Lab 4-1 Working with Arrays

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4.1. Prepare

Create Lab4 directory in the lab exercise project.

4.2. Tuna Café

Step 1. TunaCafe.php

```
P TunaCafe.php ⊠    P TunaResults.php    🌐 http://localhost:80/Lab5/Lab6/TunaCafe.php

 1 <html>
 2     <head><title> Tuna Cafe </title></head>
 3⊖    <body><font size=4 color="blue">
 4     Welcome to the Tuna Cafe Survey! </font>
 5     <form action="TunaResults.php" method="GET">
 6         <?php
 7             $menu = array('Tuna Casserole', 'Tuna Sandwich',
 8                     'Tuna Pie', 'Grilled Tuna', 'Tuna Surprise');
 9             $bestseller = 2;
10             print 'Please indicate all your favorite dishes.<br>';
11             for ($i=0; $i < count($menu); $i++) {
12                 print "<input type=\"checkbox\" name=\"prefer[]\"value=$i> $menu[$i]";
13                 if ($i == $bestseller) {
14                     print '<font color=red> Our Best Seller!!!! </font>';
15                 }
16                 print '<br>';
17             }
18         ?>
19         <input type="submit" value="Submit">
20         <input type="reset" value="Restart">
21     </form>
22     </body>
23 </html>
```
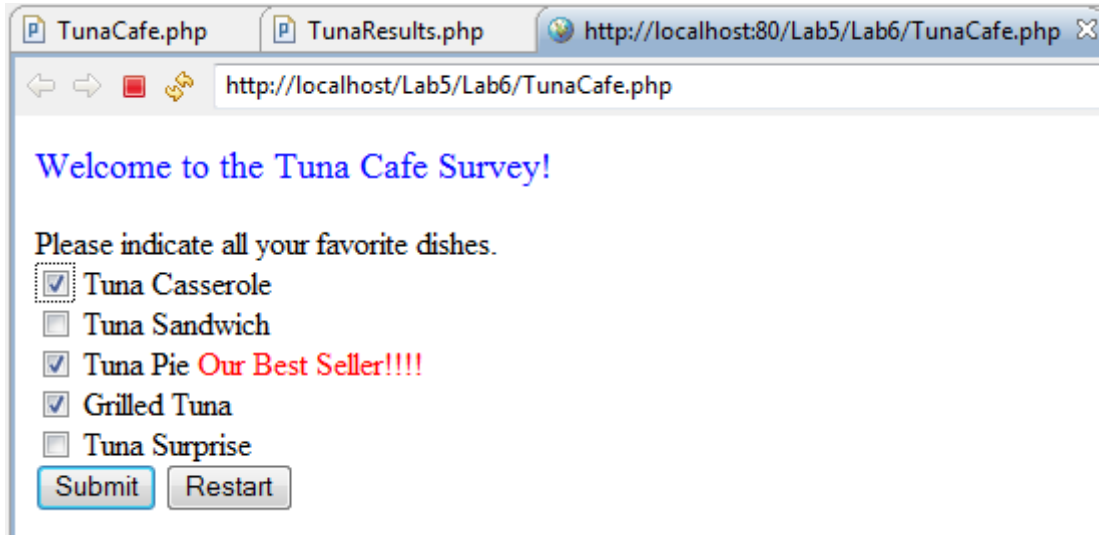
Step 2. TunaResults.php

```
P TunaCafe.php    P TunaResults.php ⊠    🌐 http://localhost:80/Lab5/Lab6/TunaCafe.php

 1 <html>
 2     <head><title> Tuna Cafe </title></head>
 3⊖    <body>
 4     <font size=4 color="blue"> Tuna Cafe Results Received </font>
 5      <?php
 6        $menu = array('Tuna Casserole', 'Tuna Sandwich', 'Tuna Pie', 'Grilled Tuna', 'Tuna Surprise');
 7
 8        $prefer = $_GET[prefer];
 9         if (count($prefer) == 0 ) {
10             print 'Oh no! Please pick something as your favorite! ';
11         } else {
12             print '<br>Your selections were <ul>';
13             foreach ($prefer as $item) {
14                 print "<li>$menu[$item]</li>";
15             }
16             print '</ul>';
17         }
18      ?>
19     </body>
20 </html>
```

Step 3. Run

| P TunaCafe.php | P TunaResults.php | ⊕ http://localhost:80/Lab5/Lab6/TunaCafe.php ⊗ |

⇦ ⇨ ◼ ⟲ http://localhost/Lab5/Lab6/TunaCafe.php

Welcome to the Tuna Cafe Survey!

Please indicate all your favorite dishes.
- ☑ Tuna Casserole
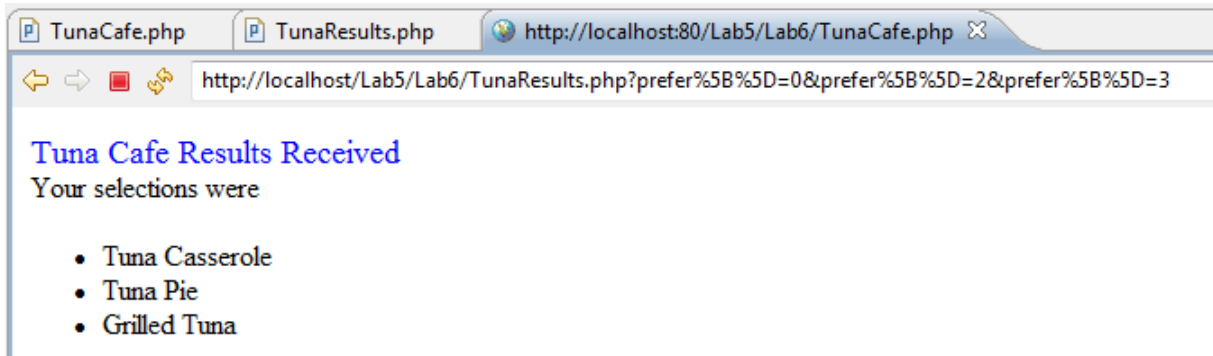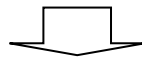- ☐ Tuna Sandwich
- ☑ Tuna Pie Our Best Seller!!!!
- ☑ Grilled Tuna
- ☐ Tuna Surprise

[Submit] [Restart]

⬇

| P TunaCafe.php | P TunaResults.php | ⊕ http://localhost:80/Lab5/Lab6/TunaCafe.php ⊗ |

⇦ ⇨ ◼ ⟲ http://localhost/Lab5/Lab6/TunaResults.php?prefer%5B%5D=0&prefer%5B%5D=2&prefer%5B%5D=3

Tuna Cafe Results Received
Your selections were

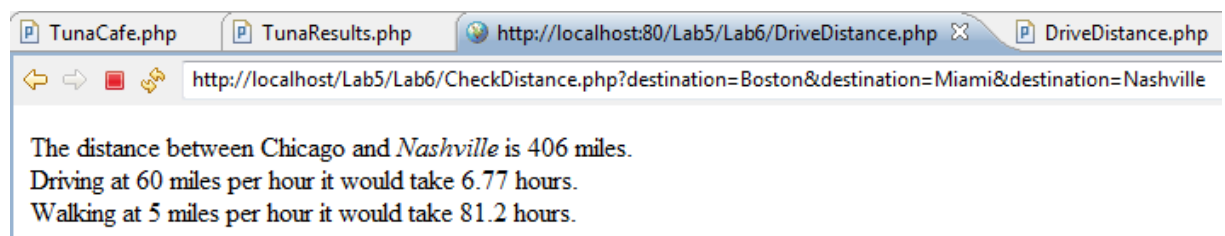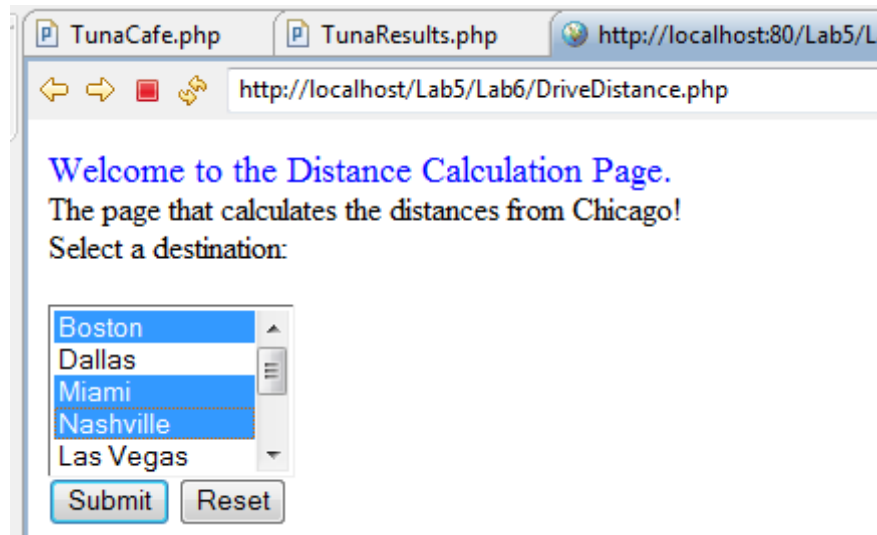- Tuna Casserole
- Tuna Pie
- Grilled Tuna

4.3. Drive Distance

Step 1. DriveDistance.php

```
1  <HTML>
2  <HEAD><TITLE> Distance from Chicago!</TITLE></HEAD>
3  <BODY>
4  <FONT SIZE=4 COLOR=BLUE> Welcome to the Distance Ca
5  <br>The page that calculates the distances from Chi
6  <BR>Select a destination:
7  <FORM ACTION="CheckDistance.php" METHOD="GET">
8      <SELECT NAME="destination" SIZE=5 MULTIPLE>
9          <OPTION> Boston </OPTION>
10         <OPTION> Dallas </OPTION>
11         <OPTION> Miami </OPTION>
12         <OPTION> Nashville </OPTION>
13         <OPTION> Las Vegas </OPTION>
14         <OPTION> Pittsburgh </OPTION>
15         <OPTION> San Francisco </OPTION>
16         <OPTION> Toronto </OPTION>
17         <OPTION> Washington, DC </OPTION>
18     </SELECT>
19     <BR>
20     <INPUT TYPE="SUBMIT" VALUE="Submit">
21     <INPUT TYPE = "RESET" VALUE = "Reset" >
22 </FORM></BODY></HTML>
```

Step 2. CheckDistance.php

```
1  <html>
2      <head><title> Distance and Time Calculations </title></head>
3      <body>
4          <?php
5              $cities = array ('Dallas' => 803, 'Toronto' => 435, 'Boston' => 848,
6                          'Nashville' => 406, 'Las Vegas' => 1526,
7                          'San Francisco' => 1835,'Washington, DC'=> 595,
8                          'Miami' => 1189, 'Pittsburgh' => 409);
9          $destination = $_GET[destination];
10         if (isset($cities[$destination])) {
11             $distance = $cities[$destination];
12             $time = round( ($distance / 60), 2);
13             $walktime = round( ($distance / 5), 2);
14                 print "The distance between Chicago and <I>$destination</I> is $distance miles.";
15                 print "<br>Driving at 60 miles per hour it would take $time hours.";
16                 print "<br>Walking at 5 miles per hour it would take $walktime hours.";
17         } else {
18                 print "Sorry, do not have destination information for $destination.";
19         }
20         ?>
21     </body>
22 </html>
```

Step 3. Run

Step 4. Note that although the user selects 3 destination, the result only calculate for the last destination. Modify CheckDistance.php to calculate and display information for all destinations, each destination is located in a row of a table (the table has 5 columns: No., Destination, Distance, Driving time (60 mph), Walking time (5 mph)).

From Chicage to:

No.	Destination	Distance	Driving time	Walking time
1	Boston	848	14.13	169.6
2	Dallas	803	13.38	160.6
3	Las Vegas	1526	25.43	305.2

4.4. Exercise - User Sorting

Given following suggestion code.

```php
<?php

function user_sort($a, $b) {
   // smarts is all-important, so sort it first
   if($b == 'smarts') {
     return 1;
   }
   else if($a == 'smarts') {
     return -1;
   }

   return ($a == $b) ? 0 : (($a < $b) ? -1 : 1);
}
```

```php
$values = array('name' => 'Buzz Lightyear',
                'email_address' => 'buzz@starcommand.gal',
                'age' => 32,
                'smarts' => 'some');

if($submitted) {
  if($sort_type == 'usort' || $sort_type == 'uksort' || $sort_type == 'uasort') {
    $sort_type($values, 'user_sort');
  }
  else {
    $sort_type($values);
  }
}
?>

<form action="UserSorting.php" method="post">
 <p>
   <input type="radio" name="sort_type" value="sort" checked="checked" />
                                                Standard sort<br />
   <input type="radio" name="sort_type" value="rsort" />   Reverse sort<br />
   <input type="radio" name="sort_type" value="usort" />   User-defined sort<br />
   <input type="radio" name="sort_type" value="ksort" />   Key sort<br />
   <input type="radio" name="sort_type" value="krsort" />  Reverse key sort<br />
   <input type="radio" name="sort_type" value="uksort" />  User-defined key sort<br
/>
   <input type="radio" name="sort_type" value="asort" />  Value sort<br />
   <input type="radio" name="sort_type" value="arsort" /> Reverse value sort<br />
   <input type="radio" name="sort_type" value="uasort" /> User-defined value
sort<br />
 </p>

 <p align="center">
    <input type="submit" value="Sort" name="submitted" />
 </p>

 <p>
    Values <?= $submitted ? "sorted by $sort_type" : "unsorted"; ?>:
 </p>

 <ul>
   <?php
    foreach($values as $key=>$value) {
      echo "<li><b>$key</b>: $value</li>";
    }
   ?>
 </ul>
</form>
```
Modify to run it in one PHP file allowing users to sort the data as they choose in the radio button.

The following result is the example:

○ Standard sort   ⊙ User-defined sort   ○ Reverse key sort   ○ Value sort
○ Reverse sort   ○ Key sort   ○ User-defined key sort   ○ Reverse value sort
                                                                              ○ User-defined value sort

Sort

Values unsorted (before sort):

- **name**: Buzz Lightyear
- **email_address**: buzz@starcommand.gal
- **age**: 32
- **smarts**: some

Values sorted by usort:

- **0**: Buzz Lightyear
- **1**: buzz@starcommand.gal
- **2**: some
- **3**: 32

○ Standard sort   ○ User-defined sort   ○ Reverse key sort   ⊙ Value sort
○ Reverse sort   ○ Key sort   ○ User-defined key sort   ○ Reverse value sort
                                                                              ○ User-defined value sort

Sort

Values unsorted (before sort):

- **name**: Buzz Lightyear
- **email_address**: buzz@starcommand.gal
- **age**: 32
- **smarts**: some

Values sorted by asort:

- **name**: Buzz Lightyear
- **email_address**: buzz@starcommand.gal
- **smarts**: some
- **age**: 32