1981	0		39

Now I'm Elliot again, after clicked the register button there is session created with my name and it redirects me to my home page (index.php),

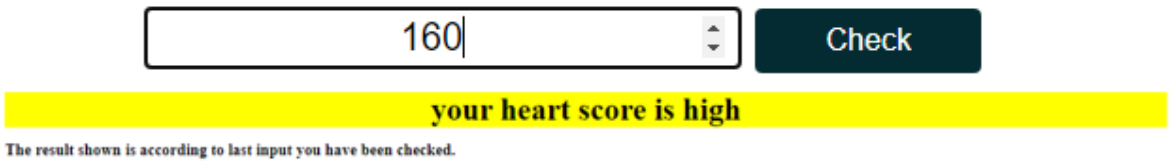
which shown at following screenshot.



The application welcoming me and there is some information about me, my max & target heart rate, and there is input to fill with last recorded heart rate score I got, either using the heart watch or however the method.

Once I enter the reading and click on check button the undefined value at the

yellow line changes into my heart rate condition (low/normal/high) depends.



now I found out that my heart rate score is higher than normal, so I need to rest and call my doctor to help with that, after getting the information I wanted to know I logout of the web application clicking on the logout button lower of the page and it redirect me to the main page (heart.html), I relog in when I want to check my heart rate again.

Now let's go behind the code and see how all that done.

Index.php

```
<?php include('server.php'); ?>
<!Doctype html>
<html>
<head>
   <meta charset="utf-8">
   <meta name="Heart Score Rate" content="welcome user ">
   <title>Heart Rate Score</title>
   <link rel="stylesheet" href="index2.css" >
</head>
<body>
   <div class="header">  <h2>Heart Rate Scoring</h2>  </div>
    <div class="content"> </div>
        <div class="heartcalc">
          <?php if (isset($_SESSION['success'])): ?>
           <div class="success">  <h3>   <?php
           echo $_SESSION['success'];
           unset($_SESSION['success']);   ?></h3></div>
    <?php endif ?>
```

```
<div class="test2"><font color="black">
   <p align="center">Welcome <strong><span style="color:green;">
   <?php echo $_SESSION['username']; ?></span></strong></p><br>

       <p> According to AHA "<span class="text3">American Heart
                              Associan</span>"<br><br>
       <?php
       //Heart Rate Calculator
       $username=$_SESSION['username'];
       $oldquery ="SELECT old FROM users WHERE username='$username'";
                    $result = mysqli_query($db, $oldquery);
/*this query for getting the old of the user from data base and use it to calculate max
                        and target heart rate as following*/
       while ($row = $result->fetch_assoc()) {
                                                $userold = $row['old']."<br>";
                                              }
       $oldy = (int)$userold;
       echo 'Your <span class="text3">Max</span> Heart Rate :
       <span class="text4"> '. (220 - $oldy) . "</span> Beat/Minute<br>";
       echo 'Your <span class="text3">Target</span> Heart Rate :
       <span class="text4"> ' . ((50/100)*(220 - $oldy)) . " - " .
            ((85/100)*(220 - $oldy)) . "</span> Beat/Minute<br><br>";
       ?><br>

     <form method="post" action="index.php">

           <label>Enter your last recorded heart rate to check it :</label>
                                 

         <input type="number" name="lastcheck" class="halfin" id="lastcheck">

          <button name="check1" class="btnin" type="submit">Check</button>
          <!--when you click the button the server handle the value of input as next-->
     </form><br>
```

```
<?php
        //the following step to save the remaining values at the data base rate &lastcheck
                echo '<p id="show" class="checkv">';
                $inputvalue=""; //to get the input value of last heart rate
                $rater="undefined"; //to save the condition of this value
              if(isset($_POST['check1']))
                {
                   $db = mysqli_connect('localhost','root','','registration');
                   $inputvalue = mysqli_real_escape_string($db,$_POST['lastcheck']);
                   //now the value we entered saved at the variable
                   if($inputvalue < ((50/100)*(220 - $oldy))) { $rater="low"; }
                    else if($inputvalue > ((85/100)*(220 - $oldy))) {$rater="high"; }
                    else { $rater="normal";}
                    $sql = "UPDATE users SET lastcheck = '$inputvalue' WHERE
                          username='$username'";
                          mysqli_query($db,$sql);
                    $sql = "UPDATE users SET rate = '$rater' WHERE
                          username='$username'";
                          mysqli_query($db,$sql);
                   }
              //now the variables value saved at the data base
                echo ' your heart score is ' . $rater . '</p>';
     echo '<font size="4">The result shown is according to last input you have been
                                        checked.</font><br>';
/*that's the yellow line after replacing the undefined value with another depends on your
                                        heart rate score*/
         ?>
           <br>
               <p><button class="btn">
               <a href="index.php?logout='1'">Logout</a></button>
                <!-- this is the logout button we will see how it works next -->
              </p></font>
        </div>
        </div>
   </div>
</body>
</html>
```

server.php (“cont.”)

```
<?php
  //logout
                if (isset($_GET['logout']))
                {
                   session_destroy();
                unset($_SESSION['username']);
                header('location: heart.html');
                }
  /*by clicking logout, the session destroy itself by undefining the username variable which was working as cookie to keep the user login and redirecting to the main page*/
?>
```

Now all data is recorded into the data base as shown,

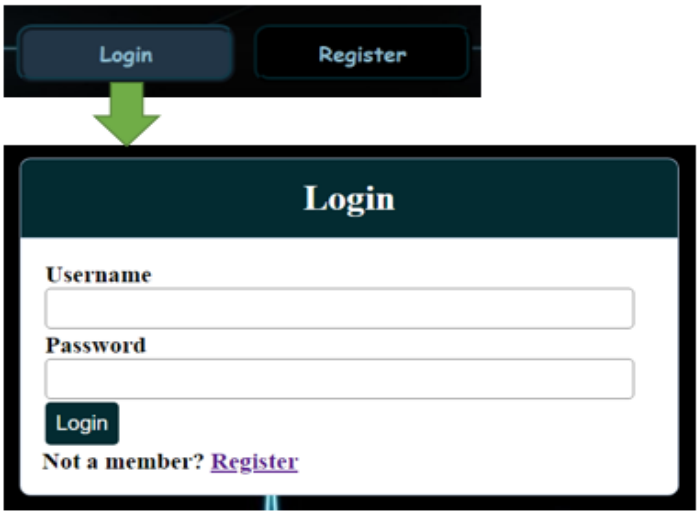
elliot707	elliot707@gmail.com	aba4919fe10dcc0be841a39a48d360ce	12	5	1981	160	high	39

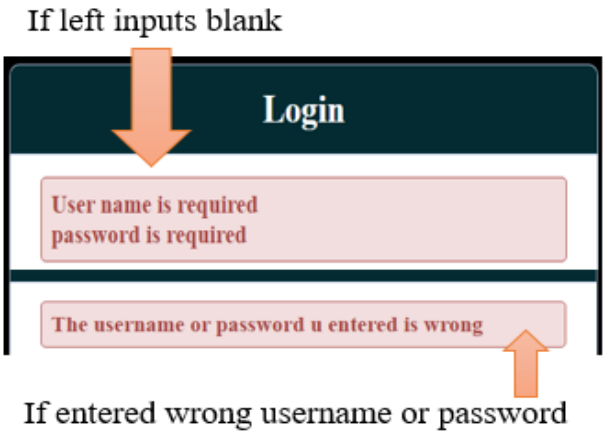
next time I need the application I will hit the login button from the main page.

and it will redirect me to the login form, this time I need to enter only the username

and password I registered with, and it’s won’t allow me to enter my home page

till I write both correctly.





let’s see how the login page code looks like,

login.php

```
<?php include('server.php'); ?>
<!—we include the server because we need it to check the input values-->
<!Doctype html>
<html>
<head>
   <meta charset="utf-8">
   <meta name="Heart Score Rate" content="this is the login page ">
   <title>Login</title>
   <link rel="stylesheet" href="register.css" >
</head>
<body>
   <div class="header">
     <h2>Login</h2>
   </div>
   <form method="post" action="login.php">

     <?php include('errors.php'); ?>
     <div class="iputg">
        <label>Username</label>
        <input type="text" name="username" class="fullin">
     </div>
     <div class="iputg">
        <label>Password</label>
        <input type="password" name="password" class="fullin">
     </div>
     <div class="iputg">
        <button type="submit" name="login" class="btn">Login</button>
         <!--when you click the button the server check the data entered-->
     </div>
     <p>Not a member? <a href="register.php">Register</a></p>

   </form>
  </div>

</body>
</html>
```

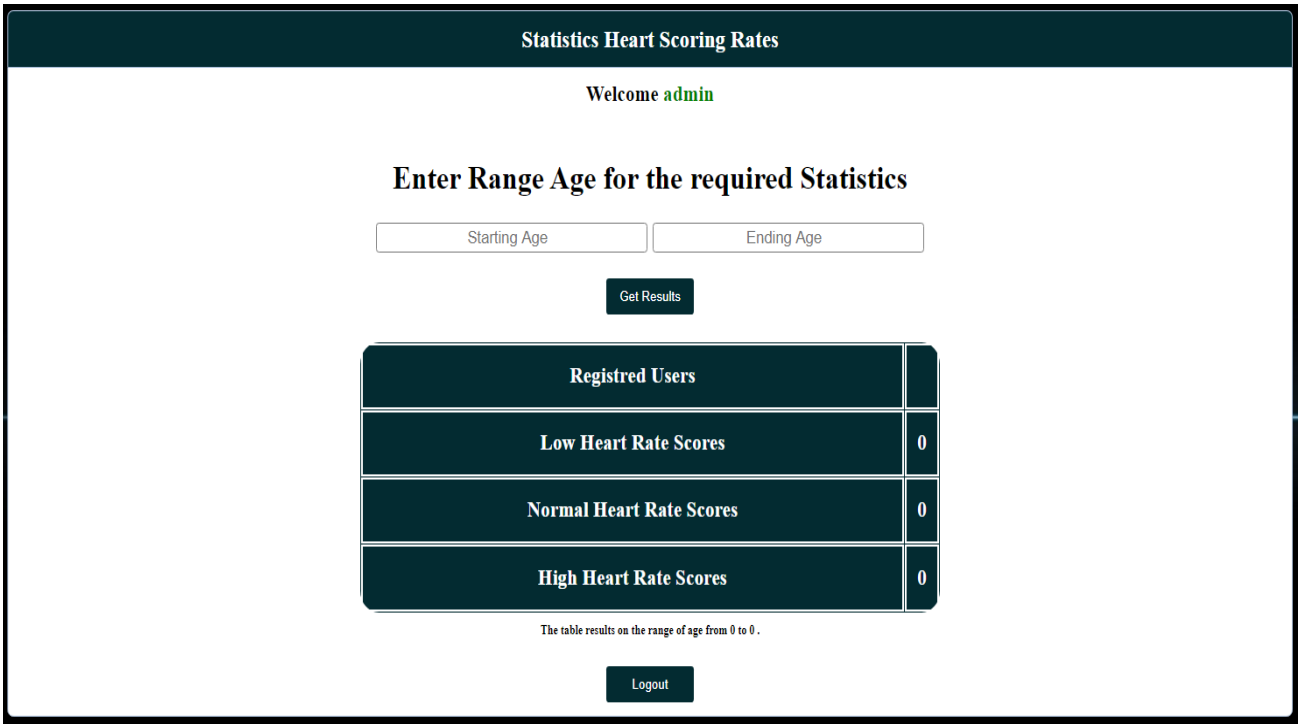
server.php(“cont.”)

```
<?php
            //User login check
            if(isset($_POST['login'])) //on clicking the login button
            {
            $username = mysqli_real_escape_string($db,$_POST['username']);
            $password = mysqli_real_escape_string($db,$_POST['password']);
               if(empty($username))
                { array_push($errors,"User name is required"); }
               if(empty($password))
                { array_push($errors,"password is required"); }
                /*if any of the inputs was empty a warning message will be
        recorded into the errors array and the process as the registration page*/
               if(count($errors) == 0){//if there is no empty inputs continue
            $password = md5($password);
            $query ="SELECT * FROM users WHERE username='$username'
                        AND password='$password'";
            $result = mysqli_query($db, $query);
            /*we encrypt the password before checking it with the username cause it’s
              recorded encrypted */
            if (mysqli_num_rows($result) == 1)
            {
            /*now we check the login type depending on the username logging as
             admin will redirect to different page than normal users*/
               if($username =="admin")
                {
                  $_SESSION['username'] = $username;
                  $_SESSION['success'] = "you are logged in successfully";
                   header('location: admin.php');// admin redirection page
                  }else{
                          $_SESSION['username'] = $username;
                          $_SESSION['success'] = "you are logged in successfully";
                          header('location: index.php'); //normal user redirection
                          }
           }else{
               array_push($errors,"The username or password u entered is wrong ");
                  }//if both wrong show warning error message
        }} ?>
```

Admin/Statistics Analyst Interaction & Webpage code explanation:

The admin or statics analyst will login normal as user did, but the redirection web page will be different. “there is ready made account for him”

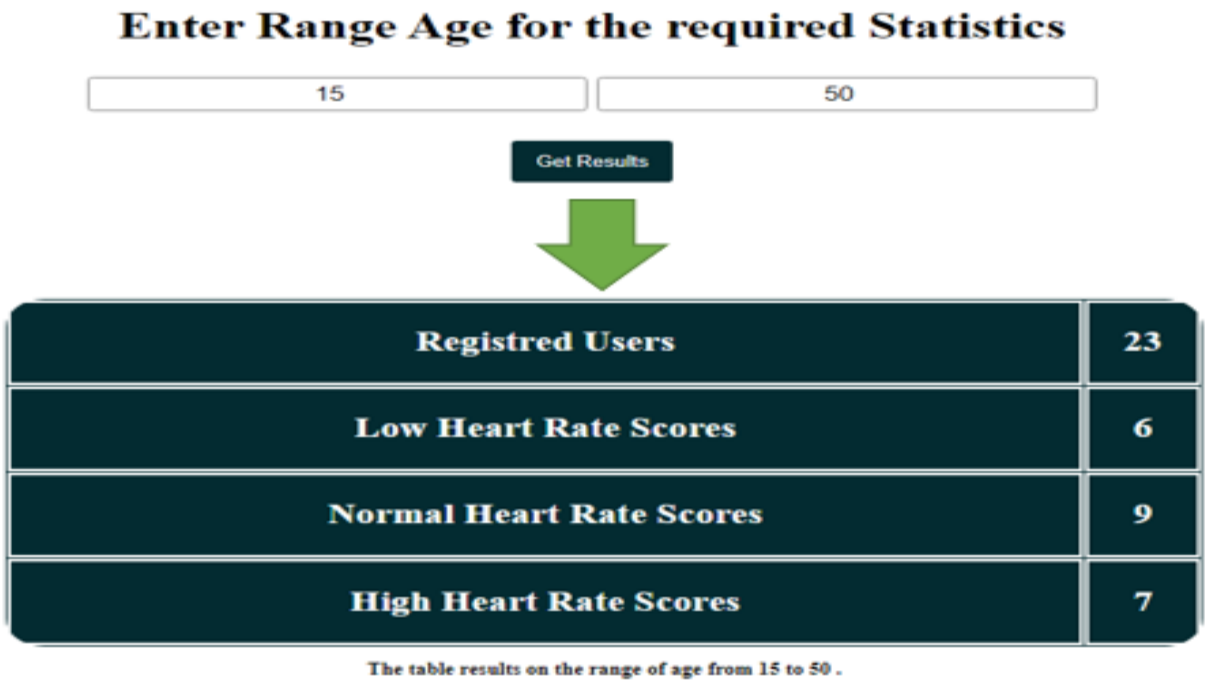
when the admin login the following page appears.



The admin now connected indirectly to the data base all he needs to do is entering age range for the required statistics and clicks get results then the table shows him, number of all registered people within this range, number of people with diseases whose heart rate is not normal,

and also it specifies how many users there with high or low heart rate.

It also mention number of healthy people who have normal heart rate within the age range you specified.



The statistics page code.

admin.php

```
<?php include('server.php'); ?>
<!Doctype html>
<html>
  <head>
    <meta charset="utf-8">
    <meta name="Heart Score Rate" content="admin page">
    <title>Statistics</title>
    <link rel="stylesheet" href="admin2.css" >
</head>
<body>
     <div class="header"><h2>Statistics Heart Scoring Rates</h2></div>
      <div class="content"></div><div class="heartcalc">
            <?php if (isset($_SESSION['success'])): ?>
        <div class="success">
          <h3><?php
                        echo $_SESSION['success'];
                        unset($_SESSION['success']);
            ?></h3></div><?php endif ?>
```

```
        <div class="test2"><font size="6" color="black" align="center">
            <p align="center">Welcome <strong><span style="color:green;">
            <?php echo $_SESSION['username']; ?>
                                                    </span></strong></p><br><br>
              <form method="POST" action="admin.php">
                <div align="center">
              <label><b><font size="7">Enter Range Age for the required Statistics
                          </font></b></label><br><br>
    <input type="number" name="minv" class="halfin" placeholder="Starting Age">
    <input type="number" name="maxv" class="halfin" placeholder="Ending Age">
    <br><br>
     <button type="submit" class="btn" name="gresult">Get Results</button>
     <br><br></form><table>
                               <tr>
                                 <td>Registered Users</td>
                                 <td><?php echo $nresult; ?></td>
                               </tr>
                               <tr>
                                   <td>Low Heart Rate Scores</td>
                                   <td><?php echo $lnresult; ?></td>
                               </tr>
                               <tr>
                                   <td>Normal Heart Rate Scores</td>
                                   <td><?php echo $nnnresult; ?></td>
                               </tr>
                               <tr>
                                    <td>High Heart Rate Scores</td>
                                    <td><?php echo $hnresult; ?></td>
                              </tr>
                          </table><?php
      echo'<font size="4" color="black" >The table results on the range of age from ' .
                          $minv . ' to ' . $maxv . ' .</font>'; ?></div><br>
<p><button class="btn"><a href="index.php?logout='1'">Logout</a></button></p>
            </p></font></div>
                </div></div>
          </div><!--the admin page code is clear but how the statistics come that’s the
                  rule of the server again we explain it next -->
</body>
</html>
```

Server.php(“cont.”)

```
<?php
                $minv="0";
                $maxv="0";
                if(isset($_POST['gresult'])) //now we saved the input values
                {
                $db = mysqli_connect('localhost','root','','registration');
                  $minv = mysqli_real_escape_string($db,$_POST['minv']);
                  $maxv = mysqli_real_escape_string($db,$_POST['maxv']);
              $userquery ="SELECT username FROM users WHERE old >='$minv'
                   and old<='$maxv'";
                  $result = mysqli_query($db, $userquery);
                  $nresult = mysqli_num_rows($result);
                  $highquery ="SELECT username FROM users WHERE
                  old >='$minv' and old<='$maxv' and rate='high'";
                  $hresult = mysqli_query($db, $highquery);
                  $hnresult = mysqli_num_rows($hresult);
                  $normalquery ="SELECT username FROM users WHERE
                  old >='$minv' and old<='$maxv' and rate='normal'";
                   $nnresult = mysqli_query($db, $normalquery);
                  $nnnresult = mysqli_num_rows($nnresult);
                  $lowquery ="SELECT username FROM users WHERE
                  old >='$minv' and old<='$maxv' and rate='low'";
                  $lresult = mysqli_query($db, $lowquery);
                  $lnresult = mysqli_num_rows($lresult);
                }//and that’s how the query of the statistics are.
?>
```

Now the admin got the statistics he wanted and after finishing he logs out as user do without any problems.

Style Sheets

as mentioned before it's not required thing at the article to explain how CSS code works according to the project mail, so we will be satisfied only adding screenshots for the code.

```css
/* heart.css */
button{width:350px;text-align: center;border-radius:25px;height:100px;
    padding:2px;font-size: 35px;font-weight: bold;background-color: #000000;border:10px solid #063d4887;
    font-family:cursive;margin-left:25px;border-style: ridge;color:#90bfd1;}
div{width:1000px;text-align: center;font-weight:bold;border-style:all;margin-left:55%;
    border-radius: 8px;padding:20px;margin-top:170px;height:800px;}
body, html{background-image: url("heartwal3.jpg");}
button:hover {    background: #223546;    font-size:35px;}
h1{color:#fff;font-weight:bold;text-align: center;font-size: 40px;
    background-color: #000;border:4px solid #90bfd1;padding:10px;}
p{color:#fff;text-align:left;font-size:35px;}
script{display: inline-block;}
.text2{color:#90bfd1;font-family: fantasy;font-size:35px;}
```

```css
/* admin2.css */
*{margin:0px;padding: 0px;}
body,html{background-image:url("heartwal3.jpg");font-size:120%;}
form, content {margin:0px auto;border:0px solid #fff;background:#fff;font-weight:bold;}
.btn{padding:15px;font-size:25px;color:#fff;background:#032b31;border:none;border-radius: 5px;width:150px;}
.halfin{height:30%;width:20.5%;padding:5px 10px;font-size:25px;border-radius:5px;border:1px solid gray;
    color:#000;text-align: center;}
.btn,a{font-size:20px;color:#fff;text-decoration: none;}
.test2{width:75%;margin:0px auto;padding:20px;border:1px solid #B0C4DE;background:#fff;
    border-radius: 0px 0px 10px 10px;font-weight:bold;text-align:left;}
.header{width:75%;margin:50px auto 0px;color:#fff;background:#032b31;text-align:center;
    border:1px solid #B0C4DE;border-bottom:none;border-radius:10px 10px 0px 0px;padding:20px;}
.success {color: #3c763d;background:#dff0d8;border:1px solid #3c763d;margin-bottom:0px;
    margin-top: 0px;width:76.8%;text-align:center;margin-left:11.5%;font-size: 25px;}
table{color:#fff;width:1000px;text-align: center;font-weight: bold;border:3px solid #000;background:#032b31;
    height:400px;border-radius: 35px;}
table,td{border:3px solid #fff;}
body,html{background-image:url("heartwal3.jpg");font-size:120%;}
.header{width:55%;margin:50px auto 0px;color:#fff;background:#032b31;text-align:center;border:1px solid #B0C4DE;
    border-bottom:none;border-radius:10px 10px 0px 0px;padding:20px;}
.text3{color:#2b8896;font-family: fantasy;font-size:35px;}
    *{margin:0px;padding: 0px;}
.success {color: #3c763d;background:#dff0d8;border:1px solid #3c763d;margin-bottom:0px;margin-top: 0px;
    width:56.8%;text-align:center;margin-left:21.5%;font-size: 25px;}
.text4{color:#2b8896;font-size:35px;}
.halfin{height:30%;width:28.5%;padding:5px 10px;font-size:25px;border-radius:5px;
    border:1px solid gray;color:#000;text-align: center;}
.btnin{padding:10px;font-size:25px;color:#fff;background:#032b31;border:none;border-radius: 5px;width:150px;}
.btnin,a{font-size:20px;color:#fff;text-decoration: none;}
.checkv{color:#000;background-color: yellow;text-align:center;font-weight:bold;}
```

```css
/* register.css */
*{margin:0px;padding: 0px;}
body,html{background-image:url("heartwal3.jpg");font-size:120%;}
.header{width:30%;margin:50px auto 0px;color:#fff;background:#032b31;
    text-align:center;border:1px solid #B0C4DE;
    border-bottom:none;border-radius:10px 10px 0px 0px;padding:20px;}
form, content {width:30%;margin:0px auto;padding:20px;border:1px solid #B0C4DE;background:#fff;
    border-radius: 0px 0px 10px 10px;font-weight:bold;}
.iputg{margin:10px 0px 10px 0px;display:block;text-align: left;margin:3px;}
.fullin{height:30%;width:93%;padding:5px 10px;font-size:25px;border-radius:5px;
    border:1px solid gray;color:#000;}
.btn{padding:10px;font-size:20px;color:#fff;background:#032b31;border:none;border-radius: 5px;}
.error{width:92%;margin:0px auto;padding: 10px;border:1px solid #a94442;color: #a94442;
    background:#f2dede;border-radius: 5px;text-align: left;}
.success {color: #3c763d;background:#dff0d8;border:1px solid #3c763d;
    margin-bottom:20px;width:30%;text-align:center;}
.heartcalc{text-align:center;border:5px solid #000;color:#fff;font-weight:bold;font-size:35px;}
.halfin{height:30%;width:28.5%;padding:5px 10px;font-size:25px;border-radius:5px;
    border:1px solid gray;color:#000;}
.test2{width:30%;margin:0px auto;padding:20px;border:1px solid #B0C4DE;background:#fff;
    border-radius: 0px 0px 10px 10px;font-weight:bold;text-align:left;}
.text2{color:#90bfd1;font-family: fantasy;font-size:35px;}
```

Conclusion:

At this article we discussed how to keep track on our heart scoring rate, after getting the value of this score rate, we use this web application to check the meaning of the numeric value you got, by logging in or registering if you are using the application for the first time.

the application uses the captured data to present you an accurate values for your:

max & target heart rate score according to AHA.

heart rate score condition (high, normal, low) according to your data.

If you are the admin of this application, you will be able to see important statistics about the health condition for all registered users,

for statistics scientists such data and statistics are very valuable at making medical statistics.

Also at this article, we explained all the following processes:

how does the code works and how to interactive with the web application as a user and as an admin showing all that with screenshots, and how the server uses the data we give and store it in the data base and bring back results we are awaiting for using MySQL queries.

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