

Lab No: Project Part 6

Lab Title: Program and deploy a Database-Driven Web Application

Objective: At the end of the lesson, students will be able to develop and deploy a database-driven web application to implement the functional requirements in accordance with the application requirements specification




Resources:

1. Development Computer.
2. Apache server, MySQL, and phpmyadmin
3. Code editor.

Procedures:

dispatch.php

4. You will create **dispatch.php** to perform the following functions:
 - 4.1. Display the call details entered in and submitted by the operator from **logcall.php**;
 - 4.2. Display a list of patrol cars that are available for dispatch;
 - 4.3. Allow the operator to select the patrol cars to dispatch; and
 - 4.4. Save the incident details, dispatch details, and update patrol car status to the database.
5. The web interface for **dispatch.php** should look like this:



[Log Call](#) [Update](#) [Report](#) [Admin](#)

Caller's Name

Kevin Lim

Contact Number (Required)

98234123

Location of Incident (Required)

Lot 1 Shopping Mall

Type of Incident (Required)

060

Description of Incident

Car hits pedestrian at traffic light.

Choose Patrol Car(s)

Car's Number	Car's Status	
QX1123V	Dispatched	<input type="checkbox"/>
QX2222B	Dispatched	<input type="checkbox"/>
QX4444D	Dispatched	<input type="checkbox"/>
QX7777G	Patrol	<input type="checkbox"/>
QX1111A	Free	<input type="checkbox"/>
QX3333C	Free	<input type="checkbox"/>
QX5555E	Free	<input type="checkbox"/>
QX6666F	Free	<input type="checkbox"/>
QX8888H	Free	<input type="checkbox"/>
QX9999I	Free	<input type="checkbox"/>

Dispatch

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Figure 1

6. In your code editor, create a new file called **dispatch.php** and add the code to create a web form to display the call details posted from **logcall.php**:

```

1 <?php
2     $callerName = $_POST['callerName'];
3     $contactNo = $_POST['contactNo'];
4     $locationOfIncident = $_POST['locationOfIncident'];
5     $typeOfIncident = $_POST['typeOfIncident'];
6     $descriptionOfIncident = $_POST['descriptionOfIncident'];
7 ?>
8 <!doctype html>
9 <html>
10     <head>
11         <meta charset="utf-8">
12         <title>Dispatch
13         </title>
14         <link href="css/bootstrap-4.3.1.css" rel="stylesheet" type="text/css">
15     </head>
16     <body>
17         <div class="container" style="width:930px">
18             <header>
19                 
20             </header>
21             <?php
22                 require_once 'nav.php';
23             ?>
24             <section style="margin-top:20px">
25                 <form action="dispatch.php" method="post">
26                     <div class="form-group row">
27                         <label for="callerName" class="col-sm-4 col-form-label">
28                             Caller's Name
29                         </label>
30                         <div class="col-sm-8">
31                             <?php echo $callerName;?>
32                             <input type="hidden" id="callerName"
33                                 value="<?php echo $callerName; ?>"
34                                 name="callerName">
35                         </div>
36                     </div>
37                     <div class="form-group row">
38                         <label for="contactNo" class="col-sm-4 col-form-label">
39                             Contact Number (Required)
40                         </label>
41                         <div class="col-sm-8">
42                             <?php echo $contactNo;?>
43                             <input type="hidden" id="contactNo"
44                                 value="<?php echo $contactNo; ?>"
45                                 name="contactNo">
46                         </div>
47                     </div>

```

```

48<div class="form-group row">
49    <label for="locationOfIncident" class="col-sm-4 col-form-label">
50        Location of Incident (Required)
51    </label>
52    <div class="col-sm-8">
53        <?php echo $locationOfIncident;?>
54        <input type="hidden" id="locationOfIncident"
55            value="<?php echo $locationOfIncident; ?>"
56            name="locationOfIncident">
57    </div>
58</div>
59<div class="form-group row">
60    <label for="typeOfIncident" class="col-sm-4 col-form-label">
61        Type of Incident (Required)
62    </label>
63    <div class="col-sm-8">
64        <?php echo $typeOfIncident;?>
65        <input id="typeOfIncident" type="hidden"
66            value="<?php echo $typeOfIncident; ?>"
67            name="typeOfIncident">
68    </div>
69</div>
70<div class="form-group row">
71    <label for="descriptionOfIncident" class="col-sm-4 col-form-label">
72        Description of Incident
73    </label>
74    <div class="col-sm-8">
75        <?php echo $descriptionOfIncident;?>
76        <input name="descriptionOfIncident" id="descriptionOfIncident"
77            type="hidden"
78            value="<?php echo $descriptionOfIncident; ?>">
79    </div>
80</div>
81<div class="form-group row">
82    <label for="patrolCars" class="col-sm-4 col-form-label">
83        Choose Patrol Car(s)
84    </label>
85    <div class="col-sm-8">
86        <table class="table table-striped">
87            <tbody>
88                <tr>
89                    <th scope="col">Car's Number
90                </th>
91                <th scope="col">Car's Status
92                </th>
93                <th scope="col">
94                </th>
95            </tr>
96        </tbody>
97    </table>
98    </div>
99</div>

```

```
100     <div class="form-group row">
101         <div class="col-sm-4">
102         </div>
103         <div class="col-sm-8" style="text-align:center">
104             <div>
105                 <input class="btn btn-primary" name="btnDispatch"
106                     type="submit" value="Dispatch">
107             </div>
108         </div>
109     </div>
110 </form>
111 </section>
112 <footer class="page-footer font-small
113         blue pt-4 footer-copyright text-center py-3">
114     Â© 2020 Copyright:
115     <a href="https://www.ite.edu.sg"> ITE
116     </a>
117 </footer>
118 </div>
119 <script type="text/javascript" src="js/jquery-3.3.1.min.js">
120 </script>
121 <script type="text/javascript" src="js/popper.min.js">
122 </script>
123 <script type="text/javascript" src="js/bootstrap-4.3.1.js">
124 </script>
125 </body>
126 </html>
```

7. To test run **dispatch.php**, you have to first launch **logcall.php**, enter some call data and then submit them to **dispatch.php**. Check that **dispatch.php** work correctly!
8. Next you will add the code for displaying list of patrol cars available for dispatch and their statuses as shown in Figure 1. In order to do that, you have to first retrieve the patrol car details from the database, then display them into a table.

Retrieve Patrol Car Detail

```

6     $descriptionOfIncident = $_POST['descriptionOfIncident'];
7
8     $cars = [];
9     require_once 'db.php';
10    $conn = new mysqli(DB_SERVER, DB_USER, DB_PASSWORD, DB_DATABASE);
11    $sql = "SELECT patrolcar.patrolcar_id, " .
12           "patrolcar_status.patrolcar_status_desc " .
13           "FROM patrolcar " .
14           "JOIN patrolcar_status ON " .
15           "patrolcar.patrolcar_status_id " .
16           "=patrolcar_status.patrolcar_status_id";
17    $result = $conn->query($sql);
18    while ($row = $result->fetch_assoc()) {
19        $id = $row['patrolcar_id'];
20        $status = $row['patrolcar_status_desc'];
21
22        $car = ["id" => $id,
23               "status" => $status
24               ];
25        array_push($cars,$car);
26    }
27    ?>

```

Populate Patrol Car

```

<tbody>
  <tr>
    <th scope="col">Car's Number
    </th>
    <th scope="col">Car's Status
    </th>
    <th scope="col">
    </th>
  </tr>
  <?php
    for($i = 0;$i<count($cars);$i++) {
      $car = $cars[$i];
      echo '<tr>';
      echo '<td>' . $car['id'] . '</td>';
      echo '<td>' . $car['status'] . '</td>';
      echo '<td>';
      echo '<input name="cbCarSelection[]" type="checkbox"
        value="" . $car['id'] . ">';
      echo '</td>';
      echo '</tr>';
    }
  ?>
</tbody>

```

9. Test run `dispatch.php` to verify that it can display the incident details submitted from `logcall.php` and the list of available patrol cars retrieved from database with the look and feel as shown in Figure 1.
10. When the operator selected the patrol cars and pressed the **Dispatch** button, the detail will be posted back to **dispatch.php** for the following processing:
 - 10.1. Insert a new incident into the incident table:

```

25         array_push($cars,$car);
26     }
27
28     $btnDispatchClicked = isset($_POST["btnDispatch"]);
29     $btnProcessCallClicked = isset($_POST["btnProcessCall"]);
30
31     if ($btnDispatchClicked == false && $btnProcessCallClicked == false) {
32         header("Location: logcall.php");
33     }
34
35     if ($btnDispatchClicked == true)
36     {
37         $insertIncidentSuccess = FALSE;
38         $patrolcarDispatched = $_POST["cbCarSelection"];
39         $numOfPatrocarDispatched = count($patrolcarDispatched);
40         $incidentStatus = 0;
41
42         if ($numOfPatrocarDispatched > 0) {
43             $incidentStatus='2';    // Dispatched
44         } else {
45             $incidentStatus='1';    // Pending
46         }
47
48         $callerName = $_POST['callerName'];
49         $contactNo = $_POST['contactNo'];
50         $incidentType = $_POST['typeOfIncident'];
51         $callerName = $_POST['callerName'];
52         $location = $_POST['locationOfIncident'];
53         $incidentDesc = $_POST['descriptionOfIncident'];
54
55         $sql = "INSERT INTO incident
56             (caller_name, phone_number,
57             incident_type_id, incident_location,
58             incident_desc, incident_status_id)
59             VALUES('" . $callerName . "',
60                 '" . $contactNo . "',
61                 '" . $incidentType . "',
62                 '" . $location . "',
63                 '" . $incidentDesc . "',
64                 $incidentStatus)";
65
66         $insertIncidentSuccess = $conn->query($sql);
67
68         if ($insertIncidentSuccess === FALSE) {
69             echo "Error: " . $sql . "<br>" . $conn->error;
70         }

```


10.2. Update patrol car status table and insert a new record into the dispatch table:

```

71
72     $incidentId = mysqli_insert_id($conn);
73
74     $updateSuccess = FALSE;
75     $insertDispatchSuccess = FALSE;
76
77     for($i=0; $i < $numOfPatrocarDispatched; $i++)
78     {
79         $carId = $patrocarDispatched[$i];
80         $sql = "UPDATE patrolcar SET
81                 patrolcar_status_id='1'
82                 WHERE patrolcar_id = '" . $carId . "'";
83         $updateSuccess = $conn->query($sql);
84         if ($updateSuccess === FALSE) {
85             echo "Error: " . $sql . "<br>" . $conn->error;
86         }
87
88         $sql = "INSERT INTO dispatch (incident_id,
89                                     patrolcar_id,
90                                     time_dispatched)
91                                     VALUES ($incidentId, '" . $carId . "', NOW())";
92         $insertDispatchSuccess = $conn->query($sql);
93         if ($insertDispatchSuccess === FALSE) {
94             echo "Error: " . $sql . "<br>" . $conn->error;
95         }
96     }
97     $conn->close();
98
99     if($insertIncidentSuccess === TRUE && $updateSuccess === TRUE
100        && $insertDispatchSuccess === TRUE) {
101         header("Location: logcall.php");
102     }
103 }
104
105 ?>

```

11. Verify that the operations from 10.1 to 10.2 are executed successfully.