1. Develop and demonstrate a XHTML document that illustrates the use external style sheet, ordered list, table, borders, padding, color, and the tag.

index.xhtml

```
<! DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
   <head>
      <title>Program One</title>
      <link rel="stylesheet" href="style.css" />
   </head>
   <body>
      <h3>Ordered List</h3>
      <ol>
         <li>Mercury</li>
         <li>Venus</li>
         <li>Earth</li>
         <li>Mars</li>
      </ol>
      <h3>Table</h3>
      <table border="1px">
         <tr>
            <th>USN</th>
            <th>Name</th>
            <th>Email</th>
         </tr>
         <tr>
            <td>CA172001</td>
            <td>Bruce</td>
            <td>bruce@gmail.com</td>
         </tr>
         <tr>
            <td>CA172002</td>
            <td>Natasha</td>
            <td>nat@gmail.com</td>
         </tr>
         <tr>
            <td>CA172003</td>
            <td>Stark</td>
            <td>tony@stark.com</td>
         </tr>
      </table>
```

```
    <h3>Borders</h3>
    <p class="sb"> I have a simple border!</p>
    <p class="db"> I have a dashed border!</p>
    <p class="dotb"> I have a dotted border!</p>
    <h3>Padding</h3>
    <p class="padded">I have a padding.</p>
    <h3>Color</h3>
    <p class="colored">I am colorful text.</p>
  </body>
</html>
```

style.css

```
body{
    font-family: Arial, Helvetica, sans-serif;
}
.sb{
    border: 1px solid #555555;
}
.db{
    border: 1px dashed #555555;
}
.dotb{
    border: 1px dotted #555555;
}
.padded{
    padding: 1em;
    background-color: #888888;
    color: #eeeeee;
}
.colored{
    background-color: #2494d4;
    color: #dddddd;
}
```

OUTPUT:

Ordered List

1. Mercury
2. Venus
3. Earth
4. Mars

Table

USN	Name	Email
CA172001	Bruce	bruce@gmail.com
CA172002	Natasha	nat@gmail.com
CA172003	Stark	tony@stark.com

Borders

I have a simple border!

I have a dashed border!

I have a dotted border!

Padding

I have a padding.

Color

I am colorful text.

2. Develop and demonstrate a XHTML file that includes Javascript script for obtaining n through prompt and computing n Fibonacci numbers

index.xhtml

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
   <head>
      <title>Program Two</title>
   </head>
   <body style="text-align:center; font-family: Arial">
      <h2>Fibonacci Series</h2>
      <div></div>
      <script src="script.js"></script>
   </body>
</html>
```
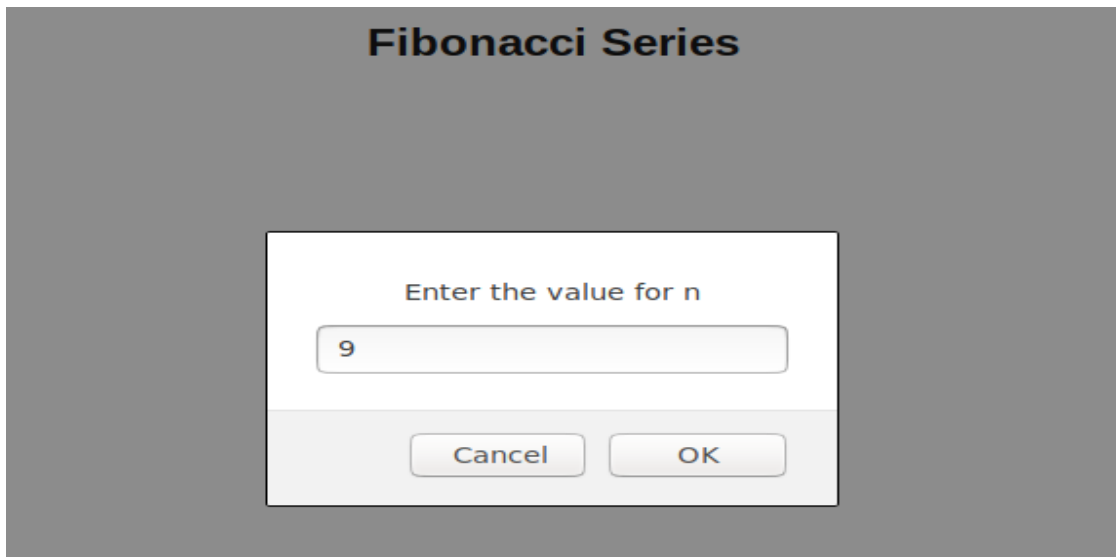
script.js

```
var fib0 = 0,
   fib1 = 1,
   fibn,
   div = document.getElementsByTagName('div')[0],
   n;

n = prompt("Enter the value for n", "2");
div.innerHTML = fib();

function fib(){
   let fibonacci = [fib0, fib1];
   if(n <= 1){
      return fibonacci;
   }else{
      for(let i = 2; i < n; i++){
         fibn = fib0 + fib1;
         fib0 = fib1;
         fib1 = fibn;
         fibonacci.push(fibn);
      }
   }
   return fibonacci;}
```

OUTPUT

Fibonacci Series

0,1,1,2,3,5,8,13,21

3. Design an XML document to store information about a student.

students.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type = "text/xsl" href = "main.xslt"?>
<rcu>
   <student>
      <name>Jaseemakhtar</name>
      <usn>CA172003</usn>
      <course>MCA</course>
      <sem>IV</sem>
   </student>
   <student>
      <name>Shubham</name>
      <usn>CA172007</usn>
      <course>MCA</course>
      <sem>IV</sem>
   </student>
   <student>
      <name>Salim</name>
      <usn>CA172006</usn>
      <course>MCA</course>
      <sem>IV</sem>
   </student>
   <student>
      <name>Vinayak</name>
      <usn>CA172008</usn>
      <course>MCA</course>
      <sem>IV</sem>
   </student>
</rcu>
```
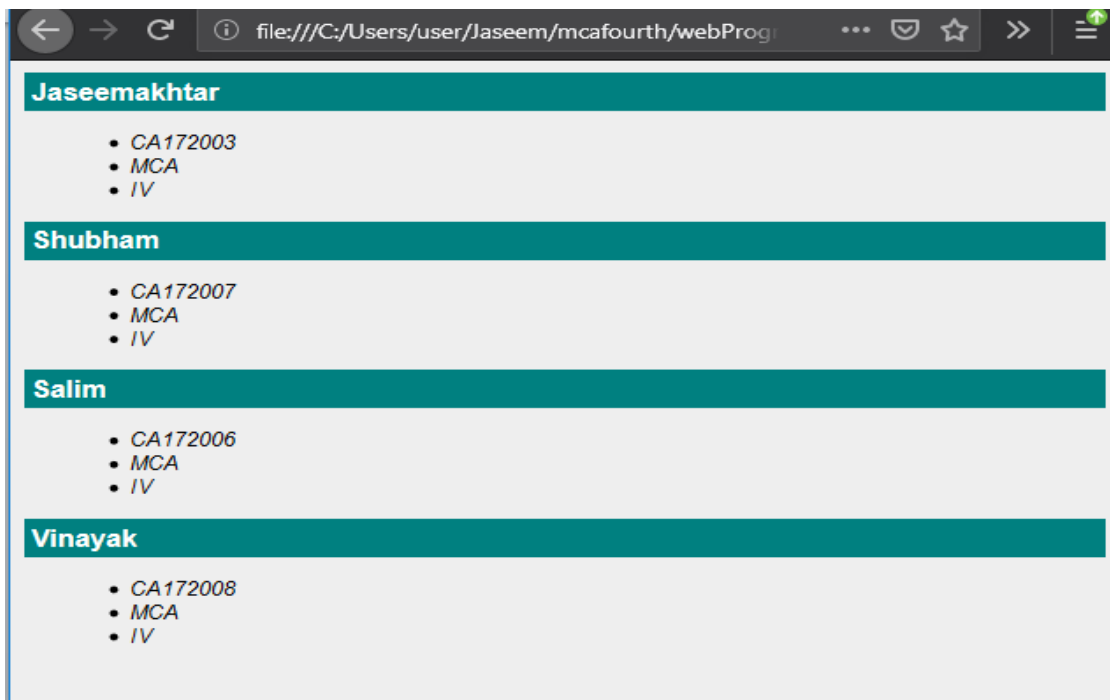
main.xslt

```xml
<?xml version="1.0" encoding="UTF-8"?>
<html xsl:version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<body style="font-family:Arial;font-size:12pt;background-color:#EEEEEE">
<xsl:for-each select="rcu/student">
  <div style="background-color:teal;color:white;padding:4px">
   <span style="font-weight:bold"><xsl:value-of select="name"/></span>
  </div>
```

```
<div style="margin-left:20px;margin-bottom:1em;font-size:10pt">
  <p style="font-style:italic">
      <ul>
              <li><xsl:value-of select="usn"/></li>
              <li><xsl:value-of select="course"/></li>
              <li><xsl:value-of select="sem"/></li>
      </ul>
  </p>
 </div>
</xsl:for-each>
</body>
</html>
```

OUTPUT:

4. Write a PHP program to store current date-time in a COOKIE and display the "Last visited on" date-time on the web page upon reopening of the same page.

```php
<?php
   $cookie_name = "lastVisited";
   $cookie_value = date("h:m:s",time());
   $expiry = time() + (60 * 60 * 2); //Will expire after 2 hours
   setcookie($cookie_name, $cookie_value, $expiry, "/");
?>
<html>
   <head>
     <style>
       body{
          font-family: Arial;
       }
     </style>
     <title>Cookie Demonstration</title>
   </head>
   <body>
     <?php
     if(!isset($_COOKIE[$cookie_name])) {
        echo "<h2><center>Welcome! You've visited for the first time.</center></h2>";
     } else {
        echo "<h2><center>Last Visited On: " . $_COOKIE[$cookie_name] . "</center></h2>";
     }
     ?>
   </body>
</html>
```
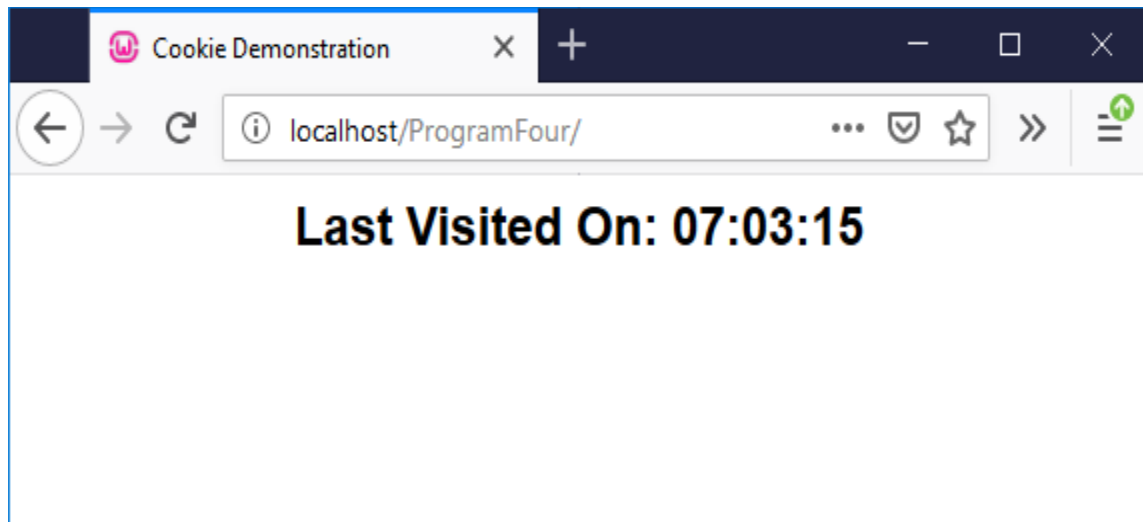
5. Write a PHP program to store page views count in SESSION, to increment the count on each refresh, and to show the count on web page.

```php
<?php
  session_start();
  $counter = 1;
  $session_name = "pageCount";
?>
<html>
  <head>
    <style>
      body{
        font-family: Arial;
      }
    </style>
    <title>Session Demonstration</title>
  </head>
  <body>
    <?php
      if(isset($_SESSION[$session_name])) {
        $counter = $_SESSION[$session_name];
        $_SESSION[$session_name] = ++$counter;
        echo "<h2><center>No. of Visits: " . $_SESSION[$session_name] . "</center></h2>";
      } else {
        $_SESSION[$session_name] = $counter;
        echo "<h2><center>Welcome! You've visited for the first time.</center></h2>";
      }
    ?>
  </body>
</html>
```
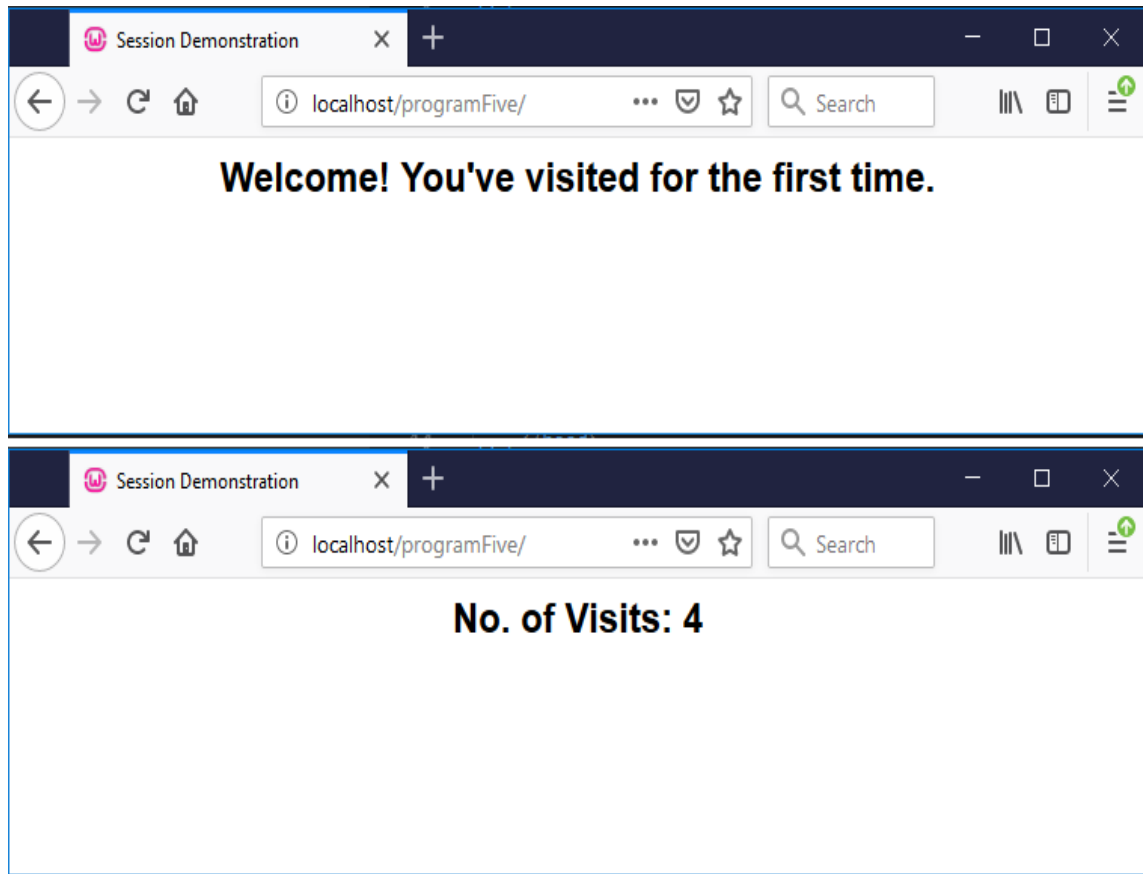
6. Create a XHTML form with Name, Address Line 1, Address Line 2, and E-mail text fields. On submitting, store the values in MySQL table. Retrieve and display the data based on Name.

```php
<?php
  $servername = "localhost";
  $username = "root";
  $password = "root";
  $conn = mysqli_connect($servername, $username, $password);
  if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
  }
  $name = $addr1 = $addr2 = $email = FALSE;
  $msg = FALSE;
    if(isset($_POST["btn_submit"])){
      $name = $_POST["name"];
      $addr1 = $_POST["address_one"];
      $addr2 = $_POST["address_two"];
      $email = $_POST["email"];

      $sql = "INSERT INTO programsix.details (name, address_one, address_two, email)
VALUES ('". $name ."', '" . $addr1 . "', '" . $addr2. "', '". $email ."')";

      if (mysqli_query($conn, $sql)) {
        $msg = "New record created successfully";
      } else {
        $msg = "Error: " . $sql . "<br>" . $conn->error;
      }
    }else if(isset($_POST["btn_search"])){
      $name = $_POST["name"];
      $sql = "select * from programsix.details where name = \"". $name . "\"";
      $result = mysqli_query($conn, $sql);
      if (mysqli_num_rows($result) > 0) {

        while($row = mysqli_fetch_assoc($result)) {

        $addr1 = $row["address_one"];
        $addr2 = $row["address_two"];
        $email = $row["email"];
      }else{
        $msg = "No results found.";
      }
    }
      mysqli_close($conn);
```
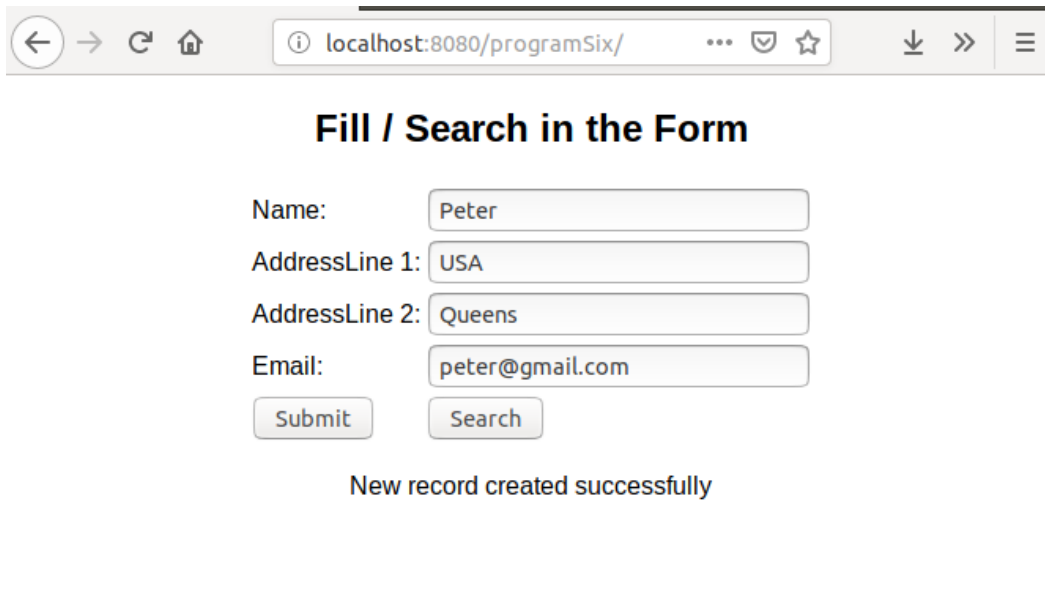
```
?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Web Programs</title>
   <style>
     body, table{
        font-family: Arial, sans-serif;
        text-align: center;
        margin: 0 auto;
     }
     td{
        text-align: left;
     }
   </style>
</head>
<body>
   <h2>Fill / Search in the Form</h2>
   <form action="" method="post">
     <table >
        <tr>
          <td>Name:</td>
          <td><input type="text" name="name" <?php if($name){echo 'value = "'. $name . '"'; }
?> /></td>
        </tr>
        <tr>
          <td>AddressLine 1:</td>
          <td><input  type="text"  name="address_one"  <?php  if($addr1){echo 'value = "'.
$addr1 . '"';}?> <?php ?> /></td>
        </tr>
        <tr>
          <td>AddressLine 2:</td>
          <td><input  type="text"  name="address_two"  <?php  if($addr2){echo 'value = "'.
$addr2 . '"';}  ?> /></td>
        </tr>
        <tr>
          <td>Email: </td>
          <td><input type="email" name="email" <?php if($email){echo 'value = "'. $email .
'"';}  ?> /></td>
        </tr>
        <tr>
          <td><input type="submit" name="btn_submit" value="Submit" /> </td>
```

```
        <td><input type="submit" name="btn_search" value="Search" /></td>
      </tr>
    </table>
  </form>
<p><?= $msg ?></p>
</body>
</html>
```
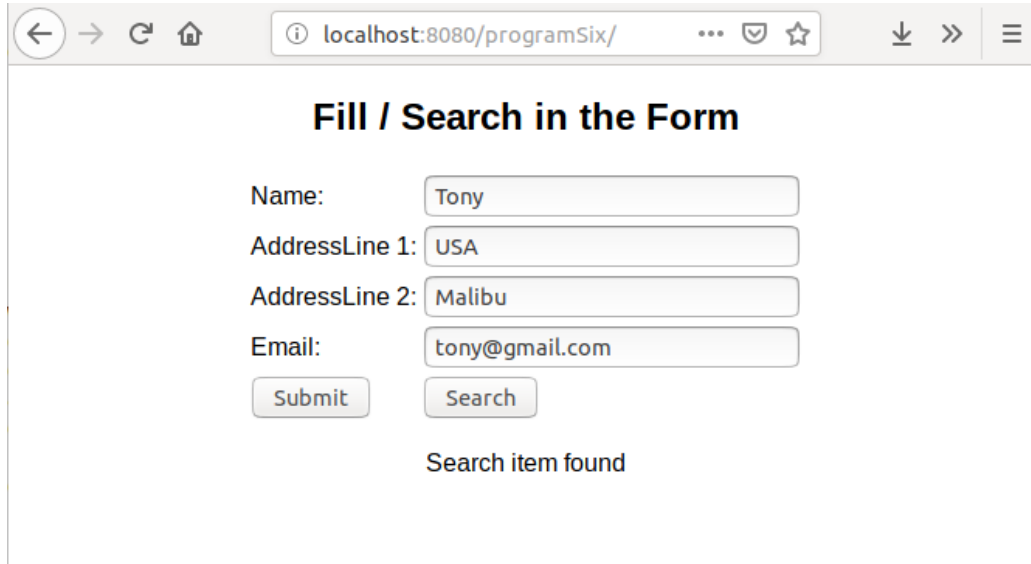
7. Using PHP and MySQL, develop a program to accept book information viz. Accession number, title, authors, edition and publisher from a web page and store the information in a database and to search for a book with the title specified by the user and to display the search results with proper headings.

index.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Search Book</title>
    <style>
      *{
         font-family: Arial;
      }
    </style>
</head>
<body>
    <h1><center>Searching for book?</center></h1>
    <div><center><a  href="add.php">Add  Book</a>   <a  href="search.php">Search Book</a></center></div>
</body>
</html>
```

connection.html

```
<?php
    $server = "localhost";
    $username = "root";
    $password = "root";
    $conn = mysqli_connect($server, $username, $password);
    if (!$conn) {
        die("Connection failed: " . $conn->connect_error);
    }
?>
```

add.php

```php
<?php
    include('connection.php');
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Add Book</title>
    <style>
        *{
            font-family: Arial;
        }
        table{
            text-align: left;
        }
    </style>
</head>
<body>
    <h1><center>Add Book</center></h1>
    <div>
        <center>
        <form action="add.php" method="post">
            <table>
                <tr>
                    <th>Accession No.</th>
                    <td><input type="text" name="accession_no"></td>
                </tr>
                <tr>
                    <th>Title</th>
                    <td><input type="text" name="title"></td>
                </tr>
                <tr>
                    <th>Authors</th>
                    <td><input type="text" name="authors"></td>
                </tr>
                <tr>
                    <th>Edition</th>
                    <td><input type="text" name="edition"></td>
                </tr>
                <tr>
                    <th>Publisher</th>
                    <td><input type="text" name="publisher"></td>
                </tr>
                <tr>
```

```html
            <td          colspan="2"          style="text-align:center;"><input          type="submit"
name="submit_add" value="Submit"></td>
        </tr>
      </table>
    </form>
    <?php
        if(isset($_POST['submit_add'])){
            $accessionno = $_POST['accession_no'];
            $title = $_POST['title'];
            $authors = $_POST['authors'];
            $edition = $_POST['edition'];
            $publisher = $_POST['publisher'];

            $sql = "INSERT INTO mcafourth.programseven (title, acession_no, authors,
edition, publishers) VALUES ('" . $title ."', '" . $accessionno . "', '" . $authors. "', '". $edition . "',
'". $publisher . "')";
            if(mysqli_query($conn, $sql)){
                echo "<h4> Inserted Successsfully. </h4> ";
            }else{
                echo "<h4> Failed to insert [ " . mysqli_error($conn) . " ]</h4> ";
            }
        }
        mysqli_close($conn);
    ?>
    </center>
  </div>
</body>
</html>
```

search.php

```php
<?php
  include('connection.php');

?>
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Search Book</title>
  <style>
    *{
      font-family: Arial;
    }
    .tab, .tab td{
```

```
            border: 1px solid #777;
        }
        .tab{
            border-collapse: collapse;
        }
    </style>
</head>
<body>
    <h1><center>Search Book</center></h1>
    <div>
        <center>
            <form action="search.php" method="post">
                <table>
                    <tr>
                        <th>Enter title: </th>
                        <td><input type="text" name="title"></td>
                    </tr>
                    <tr>
                        <td     colspan="2"     style="text-align:center;"><input     type="submit"
name="submit_search" value="Search!"></td>
                    </tr>
                </table>
            </form>
            <?php
                if(isset($_POST['submit_search'])){
                    if(isset($_POST['title'])){
                        $title = $_POST['title'];
                        $sql = "SELECT title, authors, edition, publisher from mcafourth.programseven
where title = '$title' ";
                        $result = mysqli_query($conn, $sql);
                        if (mysqli_num_rows($result) > 0) {
                            while($row = mysqli_fetch_assoc($result)) {
                                echo "<table   class=\"tab\"><tr><td>" . $row['title'] ."</td><td>"   .
$row['authors']   .   "</td><td>"   .   $row['edition']   .   "</td><td>"   .   $row['publishers']   .
"</td></tr></table>";
                            }
                        }else{
                            echo "<h3> No records found. </h3> ";
                        }
                    }
                }
                mysqli_close($conn);
            ?>
        </center>
    </div>
</body></html>
```
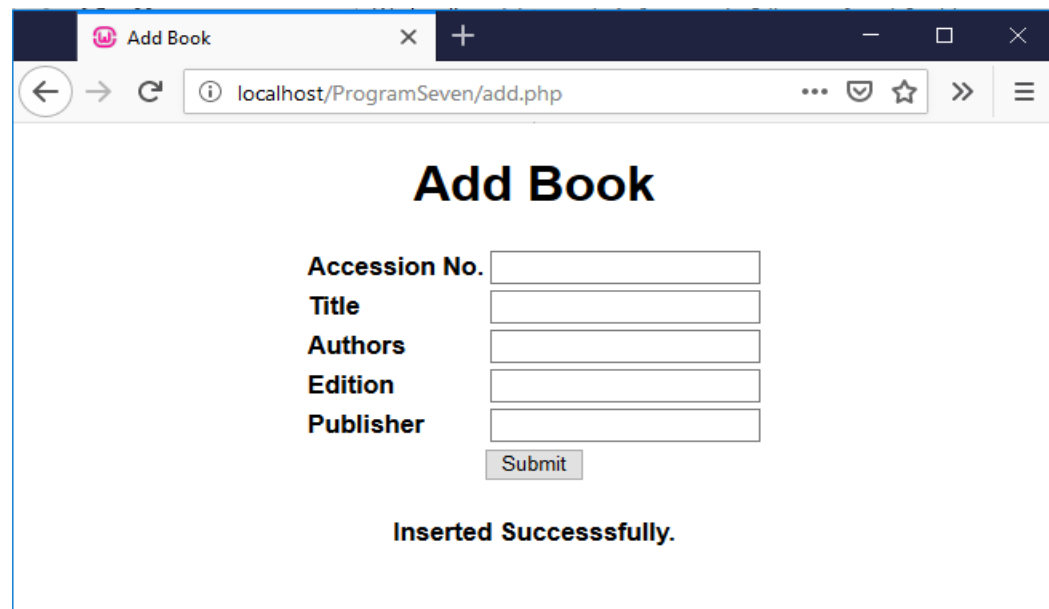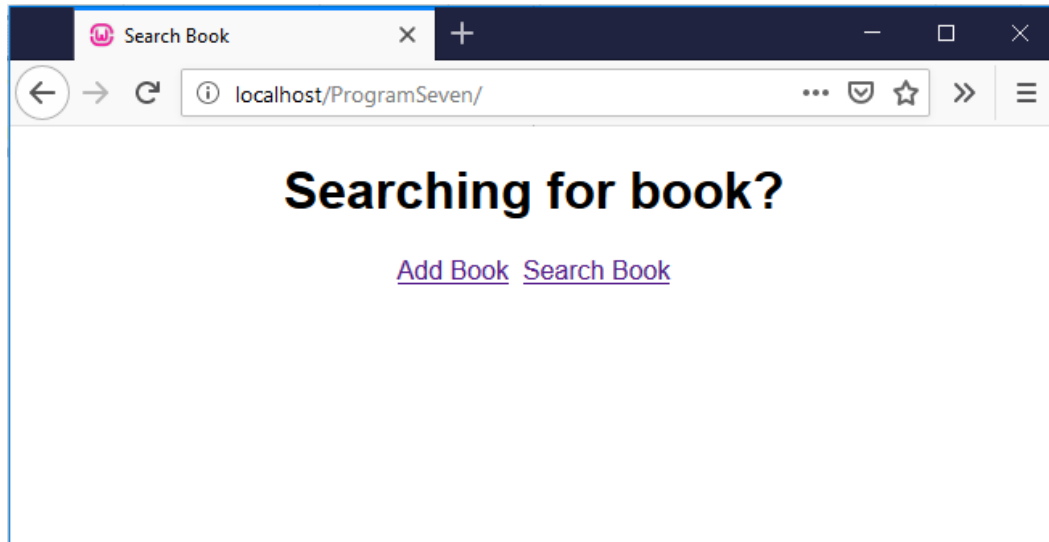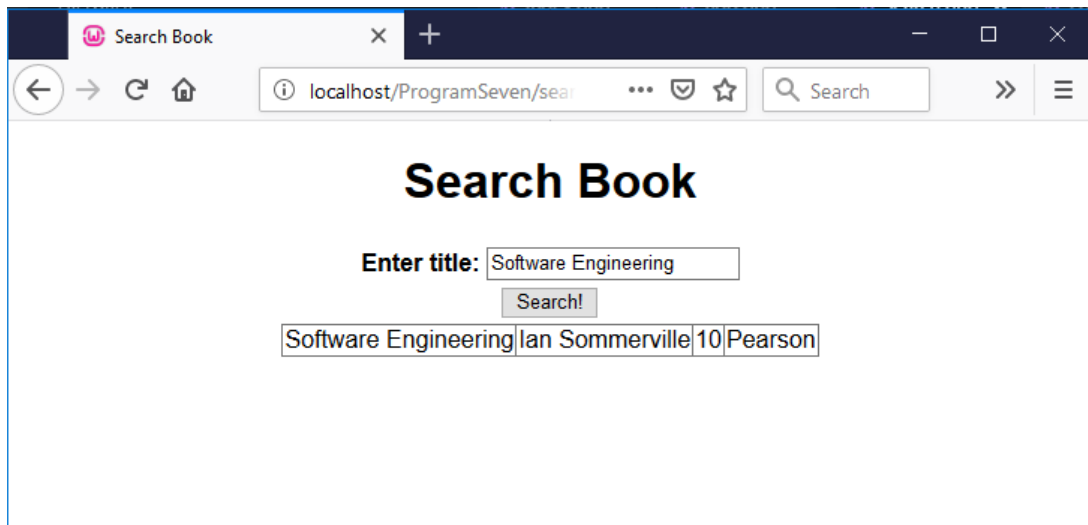
8. Develop a COMPANY database browser application. The initial Web page in this application lists all the departments in the company. By following hyperlinks, the user may see more details of departments, employees, and projects in three separate Web pages. Implement the browser program using four PHP scripts: (a) companyBrowse.php: This script lists all the departments in the company in a tabular form (b) deptView.php: (c) empView.php: (d) projectView.php.

connection.php

```php
<?php
  $server = "localhost";
  $username = "root";
  $password = "root";
  $conn = mysqli_connect($server, $username, $password);
  if (!$conn) {
    die("Connection failed: " . $conn->connect_error);
  }
?>
```

index.php

```php
<!DOCTYPE html>
<html lang="en">
<head>
  <title>The Boring Company</title>
</head>
<body>
  <h1>Boring Company Database</h1>

  <h3>Departments</h3>
  <ul>
    <li><h4><a href="deptView.php?dep=1">Information Department</a></h4></li>
    <li><h4><a href="deptView.php?dep=2">Sales Department</a></h4></li>
    <li><h4><a href="deptView.php?dep=3">Operations Department</a></h4></li>
    <li><h4><a href="deptView.php?dep=4">R&amp;D Department</a></h4></li>
  </ul>
</body>
</html>
```

empView.php

```php
<?php
  $dep = $_GET['id'];

  if($dep == 1)
    $deptName = "Information Department";
  else if($dep == 2)
    $deptName = "Sales Department";
  else if($dep == 3)
    $deptName = "Operations Department";
  else
    $deptName = "Research & Development Department";

  $projects = array();

  include('connection.php');

  $sql = "SELECT id, fname, lname, depId FROM programeight.employee WHERE depId = $dep";

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

  if(mysqli_num_rows($result) > 0){
    while($row = mysqli_fetch_assoc($result)){
      $projects[] = $row;
    }
  }


  mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title><?= $deptName ?></title>
  <style>
    table, td, th{
      border-collapse: collapse;
      border: 1px solid #ddd;
    }
  </style>
</head>
<body>
  <h1>Boring Company Database</h1>
  <h3><?= $deptName . "'s Employees" ?></h3>
```
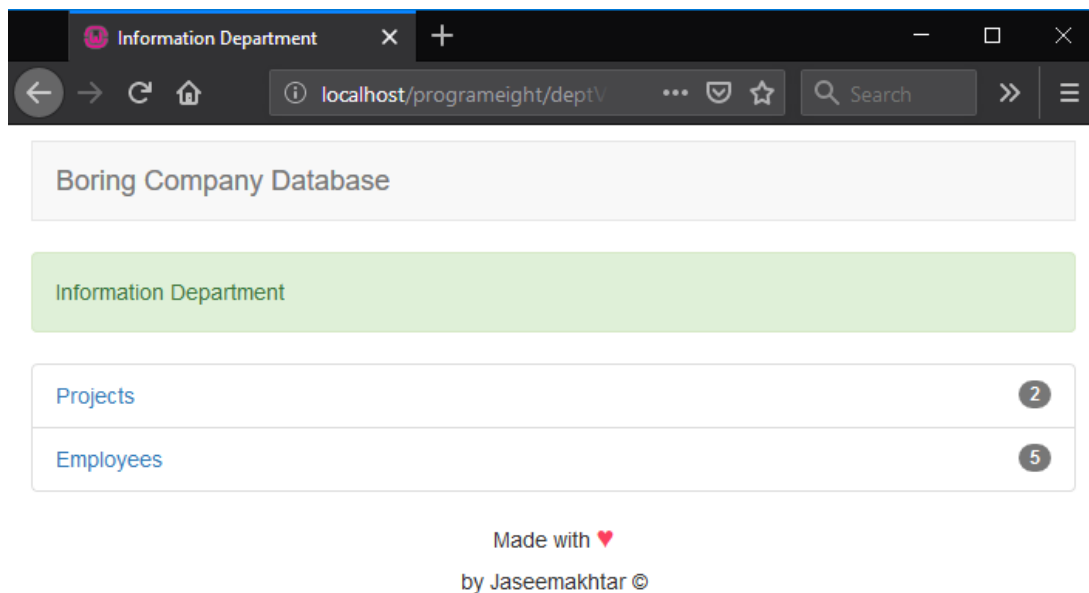
```
<table>
  <tr>
    <th>Id</th>
    <th>First Name</th>
    <th>Last Name</th>
    <th>Department Id</th>
  </tr>
  <?php
    for($i = 0; $i < count($projects); $i++){
      echo '<tr>';
      echo "<td>" . $projects[$i]['id'] . " </td>" ;
      echo "<td>" . $projects[$i]['fname'] . " </td>" ;
      echo "<td>" . $projects[$i]['lname'] . " </td>" ;
      echo "<td>" . $projects[$i]['depId'] . " </td>" ;
      echo '</tr>';
    }
  ?>

</table>
</body>
</html>
```

deptView.php

```php
<?php
  $dep = $_GET['dep'];

  if($dep == 1)
    $deptName = "Information Department";
  else if($dep == 2)
    $deptName = "Sales Department";
  else if($dep == 3)
    $deptName = "Operations Department";
  else
    $deptName = "Research & Development Department";

  $employees = $projects = '';

  include('connection.php');
  $sqlP = "SELECT count(*) AS projects FROM programeight.project WHERE dep = $dep";
  $sqlE = "SELECT count(*) AS employees FROM programeight.employee WHERE depId = $dep";

  $result = mysqli_query($conn, $sqlP);
```

```php
  if(mysqli_num_rows($result) > 0){
    while($row = mysqli_fetch_assoc($result)){
      $projects = $row['projects'];
    }
  }

  $result = mysqli_query($conn, $sqlE);

  if(mysqli_num_rows($result) > 0){
    while($row = mysqli_fetch_assoc($result)){
      $employees = $row['employees'];
    }
  }

  mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title><?= $deptName ?></title>
</head>
<body>
  <h1>Boring Company Database</h1>
  <h3><?= $deptName ?></h3>
  <ul>
    <li>
      <a href="projectView.php?id=<?= $dep ?>">Projects <span>(<?= $projects ?>)</span></a>
    </li>
    <li>
      <a href="empView.php?id=<?= $dep ?>">Employees <span>(<?= $employees ?>)</span></a>
    </li>
  </ul>
</body>
</html>
```
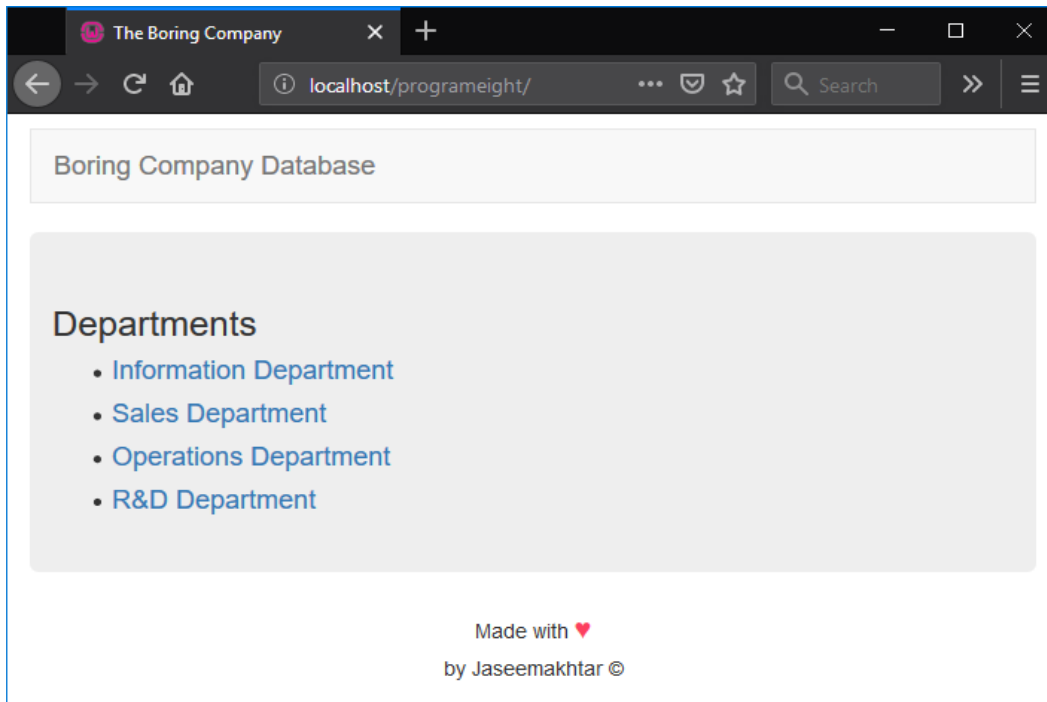
projectView.php

```php
<?php
   $dep = $_GET['id'];

   if($dep == 1)
      $deptName = "Information Department";
   else if($dep == 2)
      $deptName = "Sales Department";
   else if($dep == 3)
      $deptName = "Operations Department";
   else
      $deptName = "Research & Development Department";

   $projects = array();

   include('connection.php');

   $sql = "SELECT id, name, location, dep FROM programeight.project WHERE dep = $dep";

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

   if(mysqli_num_rows($result) > 0){
      while($row = mysqli_fetch_assoc($result)){
         $projects[] = $row;
      }
   }


   mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
   <title><?= $deptName ?></title>
   <style>
      table, td, th{
         border: 1px solid #ddd;
      }
   </style>
</head>
<body>

   <h1>Boring Company Database</h1>

   <h3><?= $deptName . "'s Projects" ?></h3>
```

```
<table>
  <tr>
    <th>Id</th>
    <th>Project Name</th>
    <th>Location</th>
    <th>Department Id</th>
  </tr>
  <?php
  for($i = 0; $i < count($projects); $i++){
    echo '<tr>';
    echo "<td>" . $projects[$i]['id'] . " </td>" ;
    echo "<td>" . $projects[$i]['name'] . " </td>" ;
    echo "<td>" . $projects[$i]['location'] . " </td>" ;
    echo "<td>" . $projects[$i]['dep'] . " </td>" ;
    echo '</tr>';
  }
  ?>

</table>
</body>
</html>
```

9. Implement the problem of finding employee names given their social security number as a Web application. Design two Web pages: 1. The first Web page would contain a HTML form that contains a select list of social security numbers of employees and a submit button. 2. Upon choosing a social security number and submitting the form in the first Web page produces the second Web page that lists the name of the employee.

connection.php

```php
<?php
  $server = "localhost";
  $username = "root";
  $password = "root";
  $conn = mysqli_connect($server, $username, $password);
  if (!$conn) {
     die("Connection failed: " . $conn->connect_error);
  }
?>
```

index.php

```php
<?php
  include('connection.php');
  $sql = "SELECT ssn FROM programnine.employee";
  $result = mysqli_query($conn, $sql);
  $ssns = array();

  if(mysqli_num_rows($result) > 0){
     while($row = mysqli_fetch_assoc($result)){
        $ssns[] = $row;
     }
  }

  mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
   <title>Program Nine</title>
   <style>
      *{
```

```html
      font-family: Arial;
    }
  </style>
</head>
<body>
<div class="container">
  <h2>Select SSN to view the details of an Employee </h2>
  <form method="get" action="details.php">
    <select name="ssn">
      <?php
        for($i = 0; $i < count($ssns); $i++){
          echo '<option value="'. $ssns[$i]['ssn'] . '">' . $ssns[$i]['ssn'] . '</option>';
        }
      ?>
    </select>
    <hr>
    <input type="submit" value="Submit">
  </form>
</div>
</body>
</html>
```
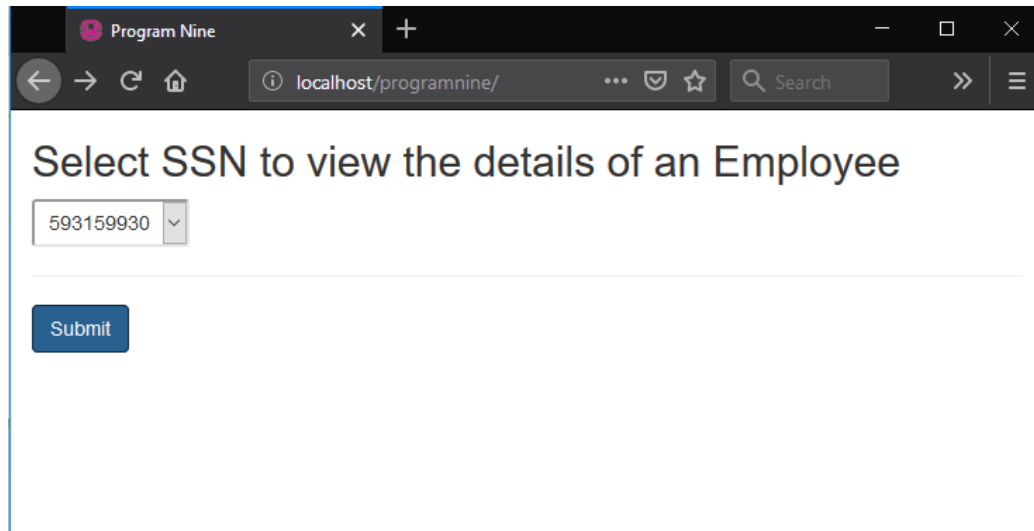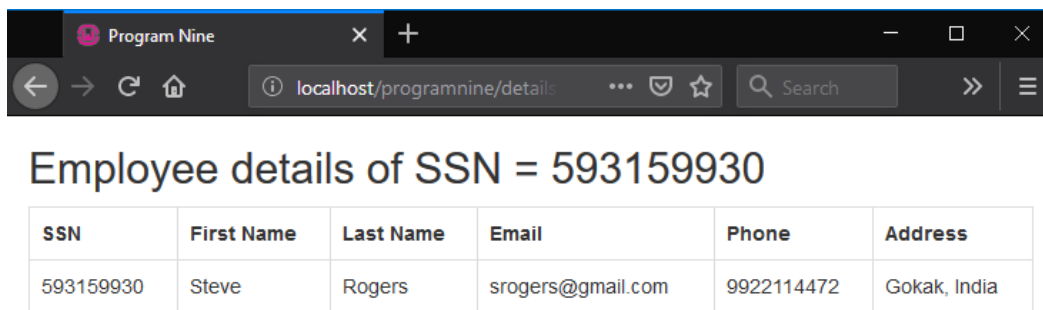
details.php

```php
<?php
  $ssn = $_GET['ssn'];
  include('connection.php');
  $sql = "SELECT ssn, fname, lname, email, phone, address FROM programnine.employee
WHERE ssn = '$ssn' ";
  $result = mysqli_query($conn, $sql);
  $emp = array();
  if(mysqli_num_rows($result) > 0){
    while($row = mysqli_fetch_assoc($result)){
      $emp[] = $row;
    }
  }
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Program Nine</title>
  <style>
    *{
      font-family: Arial;
    }
    td, tr, th{
```

```
      border: 1px solid #ddd;
      padding: .4em;
    }
    table{
      border-collapse: collapse;
    }

  </style>
</head>
<body>
  <div>
    <h2> Employee details of SSN = <?= $emp[0]['ssn'] ?> </h2>
    <table>
      <tr>
        <th>SSN</th>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Email</th>
        <th>Phone</th>
        <th>Address</th>
      </tr>
      <tr>
        <td><?= $emp[0]['ssn'] ?></td>
        <td><?= $emp[0]['fname'] ?></td>
        <td><?= $emp[0]['lname'] ?></td>
        <td><?= $emp[0]['email'] ?></td>
        <td><?= $emp[0]['phone'] ?></td>
        <td><?= $emp[0]['address'] ?></td>
      </tr>

    </table>
  </div>
</body>
</html>
```

OUTPUT:

10. Mini Project: Illustrate online address/contact book application using PHP and MySQL. The application should perform the following functions: (1) ADD a new contact. (2) DELETE one or more contacts. (3) SEARCH contacts by substring match on name. (4) LIST all contacts.

connection.php

```php
<?php
  $server = "localhost";
  $username = "root";
  $password = "jaseem";
  $conn = mysqli_connect($server, $username, $password);
  if (!$conn) {
    die("Connection failed: " . mysqli_error($conn));
  }
?>
```

index.php

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Address Book</title>
  <style>
    body{
      font-family: Arial;
    }
  </style>
</head>
<body>
<center>
  <h1>Online Address/ Contact Book</h1>
  <ul>
    <li><a href="add.php">Add Contact</a></li>
    <li><a href="delete.php">Delete Contact</a></li>
    <li><a href="search.php">Search Contact</a></li>
    <li><a href="list.php">List Contact</a></li>
  </ul>
</center>
</body>
</html>
```

add.php

```php
<?php
  include('connection.php');
  $msg = '';
  if(isset($_POST['add'])){

    $name = $_POST['name'];
    $phone = $_POST['phone'];
    $address = $_POST['address'];

    $sql = "INSERT INTO programten.contacts (id, name, phone, address) VALUES (NULL,
'$name', $phone , '$address')";
    if(mysqli_query($conn, $sql)){
      $msg = "Inserted Successsfully.";
    }else{
      $msg = "Failed to insert [ " . mysqli_error($conn) . " ]";
    }
  }
  mysqli_close($conn);

?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Address Book</title>
  <style>
    body{
      font-family: Arial;
    }
  </style>
</head>
<body>
<center>
  <h1>Add Contact</h1>
  <form method="POST" action="<?= $_SERVER['PHP_SELF'] ?>">
    <table>
      <tr>
        <td>Name:</td>
        <td><input type="text" name="name"></td>
      </tr>
      <tr>
        <td>Phone:</td>
        <td><input type="number" name="phone"></td>
      </tr>
      <tr>
```

```
        <td>Address:</td>
        <td><input type="text" name="address"></td>
      </tr>
      <tr align="center">
        <td colspan="2"><input type="submit" name="add" value="Submit"></td>
      </tr>
    </table>
  </form>
  <p><?= $msg ?></p>
</center>
</body>
</html>
```

search.php

```php
<?php
  include('connection.php');
  $msg = '';
  $contacts = array();

  if(isset($_POST['search'])){
    $name = $_POST['name'];

    $sql = "SELECT * FROM programten.contacts WHERE name LIKE '%$name%'";
    $result = mysqli_query($conn, $sql);

    if (mysqli_num_rows($result) > 0) {
      while($row = mysqli_fetch_assoc($result)) {
        $contacts[] = $row;
      }
    }else{
      $msg =  "No records found.";
    }
  }
  mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Address Book</title>
  <style>
    body{
      font-family: Arial;
    }
  </style>
```

```
</head>
<body>
<center>
    <h1>Search Contacts</h1>
    <form method="POST" action="<?= $_SERVER['PHP_SELF'] ?>">
        <input type="text" name="name" placeholder="Type Name to search" >
        <input type="submit" value="Search" name="search">
    </form>
    <br>
    <table border="1" style="width: 100%;">
        <tr>
            <th> ID</th>
            <th> Name</th>
            <th> Phone</th>
            <th> Address</th>
        </tr>
        <?php
        for($i = 0; $i < count($contacts); $i++){
            echo '<tr>';
            echo "<td>" . $contacts[$i]['id'] . " </td>" ;
            echo "<td>" . $contacts[$i]['name'] . " </td>" ;
            echo "<td>" . $contacts[$i]['phone'] . " </td>" ;
            echo "<td>" . $contacts[$i]['address'] . " </td>" ;
            echo '</tr>';
        }
        ?>
    </table>
    <p><?= $msg ?></p>
</center>
</body>
</html>
```

delete.php

```php
<?php
    include('connection.php');
    $msg = ";
    $dmsg = ";
    if(isset($_POST['delete'])){
        $ids = $_POST['ids'];

        foreach ($ids as $id){
            $sql = "DELETE FROM programten.contacts WHERE id = $id";
```

```php
        if (mysqli_query($conn, $sql)) {
            $dmsg =  "Record deleted successfully";
        } else {
            $dmsg = "Error deleting record: " . mysqli_error($conn);
        }
    }
  }

  $sql = "SELECT * FROM programten.contacts";
  $result = mysqli_query($conn, $sql);
  $contacts = array();

  if (mysqli_num_rows($result) > 0) {
    while($row = mysqli_fetch_assoc($result)) {
        $contacts[] = $row;
    }
  }else{
    $msg =  "No records found.";
  }
  mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Address Book</title>
  <style>
    body{
        font-family: Arial;
    }
  </style>
</head>
<body>
<center>
  <h1>Delete Contacts</h1>
  <form method="POST" action="<?= $_SERVER['PHP_SELF'] ?>">
    <table border="1" style="width: 100%;">
      <tr
        <th> .</th>
        <th> ID</th>
        <th> Name</th>
        <th> Phone</th>
        <th> Address</th>
      </tr>
      <?php
        for($i = 0; $i < count($contacts); $i++){
            echo '<tr>';
```

```php
            echo '<td> <input type="checkbox" name="ids[]" value="' . $contacts[$i]['id'] . '">
</td>' ;
            echo "<td>" . $contacts[$i]['id'] . " </td>" ;
            echo "<td>" . $contacts[$i]['name'] . " </td>" ;
            echo "<td>" . $contacts[$i]['phone'] . " </td>" ;
            echo "<td>" . $contacts[$i]['address'] . " </td>" ;
            echo '</tr>';
          }
        ?>
        <tr align="center">
          <td colspan="5"> <input type="submit" value="Delete" name="delete"> </td>
        </tr>

      </table>
    </form>

  <p><?= $msg ?></p>
  <p><?= $dmsg ?></p>
</center>
</body>
</html>
```

list.php

```php
<?php
  include('connection.php');
  $msg = '';
  $sql = "SELECT * FROM programten.contacts";
  $result = mysqli_query($conn, $sql);
  $contacts = array();

  if (mysqli_num_rows($result) > 0) {
    while($row = mysqli_fetch_assoc($result)) {
      $contacts[] = $row;
    }
  }else{
    $msg =  "No records found.";
  }

  mysqli_close($conn);
?>
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Address Book</title>
```

```html
    <style>
      body{
        font-family: Arial;
      }
    </style>
</head>
<body>
<center>
  <h1>All Contacts</h1>
  <table border="1" style="width: 100%;">
    <tr>
      <th> ID</th>
      <th> Name</th>
      <th> Phone</th>
      <th> Address</th>
    </tr>
  <?php
    for($i = 0; $i < count($contacts); $i++){
      echo '<tr>';
      echo "<td>" . $contacts[$i]['id'] . " </td>" ;
      echo "<td>" . $contacts[$i]['name'] . " </td>" ;
      echo "<td>" . $contacts[$i]['phone'] . " </td>" ;
      echo "<td>" . $contacts[$i]['address'] . " </td>" ;
      echo '</tr>';
    }
  ?>
  </table>
  <p><?= $msg ?></p>
</center>
</body>
</html>
```
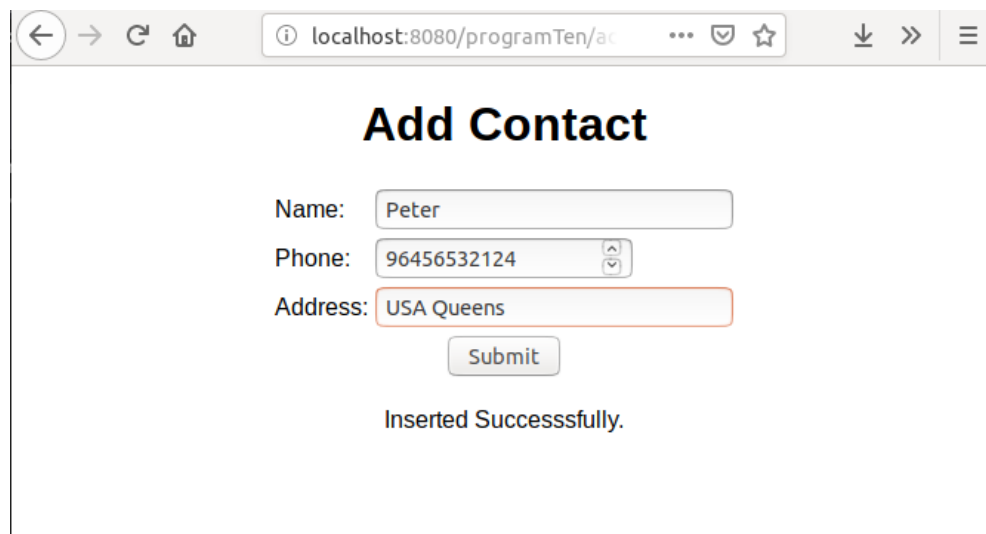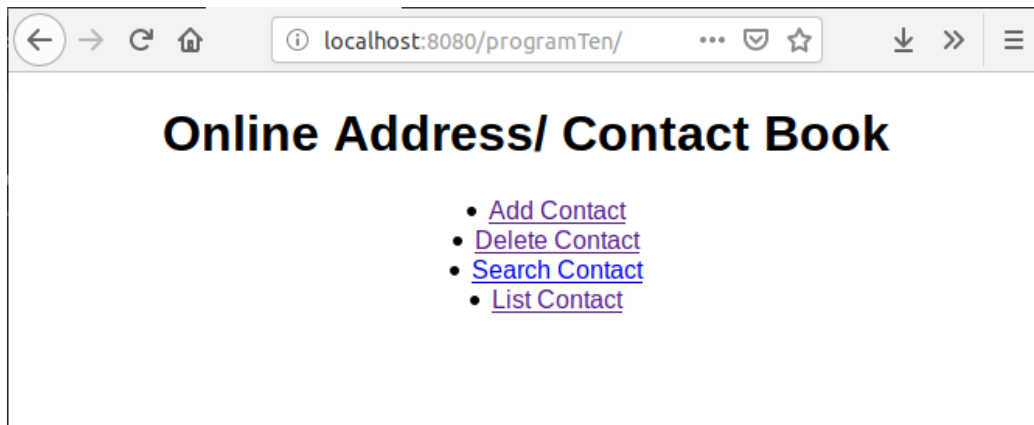
Delete Contacts

.	ID	Name	Phone	Address
☐	1	Stark	9988776655	USA NY
☑	2	Bruce	97865153596	USA NY
☐	3	Wayne	9684563215	Gotham City
☐	4	Stephen	9686596321	Kathmandu
☑	5	Thor	6895352145	Asguard
☑	6	Carol	6548962365	C-53
☐	8	Charles	9865321245	West Chester
			Delete	
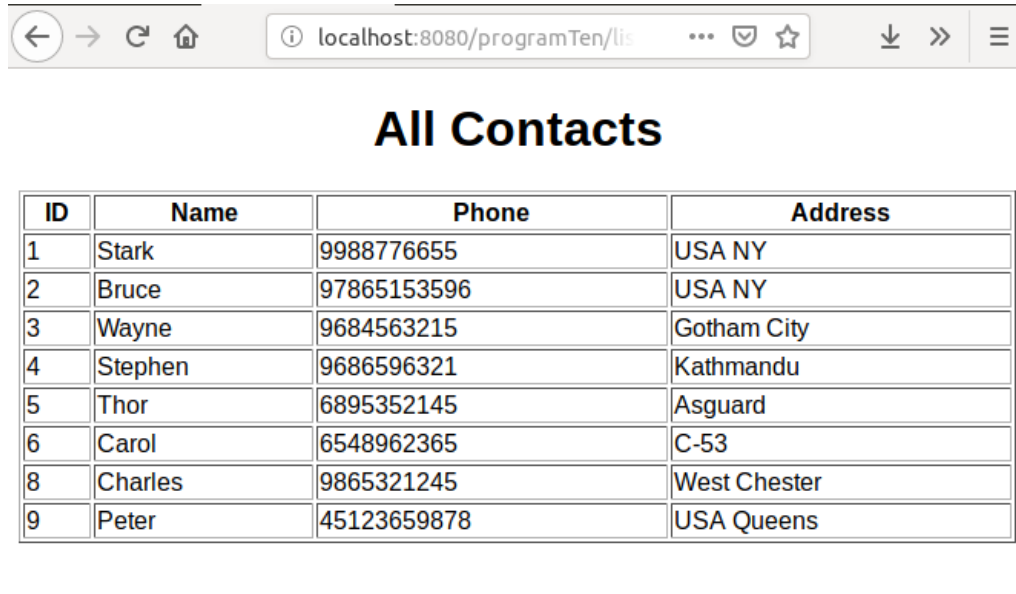
Search Contacts

ar | Search

ID	Name	Phone	Address
1	Stark	9988776655	USA NY
6	Carol	6548962365	C-53
8	Charles	9865321245	West Chester

All Contacts
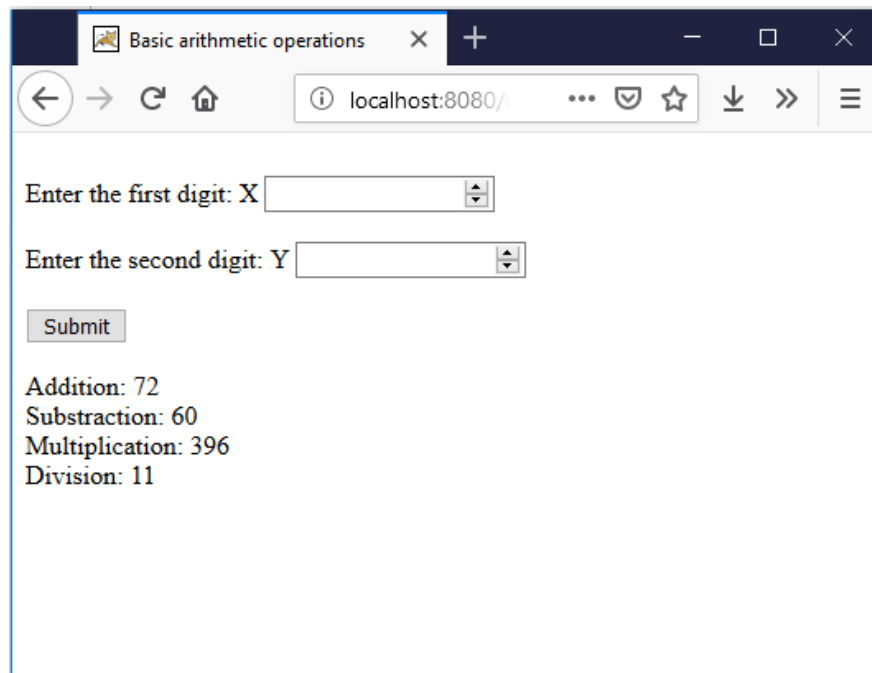
ID	Name	Phone	Address
1	Stark	9988776655	USA NY
2	Bruce	97865153596	USA NY
3	Wayne	9684563215	Gotham City
4	Stephen	9686596321	Kathmandu
5	Thor	6895352145	Asguard
6	Carol	6548962365	C-53
8	Charles	9865321245	West Chester
9	Peter	45123659878	USA Queens

11. JSP program for basic arithmetic operations.

```
<html>
      <head>
            <title>
                  Basic arithmetic operations
            </title>
      </head>
      <body>
                  <form action="#">
                        <br>Enter the  first digit: X
                        <input type="number" name="firstDigit" >
                        <br><br>Enter the second digit: Y
                        <input type="number" name="secondDigit" >
                        <br><BR>
                        <input type="submit" value="Submit" name="submit">
                  </form>
                  <%
                        if (request.getParameter("submit") != null) {
                        String s = (String) request.getParameter("firstDigit");
                        int x = Integer.parseInt(s);
                        String s1 = (String) request.getParameter("secondDigit");
                        int y = Integer.parseInt(s1);
                        //Arithmetic operation
                        int sum = x + y;
                        int sub = x - y;
                        int mul = x * y;
                        int div = x / y;

                        out.println("Addition: " + sum + "<br>");
                        out.println("Substraction: " +sub + "<br>");
                        out.println("Multiplication: " +mul + "<br>");
                        out.println("Division: " +div + "<br>");
                        }
                  %>
      </body>
</html>
```

12. Illustrate JDBC connectivity to update customer information.

Application.java

```java
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
import java.sql.*;
public class Application extends JFrame implements ActionListener{
    JButton btnUpdate, btnFetch;
    JTextField txtId, txtName, txtEmail;
    JLabel lblId, lblName, lblEmail;
    Connection connection;
    Statement statement;
    public Application(Connection connection){
        this.connection = connection;
        txtId = new JTextField(20);
        txtName = new JTextField(20);
        txtEmail = new JTextField(20);
        lblId = new JLabel("ID: ");
        lblName = new JLabel("Name: ");
        lblEmail = new JLabel("Email: ");
        btnUpdate = new JButton("Update");
        btnFetch = new JButton("Fetch");
        setLayout(new GridLayout(0, 2));
        add(lblId);
        add(txtId);

        add(lblName);
        add(txtName);
        add(lblEmail);
        add(txtEmail);
        add(btnFetch);
        add(btnUpdate);

        btnFetch.addActionListener(this);
        btnUpdate.addActionListener(this);
        setTitle("Update Customer Information");
        setDefaultCloseOperation(EXIT_ON_CLOSE);
        setSize(420, 200);
        setVisible(true);
    }
    @Override
    public void actionPerformed(ActionEvent e) {
        if(e.getSource() == btnFetch){
            try{
```
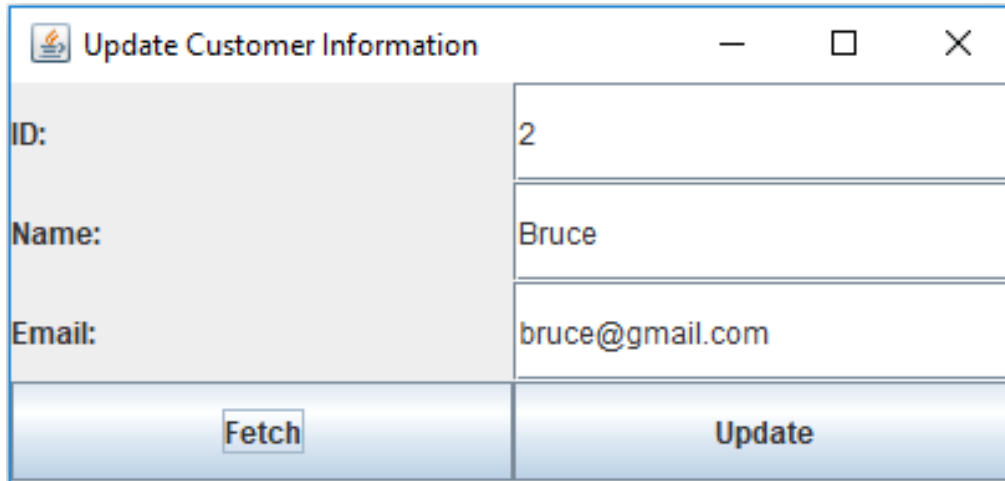
```java
        String id = txtId.getText().trim();
        if("".equals(id)){
           System.out.println("You should enter id first");
           return;
        }else{
           statement = connection.createStatement();
           String sql = "SELECT * FROM programeleven WHERE id = " + id;
           ResultSet resultSet = statement.executeQuery(sql);
           if(resultSet.next()){
              txtId.setText(resultSet.getInt(1) + "");
              txtName.setText(resultSet.getString(2));
              txtEmail.setText(resultSet.getString(3));
           }else{
              System.out.println("ID not found");
              txtEmail.setText("");
              txtName.setText("");
              txtId.setText("");
           }
        }
     }catch(Exception ex){
        System.out.println(ex);
     }
  }else{
     try{
        String id = txtId.getText().trim();
        String name = txtName.getText().trim();
        String email = txtEmail.getText().trim();

        if(id.equals("") && name.equals("") && email.equals("")){
           System.out.println("Do not leave any field blank");
           return;
        }else {
           String sql = "UPDATE programeleven SET id = " + id + " , name = '" + name + "',
email = '" + email + "' WHERE id = " + id;
           if(statement.executeUpdate(sql) > 0){
              System.out.println("Update successfully.");
           }else{
              System.out.println("Failed to update.");
           }
        }
     }catch (Exception ex){
        System.out.println(ex);
     }
  }
 }
}
```
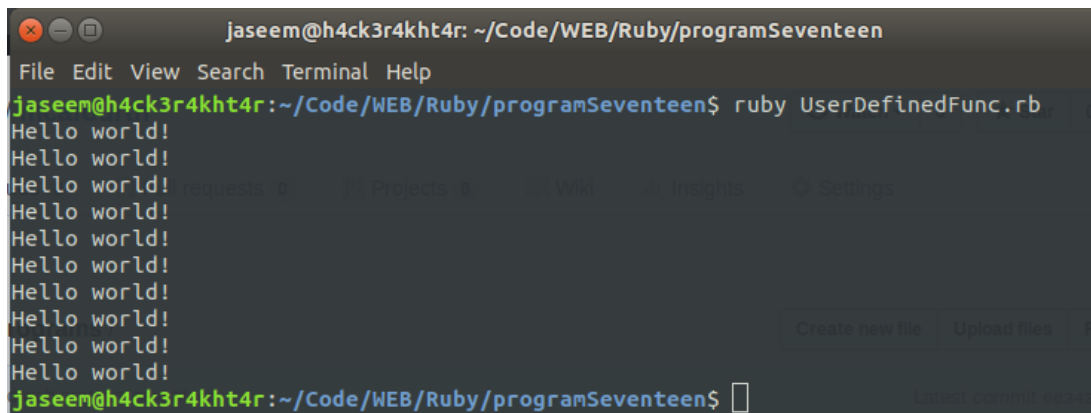
13. Write a Ruby program to create a user defined function and illustrate to call the function.

user defined function myfunc with two parameters

def myfunc x, y

   puts "#{x * y}"

end

myfunc "Hello world!\n", 10

OUTPUT:
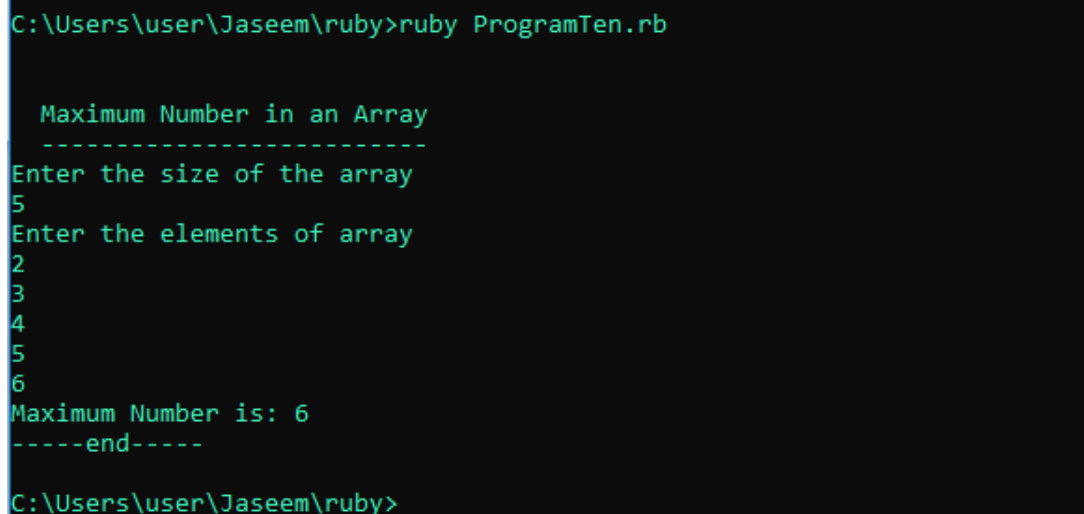
14. Write a ruby program to find maximum element in an array.

```
puts "\n\n\s\sMaximum Number in an Array"
puts "\s\s-------------------------"

puts "Enter the size of the array"
n=gets.to_i
a=Array.new(n)
puts "Enter the elements of array"
for i in 1..n
a[i]=gets.to_i
end
j=1
for i in (j+1)..n
  if a[j]<a[i]
    a[j]=a[i]
  end
end

puts "Maximum Number is: #{a[1]}"
puts "-----end-----"
```

OUTPUT:

```
C:\Users\user\Jaseem\ruby>ruby ProgramTen.rb


  Maximum Number in an Array
  -------------------------
Enter the size of the array
5
Enter the elements of array
2
3
4
5
6
Maximum Number is: 6
-----end-----

C:\Users\user\Jaseem\ruby>
```
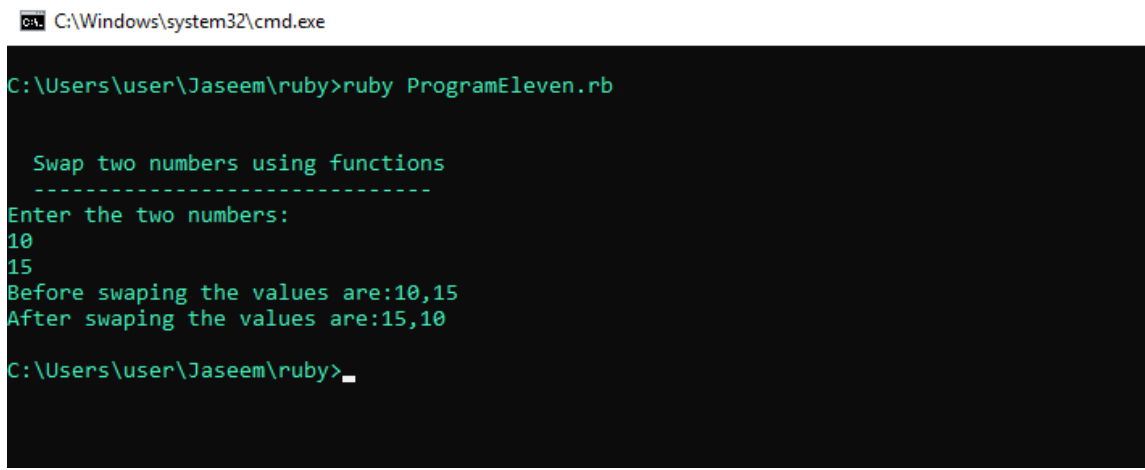
15. Write a ruby program to swap two numbers using function.

```ruby
#=begin
class Swapfun
=begin
  def read
    puts "Enter two numbers:"
    @a=gets.to_i
    @b=gets.to_i
    puts "Before swaping the values are:#{@a},#{@b}"
  end
=end
  def swap(a,b)
    @a=a;@b=b
    t=@a
    @a=@b
    @b=t
   #puts "#{@a},#{@b}"
  end
  def show()
    puts "After swaping the values are:#{@a},#{@b}"
  end
end
 obj1=Swapfun.new
puts "Enter the two numbers:"
a=gets.to_i
b=gets.to_i
puts "Before swaping the values are:#{a},#{b}"
obj1.swap(a,b)
obj1.show()
```

OUTPUT:

16. Write a ruby program to reverse an given integer.

```
puts "\n\n\s\sReverse a given number"
puts "\s\s---------------------"
puts "Enter the number:"
n=gets.to_i
a=Array.new
i=0
rev=0
puts "Reversed Number:"
begin
mod=n%10
a[i]=mod
rev=rev*10+mod
n=n/10
end while (n > 0)
puts "#{rev}"
puts "-----end-----"
```

OUTPUT:

17. Write a ruby program to sort n elements using bubble sort.

```ruby
puts "\n\n\s\sBubble Sort"
puts "\s\s-----------"
puts "Enter the size of the array"
n=gets.to_i
a=Array.new(n)
puts "Enter the elements :"
for i in 0...n
  a[i]=gets.to_i
end
t=0
for i in 0...n
  for j in 0...(n-(i+1))
    if (a[j] > a[j+1])
      t=a[j]
      a[j]=a[j+1]
      a[j+1]=t
    end
  end
end
puts "After Sorting :"
for i in 0..n
  puts "#{a[i]}"
end
```
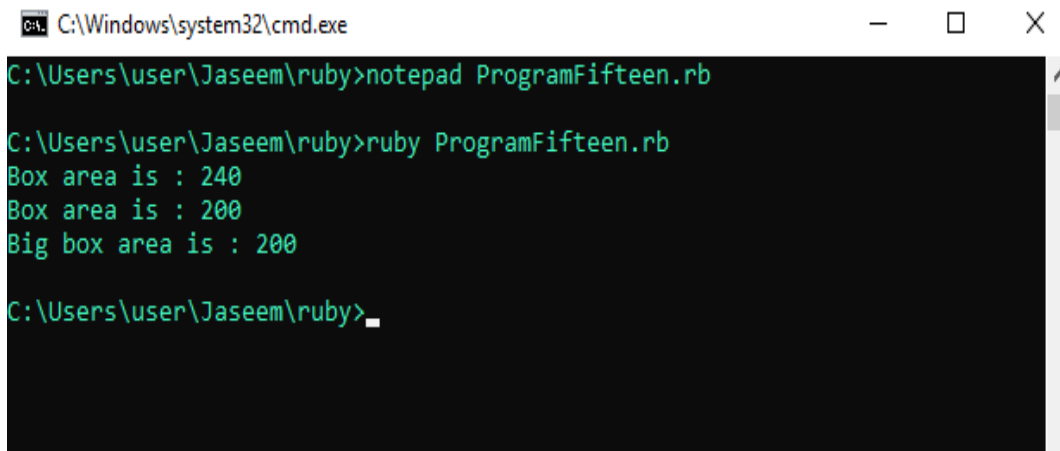
OUTPUT:

```
C:\Windows\system32\cmd.exe                              —    □    ×

C:\Users\user\Jaseem\ruby>ruby ProgramFourteen.rb


  Bubble Sort
  ----------
Enter the size of the array
5
Enter the elements :
2
1
9
8
5
After Sorting :
1
2
5
8
9
```

18. Implement the concept of method overriding in Ruby.

```ruby
# define a class
class Box
  # constructor method
  def initialize(w,h)
    @width, @height = w, h
  end
  # instance method
  def getArea
    puts "Box area is : #{ @width * @height} "
  end
end
# define a subclass
class BigBox < Box
  # change existing getArea method as follows
  def getArea
    super
    @area = @width * @height
    puts "Big box area is : #@area"
  end
end
# create an object
box = BigBox.new(10, 20)
box1= Box.new(20,12)
box1.getArea()
# print the area using overriden method.
box.getArea()
```

OUTPUT: