

Lab 9 CPS530

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Section 2
Lab 9

Introduction:

In this lab I'm messing around with php and sql. I saved some travel pictures in a database, and this page pulls them out and shows them depending on what the problem asks for. It basically helped me see how PHP can grab stuff from a database and display it on a website instead of me typing everything by hand.

Links:

<http://webdev.cs.torontomu.ca/~b53khan/lab09a.php>
<http://webdev.cs.torontomu.ca/~b53khan/lab09b.php>
<http://webdev.cs.torontomu.ca/~b53khan/lab09c.php>
<http://webdev.cs.torontomu.ca/~b53khan/lab09d.php>
<http://webdev.cs.torontomu.ca/~b53khan/lab09e.php>

Code:

a)

```
<?php
include 'dbconnect.php';

$tableSQL = "
CREATE TABLE IF NOT EXISTS travel_pictures (
    picture_id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
    description VARCHAR(255) NOT NULL,
    location VARCHAR(255) NOT NULL,
    `date` VARCHAR(10) NOT NULL,      -- mm/dd/yy
    file VARCHAR(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
";

if (!mysqli_query($connect, $tableSQL)) {
    die('Error creating table: ' . mysqli_error($connect));
}

$countSQL = "SELECT COUNT(*) AS total FROM travel_pictures";
$countResult = mysqli_query($connect, $countSQL);
```

```

if (!$countResult) {
    die('Error checking row count: ' . mysqli_error($connect));
}

$countRow = mysqli_fetch_assoc($countResult);
$currentTotal = (int)$countRow['total'];

$message = "";

if ($currentTotal === 0) {

    $insertSQL = "
        INSERT INTO travel_pictures (description, location, `date`, file) VALUES
        ('Sunset at the beach', 'Dubai, UAE', '08/12/24', 'dubai_beach.jpg'),
        ('CN Tower at night', 'Toronto, Ontario', '07/05/24', 'cn_tower_night.jpg'),
        ('Foggy morning on the bridge', 'Karachi, Pakistan', '06/21/23',
        'karachi_bridge.jpg'),
        ('Boats on the canal', 'Venice, Italy', '05/14/22', 'venice_canal.jpg'),
        ('Falls from the lookout', 'Niagara Falls, Ontario', '09/02/23',
        'niagara_falls.jpg'),
        ('Old city market', 'Istanbul, Türkiye', '03/10/22', 'istanbul_market.jpg'),
        ('Street lights in the rain', 'London, UK', '11/19/21', 'london_rain.jpg'),
        ('Palm trees by the water', 'Sharjah, UAE', '01/08/24',
        'sharjah_corniche.jpg'),
        ('Cliffside view of the sea', 'Santorini, Greece', '04/25/22',
        'santorini_cliffs.jpg'),
        ('Busy downtown at sunset', 'New York, USA', '10/30/23', 'nyc_sunset.jpg');
    ";

    if (mysqli_query($connect, $insertSQL)) {
        $message = "Table created (if needed) and 10 records were inserted
successfully.";
    } else {
        die('Error inserting records: ' . mysqli_error($connect));
    }

    $countResult = mysqli_query($connect, $countSQL);
    $countRow = mysqli_fetch_assoc($countResult);
    $currentTotal = (int)$countRow['total'];

} else {
    $message = "Table already had data. No new records were inserted.";
}

```

```
}
```

```
mysqli_close($connect);
```

```
?>
```

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <title>Lab 09 - Problem 1</title>
```

```
    <style>
```

```
        body {
```

```
            font-family: Arial, sans-serif;
```

```
            background: #f4f4f9;
```

```
            padding: 30px;
```

```
        }
```

```
        .wrapper {
```

```
            max-width: 700px;
```

```
            margin: 0 auto;
```

```
            background: #ffffff;
```

```
            border-radius: 8px;
```

```
            padding: 20px 25px;
```

```
            box-shadow: 0 2px 6px rgba(0,0,0,0.1);
```

```
        }
```

```
        h1 {
```

```
            font-size: 1.6rem;
```

```
            margin-bottom: 0.5rem;
```

```
        }
```

```
        .status {
```

```
            margin-top: 15px;
```

```
            padding: 12px 15px;
```

```
            border-radius: 5px;
```

```
            background: #e8f5e9;
```

```
            border: 1px solid #a5d6a7;
```

```
        }
```

```
        .count {
```

```
            margin-top: 10px;
```

```
            font-weight: bold;
```

```
        }
```

```
        .note {
```

```
            margin-top: 15px;
```

```
            font-size: 0.9rem;
```

```

        color: #555;
    }

```

```
</style>
```

```
</head>
```

```
<body>
```

```
<div class="wrapper">
```

```
    <h1>Lab 09 Problem 1</h1>
```

```

        <div class="status"><?php echo htmlspecialchars($message); ?></div>
```

```
        <div class="count">Current number of records in table: <?php echo $currentTotal;
```

```
?></div>
```

```
</div>
```

```
</body>
```

```
</html>
```

b)

```
<?php
```

```
include 'dbconnect.php';
```

```
$sql = "
```

```
    SELECT picture_id, description, location, `date`, file
    FROM travel_pictures
    ORDER BY STR_TO_DATE(`date`, '%m/%d/%y') DESC, picture_id DESC
";
```

```

$result = mysqli_query($connect, $sql);
```

```

if (!$result) {
    die("Query failed: " . mysqli_error($connect));
}
```

```
?>
```

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <title>Lab 09 Problem 2</title>
```

```
<style>
```

```
    body {
```

```
        font-family: Arial, sans-serif;
```

```
background: linear-gradient(135deg, #0f172a, #1f2937);
margin: 0;
padding: 30px 10px;
color: #f9fafb;
}

.wrapper {
    max-width: 1000px;
    margin: 0 auto;
    background: #111827;
    border-radius: 10px;
    padding: 20px 25px 30px;
    box-shadow: 0 10px 25px rgba(0,0,0,0.5);
}

h1 {
    font-size: 1.8rem;
    margin-bottom: 0.25rem;
}

h2 {
    font-size: 1rem;
    font-weight: 400;
    color: #9ca3af;
    margin-top: 0;
    margin-bottom: 1.5rem;
}

table {
    width: 100%;
    border-collapse: collapse;
    margin-top: 10px;
    background: #020617;
}

th, td {
    padding: 10px 12px;
    text-align: left;
}

th {
    background: #0f172a;
```

```
        color: #e5e7eb;
        text-transform: uppercase;
        font-size: 0.75rem;
        letter-spacing: 0.08em;
        border-bottom: 2px solid #1f2937;
    }

    tr:nth-child(even) td {
        background: #020617;
    }

    tr:nth-child(odd) td {
        background: #030712;
    }

    tr:hover td {
        background: #111827;
    }

    .thumb {
        width: 120px;
        height: 80px;
        object-fit: cover;
        border-radius: 6px;
        border: 1px solid #1f2937;
    }

    .no-records {
        margin-top: 15px;
        padding: 12px;
        background: #7f1d1d;
        border-radius: 6px;
        border: 1px solid #fecaca;
        color: #fee2e2;
    }

    .small-note {
        margin-top: 12px;
        font-size: 0.8rem;
        color: #9ca3af;
    }
```

```

        code {
            background: #020617;
            padding: 2px 5px;
            border-radius: 4px;
            font-size: 0.85em;
        }
    
```

</style>

</head>

<body>

<div class="wrapper">

<h1>Lab 09 Problem 2</h1>

<?php if (mysqli_num_rows(\$result) === 0): ?>

<div class="no-records">

There are currently no pictures in the <code>travel_pictures</code> table.

Run <code>lab09a.php</code> first to populate it.

</div>

<?php else: ?>

<table>

<thead>

<tr>

<th>#</th>

<th>Preview</th>

<th>Description</th>

<th>Location</th>

<th>Date Taken
<span

(mm/dd/yy)</th>

<th>File Name</th>

</tr>

</thead>

<tbody>

<?php while (\$row = mysqli_fetch_assoc(\$result)): ?>

<tr>

<td><?php echo htmlspecialchars(\$row['picture_id']); ?></td>

<td>

"

class="thumb"

onerror="this.style.display='none';"

>

</td>

```

        <td><?php echo htmlspecialchars($row['description']); ?></td>
        <td><?php echo htmlspecialchars($row['location']); ?></td>
        <td><?php echo htmlspecialchars($row['date']); ?></td>
        <td><?php echo htmlspecialchars($row['file']); ?></td>
    </tr>
<?php endwhile; ?>
</tbody>
</table>
<?php endif; ?>
</div>
</body>
</html>
<?php
mysqli_free_result($result);
mysqli_close($connect);
?>
```

c)

```

<?php

include 'dbconnect.php';

$sql = "
    SELECT picture_id, description, location, `date`, file
    FROM travel_pictures
    WHERE location LIKE '%Ontario%'
    ORDER BY STR_TO_DATE(`date`, '%m/%d/%y') DESC, picture_id DESC
";

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

if (!$result) {
    die("Query failed: " . mysqli_error($connect));
}

$hasRows = mysqli_num_rows($result) > 0;
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
```

```
<title>Lab 09 Problem 3</title>
<style>

body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 30px 10px;
    background: radial-gradient(circle at top, #1d4ed8, #020617);
    color: #f9fafb;
}

.wrapper {
    max-width: 1100px;
    margin: 0 auto;
    background: rgba(15, 23, 42, 0.92);
    border-radius: 14px;
    padding: 22px 24px 28px;
    box-shadow: 0 14px 35px rgba(0,0,0,0.55);
}

h1 {
    font-size: 1.9rem;
    margin-bottom: 0.25rem;
}

h2 {
    font-size: 1rem;
    font-weight: 400;
    color: #9ca3af;
    margin-top: 0;
    margin-bottom: 1.5rem;
}

.gallery {
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(220px, 1fr));
    gap: 18px;
}

.card {
    background: #020617;
    border-radius: 10px;
    overflow: hidden;
```

```
border: 1px solid #1e293b;
box-shadow: 0 6px 18px rgba(0,0,0,0.5);
display: flex;
flex-direction: column;
}

.card img {
width: 100%;
height: 180px;
object-fit: cover;
display: block;
}

.card-body {
padding: 10px 12px 12px;
}

.desc {
font-weight: 600;
font-size: 0.95rem;
margin-bottom: 2px;
}

.loc {
font-size: 0.85rem;
color: #9ca3af;
}

.date {
font-size: 0.80rem;
color: #6b7280;
margin-top: 4px;
}

.no-results {
margin-top: 14px;
padding: 14px 16px;
border-radius: 8px;
background: #7f1d1d;
border: 1px solid #fecaca;
color: #fee2e2;
font-size: 0.95rem;
```

```
}

.note {
    margin-top: 12px;
    font-size: 0.8rem;
    color: #9ca3af;
}
</style>
</head>
<body>
<div class="wrapper">
    <h1>Lab 09 Problem 3</h1>

    <?php if (!$hasRows): ?>
        <div class="no-results">
            There are currently <strong>no photos with location containing
            "Ontario"‐</strong>
            in the <code>travel_pictures</code> table.
        </div>
    <?php else: ?>
        <div class="gallery">
            <?php while ($row = mysqli_fetch_assoc($result)): ?>
                <div class="card">
                    "‐
                        onerror="this.style.display='none';"
                    >
                    <div class="card-body">
                        <div class="desc">
                            <?php echo htmlspecialchars($row['description']); ?>
                        </div>
                        <div class="loc">
                            <?php echo htmlspecialchars($row['location']); ?>
                        </div>
                        <div class="date">
                            Taken on: <?php echo htmlspecialchars($row['date']); ?>
                        </div>
                    </div>
                </div>
            <?php endwhile; ?>
        </div>
    </div>
```

```

<?php endif; ?>

</div>
</body>
</html>
<?php
mysqli_free_result($result);
mysqli_close($connect);
?>

```

d)

```

<?php

include 'dbconnect.php';

$locations = [];
$locSQL = "SELECT DISTINCT location FROM travel_pictures ORDER BY location ASC";
$locResult = mysqli_query($connect, $locSQL);
while ($row = mysqli_fetch_assoc($locResult)) {
    $locations[] = $row['location'];
}

$years = [];
$yearSQL = "
    SELECT DISTINCT YEAR(STR_TO_DATE(`date`, '%m/%d/%y')) AS year
    FROM travel_pictures
    ORDER BY year DESC
";
$yearResult = mysqli_query($connect, $yearSQL);
while ($row = mysqli_fetch_assoc($yearResult)) {
    if (!empty($row['year'])) {
        $years[] = $row['year'];
    }
}

$chosenLocation = $_GET['location'] ?? 'all';
$chosenYear     = $_GET['year'] ?? 'all';

$photos = [];
$searched = isset($_GET['submitted']);
$noResults = false;

```

```

if ($searched) {
    $conditions = [];

    if ($chosenLocation !== 'all') {
        $safeLoc = mysqli_real_escape_string($connect, $chosenLocation);
        $conditions[] = "location = '$safeLoc'";
    }

    if ($chosenYear !== 'all') {
        $safeYear = mysqli_real_escape_string($connect, $chosenYear);
        $conditions[] = "YEAR(STR_TO_DATE(`date`, '%m/%d/%y')) = '$safeYear'";
    }
}

$whereClause = !empty($conditions) ? implode(" AND ", $conditions) : "1";

$sql = "
    SELECT *
    FROM travel_pictures
    WHERE $whereClause
    ORDER BY STR_TO_DATE(`date`, '%m/%d/%y') DESC
";

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

while ($row = mysqli_fetch_assoc($result)) {
    $photos[] = $row;
}

if (count($photos) === 0) {
    $noResults = true;
}
}

?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Lab 09 Problem 4</title>
    <style>
        body {
            font-family: Arial, sans-serif;

```

```
margin: 0;
padding: 30px 10px;
background: radial-gradient(circle at top, #1d4ed8, #020617);
color: #f9fafb;
}

.wrapper {
    max-width: 1100px;
    margin: 0 auto;
    background: rgba(15, 23, 42, 0.92);
    border-radius: 14px;
    padding: 22px 24px 28px;
    box-shadow: 0 14px 35px rgba(0,0,0,0.55);
}

h1 {
    font-size: 1.9rem;
    margin-bottom: 0.25rem;
}

h2 {
    font-size: 1rem;
    font-weight: 400;
    color: #9ca3af;
    margin-top: 0;
    margin-bottom: 1.5rem;
}

form {
    display: flex;
    gap: 20px;
    background: #020617;
    padding: 14px 16px;
    border-radius: 10px;
    border: 1px solid #1e293b;
    margin-bottom: 20px;
}

.field {
    display: flex;
    flex-direction: column;
}

label {
    font-size: 0.85rem;
    margin-bottom: 4px;
    color: #d1d5db;
}
```

```
select {
    padding: 6px 8px;
    border-radius: 6px;
    background: #0f172a;
    color: #e5e7eb;
    border: 1px solid #475569;
}

button {
    background: #3b82f6;
    padding: 8px 16px;
    border-radius: 8px;
    font-weight: bold;
    color: white;
    cursor: pointer;
    border: none;
    margin-top: 18px;
}

.no-results {
    padding: 14px;
    border-radius: 10px;
    background: #1e293b;
    border: 1px dashed #475569;
    color: #e2e8f0;
    text-align: center;
}

.gallery {
    margin-top: 18px;
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(220px, 1fr));
    gap: 18px;
}

.card {
    background: #020617;
    border-radius: 12px;
    overflow: hidden;
    border: 1px solid #1e293b;
}

.card img {
    width: 100%;
    height: 190px;
    object-fit: cover;
}
```

```

    .card-body {
        padding: 10px 12px;
    }
    .desc {
        font-weight: 600;
    }
    .loc, .date {
        color: #9ca3af;
        font-size: 0.85rem;
    }

```

</style>

</head>

<body>

<div class="wrapper">

<h1>Lab 09 Problem 4</h1>

<form method="get">

<div class="field">

<label>Location</label>

<select name="location">

<option value="all">All Locations</option>

<?php foreach (\$locations as \$loc): ?>

<option value="<?php echo \$loc; ?>" <?php if (\$loc === \$chosenLocation) echo "selected"; ?>>

<?php echo \$loc; ?>

</option>

<?php endforeach; ?>

</select>

</div>

<div class="field">

<label>Year</label>

<select name="year">

<option value="all">All Years</option>

<?php foreach (\$years as \$yr): ?>

<option value="<?php echo \$yr; ?>" <?php if (\$yr == \$chosenYear) echo "selected"; ?>>

<?php echo \$yr; ?>

</option>

<?php endforeach; ?>

</select>

</div>

```

<button type="submit" name="submitted" value="1">Show Photos</button>
</form>

<?php if ($searched): ?>
<?php if ($noResults): ?>
    <div class="no-results">No photos matched your selection.</div>
<?php else: ?>
    <div class="gallery">
        <?php foreach ($photos as $p): ?>
            <div class="card">
                
                <div class="card-body">
                    <div class="desc"><?php echo
htmlspecialchars($p['description']); ?></div>
                    <div class="loc"><?php echo
htmlspecialchars($p['location']); ?></div>
                    <div class="date">Taken on: <?php echo
htmlspecialchars($p['date']); ?></div>
                </div>
            </div>
        <?php endforeach; ?>
    </div>
    <?php endif; ?>
    <?php endif; ?>

</div>
</body>
</html>

<?php
mysqli_close($connect);
?>
```

e)

```

<?php

include 'dbconnect.php';

$sql = "SELECT file FROM travel_pictures ORDER BY picture_id ASC";
```

```
$result = mysqli_query($connect, $sql);

$images = [];
while ($row = mysqli_fetch_assoc($result)) {
    $images[] = $row['file'];
}

$totalImages = count($images);

mysqli_close($connect);
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Lab 09 Problem 5</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 30px 10px;
            background: radial-gradient(circle at top, #1d4ed8, #020617);
            color: #f9fafb;
        }

        .wrapper {
            max-width: 1100px;
            margin: 0 auto;
            background: rgba(15, 23, 42, 0.92);
            border-radius: 14px;
            padding: 22px 24px 30px;
            box-shadow: 0 14px 35px rgba(0,0,0,0.55);
        }

        h1 {
            font-size: 2rem;
            margin-bottom: 0.4rem;
        }

        .count {
            font-size: 2.5rem;
            font-weight: bold;
        }
    </style>
</head>
<body>
    <div class="wrapper">
        <h1>Total Images: <span class="count">$totalImages</span></h1>
    </div>
</body>
</html>
```

```
        color: #93c5fd;
        margin-top: 5px;
        margin-bottom: 25px;
        text-align: center;
    }

.gallery {
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(220px, 1fr));
    gap: 18px;
}

.card {
    background: #020617;
    border-radius: 12px;
    overflow: hidden;
    border: 1px solid #1e293b;
    box-shadow: 0 6px 18px rgba(0,0,0,0.5);
}

.card img {
    width: 100%;
    height: 200px;
    display: block;
    object-fit: cover;
}

.empty {
    padding: 14px;
    background: #1e293b;
    border: 1px dashed #475569;
    text-align: center;
    border-radius: 12px;
    font-size: 1rem;
    color: #e2e8f0;
}

</style>
</head>
<body>

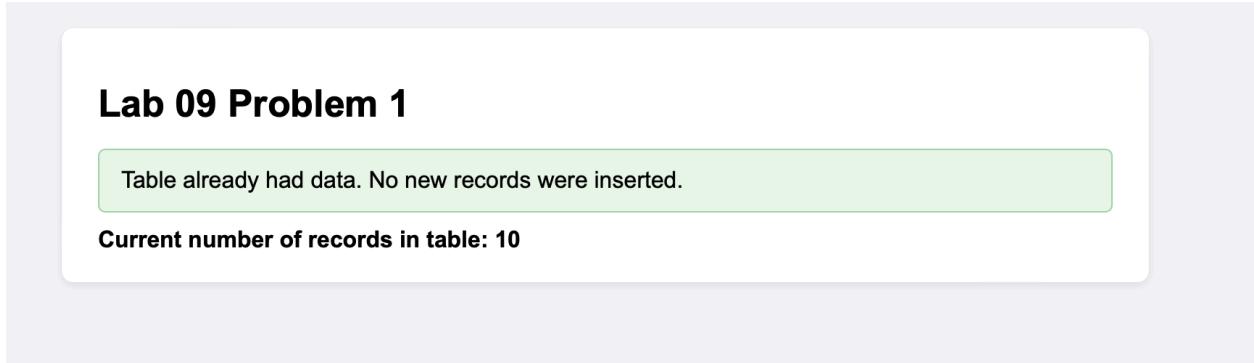
<div class="wrapper">
    <h1>Lab 09 Problem 5</h1>
```

```
<div class="count"><?php echo $totalImages; ?> Images</div>

<?php if ($totalImages === 0): ?>
    <div class="empty">No images found in the database.</div>
<?php else: ?>
    <div class="gallery">
        <?php foreach ($images as $file): ?>
            <div class="card">
                
            </div>
        <?php endforeach; ?>
    </div>
<?php endif; ?>
</div>

</body>
</html>
```

Screenshots:



Lab 09 Problem 2

#	PREVIEW	DESCRIPTION	LOCATION	DATE TAKEN (MM/DD/YY)	FILE NAME
---	---------	-------------	----------	--------------------------	-----------

1		Sunset at the beach	Dubai, UAE	08/12/24	dubai_beach.jpg
2		CN Tower at night	Toronto, Ontario	07/05/24	cn_tower_night.jpg
8		Palm trees by the water	Sharjah, UAE	01/08/24	sharjah_corniche.jpg
10		Busy downtown at sunset	New York, USA	10/30/23	nyc_sunset.jpg
5		Falls from the lookout	Niagara Falls, Ontario	09/02/23	niagara_falls.jpg

Lab 09 Problem 3



CN Tower at night

Toronto, Ontario

Taken on: 07/05/24



Falls from the lookout

Niagara Falls, Ontario

Taken on: 09/02/23

Lab 09 – Problem 4

Location

All Locations

Year

All Years

Show Photos

Lab 09 Problem 5

10 Images



Conclusion:

Doing this lab was a bit tricky at first because I had to get used to connecting PHP to MySQL on the webdev server, but once I got the hang of it, everything started to make sense.