

Assignment 12

Jiarong Ye

November 14, 2018

[click for demo](#)

SQL queries

list all available employees

```
In [ ]: select empid, emptytype
        from employees2
        where emptytype='$emptytype'
        and empid not in
            (select empid from (select table2.empid, table2.date from (select empid
                                from employees2
                                where emptytype='$emptytype') as table1
                                inner join
                                (select *
                                 from daysoff) as table2
                                on table1.empid = table2.empid
                                where date = '$date') as request_day_off)
        and empid not in
            (select empid from (select table2.empid, table2.date from (select empid
                                from employees2
                                where emptytype='$emptytype') as table1
                                inner join
                                (select *
                                 from schedule2) as table2
                                on table1.empid = table2.empid
                                where date = '$date') as already_scheduled)
```

schedule available employee

```
In [ ]: insert into schedule2 (dept, date, shift, empid)
        values ('$dept', '$date', '$shift', $empid);
```

update the department needs table

```
In [ ]: update department_need
        set number_of_employees = number_of_employees - 1
        where emptytype='$emptytype'
```

```

and date='$date'
and period='$shift'
and department_name='$dept'

# or delete if the number of employees needed for the department is 0 after updating
delete from department_need
where emptytype='$emptytype'
and date='$date'
and period='$shift'
and department_name='$dept'

```

php code

list all available employees (not scheduled or requested any day off)

- input
 - Date
 - Employee Type
- output
 - a list of all available employees of the assigned employee type on that assigned date

```

In [ ]: <?php
/**
 * Created by PhpStorm.
 * User: karen
 * Date: 11/14/18
 * Time: 4:41 PM
 */

require_once('../connect/connect.php');
require_once('../helper/schedulehelper.php');

function check_available($con)
{
    if (isset($_POST["date"],
        $_POST['emptytype'])) {
        $date = $_POST['date'];
        $emptytype = $_POST['emptytype'];

        $query = "
            select empid, emptytype
            from employees2
            where emptytype='$emptytype'
            and empid not in
                (select empid from (select table2.empid, table2.date from (select empid

```

```

                                from employees2
                                where emptytype='$emptytype') as table1
                                inner join
                                    (select *
                                     from daysoff) as table2
                                on table1.empid = table2.empid
        where date = '$date') as request_day_off)
and empid not in
    (select empid from (select table2.empid, table2.date from (select empid
                                                                from employees2
                                                                where emptytype='$emptytype') as table1
                                                                inner join
                                                                    (select *
                                                                     from schedule2) as table2
                                                                on table1.empid = table2.empid
                                                                where date = '$date') as already_scheduled)
";

if (!( $result = mysqli_query($con, $query))) {
    $msg = 'MySQL error #' . mysqli_connect_errno() . " : " . mysqli_connect_error();

    printf($msg, __FILE__, __LINE__);

} else if (0 == mysqli_num_rows($result)) {
    echo "<center><h3>There're no $emptytype employees available on $date!</h3></center><br><br>";
    return "";
} else {
    echo "<br><br>";
    echo "<center><h4>The available list of $emptytype employees on $date</h4><br><br>";
    echo "<table class='table table-striped' border=1>";
    echo "<tr>";
    $i = 0;
    $col_name = array();
    while ($i < mysqli_num_fields($result)) {
        $meta = mysqli_fetch_field_direct($result, $i);
        echo '<td>' . $meta->name . '</td>';
        $i = $i + 1;
        array_push($col_name, $meta->name);
    }
    echo '<td>Date</td>';
    echo '<td>Department</td>';
    echo '<td>Shift</td>';
    echo '<td>Schedule</td>';

    while ($row = mysqli_fetch_assoc($result)) {
        echo "<tr>\n";
        $index = 0;

```

```

        echo "<form class='post_form' action='../tasks/add_schedule.php' method='post'>";
        foreach ($row as $cell) {
            echo "<td><input style='width: 100px' type='text' name='$col_name[$index]' value='$cell'>";
            $index++;
        }
        echo "<td><input style='width: 100px' type='text' name='date' value='$date'></td>";
        echo "<td><select name='dept'>".DepartmentNeedList($con). "</select></td>";
        echo "<td><select name='shift'>".ShiftList($con). "</select></td>";
        echo "<td><input type='submit' value='schedule'></td>";
        echo "</tr></form>\n";
    }

    echo "</table><br><br><br>";
}
}
}

```

```

check_available($con);

```

schedule someone from the available employees list and decrement the needs table for that dept/date/shift/emptytype

```

In [ ]: <?php
/**
 * Created by PhpStorm.
 * User: karen
 * Date: 11/14/18
 * Time: 7:31 PM
 */
require_once('../view/navbar.php');
require_once('../connect/connect.php');
require_once('../helper/schedulehelper.php');

function delete_from_needs($con)
{
    if (isset(
        $_POST['empid'],
        $_POST["date"],
        $_POST['emptytype'],
        $_POST['dept'],
        $_POST['shift'])) {

        $dept = $_POST['dept'];
        $date = $_POST['date'];
        $shift = $_POST['shift'];
        $emptytype = $_POST['emptytype'];
    }
}

```

```

$query = "
    update department_need
    set number_of_employees = number_of_employees - 1
    where emptytype='$emptytype'
    and date='$date'
    and period='$shift'
    and department_name='$dept'
";
$result = mysqli_query($con, $query);
if (!($result)) {
    $msg = 'MySQL error #' . mysqli_connect_errno() . ": " . mysqli_connect_error();
    printf($msg, __FILE__, __LINE__);
}else{
    echo '<br><br><h3><center>The number of employees needed for department '. $dept .'
}

$query = "
    select number_of_employees
    from department_need
    where emptytype='$emptytype'
    and date='$date'
    and period='$shift'
    and department_name='$dept'
";

$result = mysqli_query($con, $query);
if (!($result)) {
    $msg = 'MySQL error #' . mysqli_connect_errno() . ": " . mysqli_connect_error();
    printf($msg, __FILE__, __LINE__);
}else {
    $num_emp = mysqli_fetch_assoc($result);

    if ($num_emp['number_of_employees'] == 0) {
        $query = "
            delete from department_need
            where emptytype='$emptytype'
            and date='$date'
            and period='$shift'
            and department_name='$dept'
        ";
        $result = mysqli_query($con, $query);
        if (!($result)) {
            $msg = 'MySQL error #' . mysqli_connect_errno() . ": " . mysqli_connect_error();
            printf($msg, __FILE__, __LINE__);
        }
    }
}
}

```

```

    }
}

```

```

function schedule_by_emptype($con)
{
    if (isset(
        $_POST['empid'],
        $_POST["date"],
        $_POST['emptype'],
        $_POST['dept'],
        $_POST['shift'])) {

        $emptype = $_POST['emptype'];
        $empid = $_POST['empid'];
        $dept = $_POST['dept'];
        $date = $_POST['date'];
        $shift = $_POST['shift'];

        $query = "
            select *
            from department_need
            where emptype='$emptype'
              and date='$date'
              and period='$shift'
              and department_name='$dept'
        ";

        $result = mysqli_query($con, $query);
        if (!($result)) {
            $msg = 'MySQL error #' . mysqli_connect_errno() . ": " . mysqli_connect_error();
            printf($msg, __FILE__, __LINE__);
        } else {
            if (0 == mysqli_num_rows($result)) {
                echo "<br><br><h3><center>No " . $emptype . " employees are needed for department " . $dept;
            } else {
                $query = "
                    insert into schedule2 (dept, date, shift, empid)
                    values ('$dept', '$date', '$shift', $empid);
                ";

                $result = mysqli_query($con, $query);
                if (!($result)) {
                    $msg = 'MySQL error #' . mysqli_connect_errno() . ": " . mysqli_connect_error();
                    printf($msg, __FILE__, __LINE__);
                } else {
                    $query = "SELECT firstname, lastname
                        FROM employees2

```

```

        WHERE empid = '$empid';
        $result = mysqli_query($con, $query);
        $row = mysqli_fetch_assoc($result);
        $firstname = $row['firstname'];
        $lastname = $row['lastname'];
        echo '<br><br><h3><center><i>' . $firstname . ' ' . $lastname . '</i> (id: ' . $empid . ')</center></h3>';
        for department ' . $dept . ' from ' . $shift . ' on date ' . $date . '</center></h3>';
    }

    delete_from_needs($con);
}
}
}

schedule_by_emptytype($con);

?>

<script>
    setTimeout(function () {
        window.location.href = '../view/schedule_emptytype_display.php';
    }, 5000);
</script>

```

database design

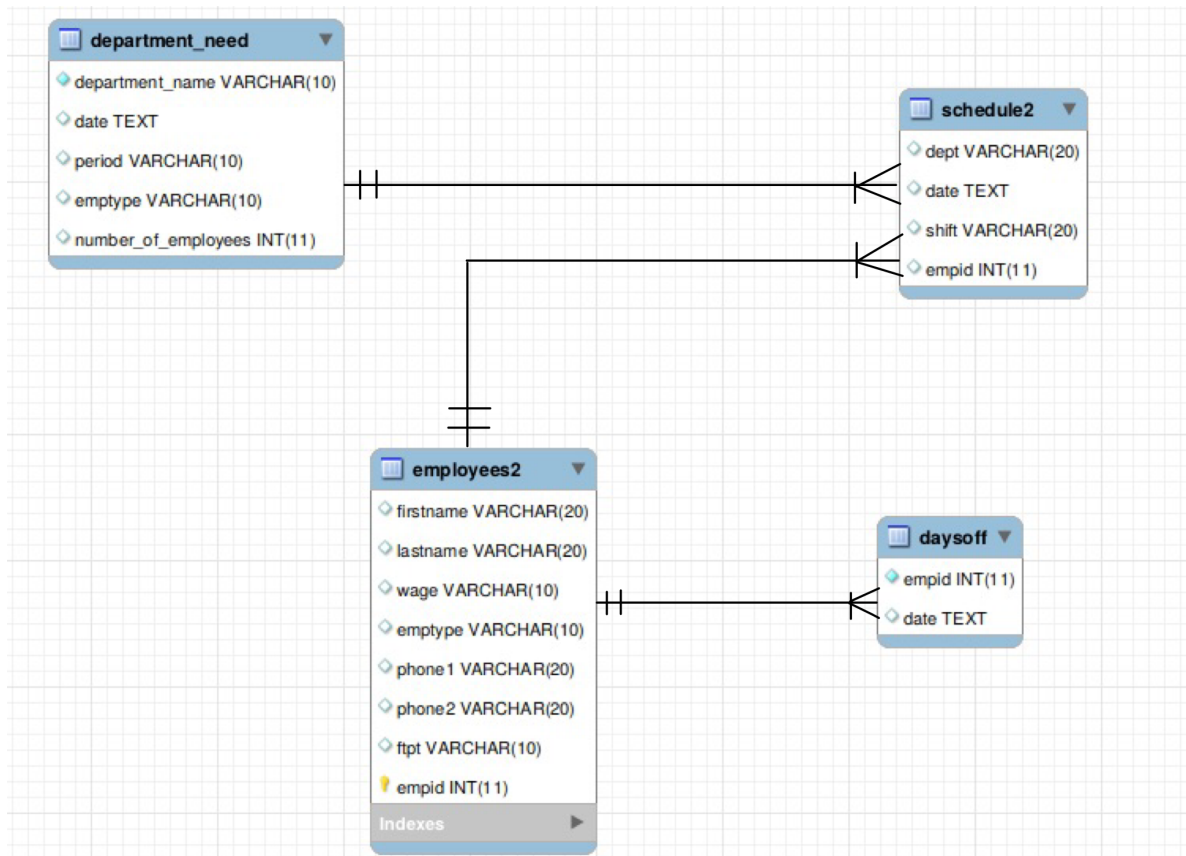


table description

```
DESCRIBE `department_need`
```

+ Options

Field	Type	Null	Key	Default	Extra
department_name	varchar(10)	NO		NULL	
date	text	YES		NULL	
period	varchar(10)	YES		NULL	
emptytype	varchar(10)	YES		NULL	
number_of_employees	int(11)	YES		NULL	

DESCRIBE `employees2`

+ Options

Field	Type	Null	Key	Default	Extra
firstname	varchar(20)	YES		NULL	
lastname	varchar(20)	YES		NULL	
wage	varchar(10)	YES		NULL	
emptype	varchar(10)	YES		NULL	
phone1	varchar(20)	YES		NULL	
phone2	varchar(20)	YES		NULL	
ftpt	varchar(10)	YES		NULL	
empid	int(11)	NO	PRI	NULL	auto_increment

DESCRIBE `schedule2`

+ Options

Field	Type	Null	Key	Default	Extra
dept	varchar(20)	YES		NULL	
date	text	YES		NULL	
shift	varchar(20)	YES		NULL	
empid	int(11)	YES		NULL	

Test cases ([click for demo](#))

Date: Dec 24 2018; Emptype: LPN; Department: SUR; Shift: 3PM-11PM

Schedule available employees

Date:

Employee Type:

The available list of LPN employees on Dec 24 2018

empid	emptye	Date	Department	Shift	Schedule
1	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
10	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
26	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
35	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
40	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
42	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
55	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
60	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
62	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
70	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
71	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
72	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
77	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule

80	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
87	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
91	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
94	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule
96	LPN	Dec 24 2018	ER ▼	7AM-3PM ▼	schedule

pick an employee to schedule for a shift in a department

empid	emptye	Date	Department	Shift	Schedule
1	LPN	Dec 24 2018	SUR ▼	3PM-11PM ▼	schedule

Stephanie Barnes (id: 1) is successfully scheduled for department SUR from 3PM-11PM on date Dec 24 2018

The number of employees needed for department SUR is updated.

and after being scheduled, the employee (id:1) will no longer appear on the available list

Date:

Employee Type:

The available list of LPN employees on Dec 24 2018

empid	emptype	Date	Department	Shift	Schedule
<input type="text" value="10"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>
<input type="text" value="26"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>
<input type="text" value="35"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>
<input type="text" value="40"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>
<input type="text" value="42"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>
<input type="text" value="55"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>
<input type="text" value="60"/>	<input type="text" value="LPN"/>	<input type="text" value="Dec 24 2018"/>	<input type="text" value="ER"/>	<input type="text" value="7AM-3PM"/>	<input type="button" value="schedule"/>

the scheduling information will be added to the schedule table:

```
SELECT * FROM `schedule2` WHERE 1
```

☐ Show all | Number of rows: Filter rows:

+ Options

dept	date	shift	empid
SUR	Dec 24 2018	3PM-11PM	1

Date: Jan 06 2018, Emptype: RN; Department: MAT; Shift: 11AM-7PM

Schedule available employees

Date:

Employee Type:

The available list of RN employees on Jan 06 2019

empid	emptype	Date	Department	Shift	Schedule
2	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
3	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
4	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
5	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
12	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
13	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
14	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
17	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
21	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
28	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
32	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
37	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
39	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule

43	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
44	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
45	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
47	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
49	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
54	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
56	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
57	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
61	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
63	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
64	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
66	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
75	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
78	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
79	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
85	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule

88	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
92	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
93	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
99	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule

pick an employee to schedule for a shift in a department

99	RN	Jan 06 2019	MAT ▼	11PM-7AM ▼	schedule
----	----	-------------	-------	------------	----------

Jeremy Flores (id: 99) is successfully scheduled for department MAT from 11PM-7AM on date Jan 06 2019

The number of employees needed for department MAT is updated.

and after being scheduled, the employee (id:99) will no longer appear on the available list

88	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
92	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule
93	RN	Jan 06 2019	ER ▼	7AM-3PM ▼	schedule

the scheduling information will be added to the schedule table:

```
SELECT * FROM `schedule2`
```

☐ Show all | Number of rows: 25 ▼ | Filter rows:

+ Options

dept	date	shift	empid
ER	Dec 24 2018	7AM-3PM	1
MAT	Jan 06 2019	11PM-7AM	99

Date: Dec 30 2018, Emptype: ULTRA; Department: ICU; Shift: 3PM-11PM

Schedule available employees

Date: Dec 30 2018 ▼

Employee Type: ULTRA ▼

Check

The available list of ULTRA employees on Dec 30 2018

empid	emptype	Date	Department	Shift	Schedule
6	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
15	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
19	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
29	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
48	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
65	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
67	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
69	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
76	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
84	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
98	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule

pick an employee to schedule for a shift in a department

65	ULTRA	Dec 30 2018	ICU ▼	3PM-11PM ▼	schedule
----	-------	-------------	-------	------------	--------------------------

Fail to schedule since the assigned department has no need for that employee type on the assigned date

No ULTRA employees are needed for department ICU from 3PM-11PM on Dec 30 2018.

So there no changes will be made to the list of available employees:

empid	emptype	Date	Department	Shift	Schedule
6	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
15	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
19	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
29	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
48	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
65	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
67	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
69	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
76	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
84	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule
98	ULTRA	Dec 30 2018	ER ▼	7AM-3PM ▼	schedule