



Masters in Applied Software Technology

Web Technologies

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Assignment 2

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Summary

The HTML page contains 7 day tables and an hour table all within a containing table. The `expandTables()` method calls other methods to expand the days and the hours tables. Each cell has a listener which calls the `displayForm()` method when clicked. The form has a text field for a description, a time field and a colour chooser.

The required validation is performed when a submission is attempted and then an appointment div is created on top of the cell or cells with the correct time if input is valid. The collision detection compares the location of all the current appointments and the proposed appointment.

There are mouse over and mouse out listeners on each appointment which call methods to display and remove the 2 images. The pencil image has a click listener which calls the `editAppointment()` method. This displays the form filled with the appointment data. The form can be edited and submitted again. The X image has a click listener which calls the `removeAppointment()` method. This deletes the appointment.

```

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <!-- Always force latest IE rendering engine (even
in intranet) & Chrome Frame
    Remove this if you use the .htaccess -->
    <meta http-equiv="X-UA-Compatible"
content="IE=edge,chrome=1">
    <meta name="description" content="">
    <meta name="author" content="c05356962">
    <meta name="viewport" content="width=device-width;
initial-scale=1.0">

    <title>Organiser</title>
    <!-- Replace favicon.ico & apple-touch-icon.png in
the root of your domain and delete these references -->
    <link rel="shortcut icon" href="/favicon.ico">
    <link rel="apple-touch-icon" href="/apple-touch-
icon.png">
    <link rel="stylesheet" href="organiser.css">
    <script src="organiser.js"></script>
  </head>

  <body onload="expandTables()">
    <div>
      <header>
        <h1>Organiser</h1>
      </header>

      <div id="main">
        <table class = "container">
          <tr>
            <td class = "container"><table
id="hours"></table></td>
            <td class = "container"><table
id="monday"></table></td>
            <td class = "container"><table
id="tuesday"></table></td>
            <td class = "container"><table
id="wednesday"></table></td>
            <td class = "container"><table
id="thursday"></table></td>
            <td class = "container"><table
id="friday"></table></td>
            <td class = "container"><table
id="saturday"></table></td>
            <td class = "container"><table
id="sunday"></table></td>
          </tr>
        </table>

      </div>

      <div id="coverDiv">

        <div id="formDiv" style="">

```

```

        <form id="form" name="form"
action="" method="get">
        <p id = "errorText" class
="error"></p>
        <p>
            Appointment details:
        </p>
        <textarea id="details"
name="details" rows="5" cols="2"></textarea>
        <p>
            <!-- Duration: -->
            <input type="time"

id="duration" hidden>
        <p id = "durationError" class
="error"></p>
        <p>
            Start time:
            <input type="text"

id="startTime" readonly>
            <!-- <input type="time"

id="startTime"> -->
            End time:
            <input type="time"

id="endTime">
            Select a colour for this
appointment:
            <input type="color"

id="colour" value = '#ff0000'>
            <INPUT type="button"
name="submit" Value="Create" onClick="putDataIn(this.form)">
            <INPUT type="button"
name="cancel" Value="Cancel" onClick="closeForm(this.form)">
        </p>
        </form>
        <p id = "testOutput"></p>
    </div>
</div>
<div id="appointments">
</div>
    <p id = "pageTest"></p>
    <!-- <div id="testH">
        aaa
    </div>
    -->
    <nav>
        <p>
            <a href="/">Home</a>
        </p>
        <p>
            <a href="/contact">Contact</a>
        </p>
    </nav>

```

```
        </nav>

        <footer>
            <p>
                &copy; Copyright by Brendan Kehoe
            </p>
        </footer>
    </div>
</body>
</html>
```

```

/**
 * Javascript
 * @author Brendan Kehoe
 */

var currentCell;
var durationHour;
var currentEditLeft;
var currentEditTop;
var currentEditWidth;
var currentEditHeight;
var normal = true;

function expandTables() {
    var hoursTable = document.getElementById("hours");
    var monday = document.getElementById("monday");
    var tuesday = document.getElementById("tuesday");
    expandHours(hoursTable);
    expandTable(monday);
    expandTable(tuesday);
    expandTable(wednesday);
    expandTable(thursday);
    expandTable(friday);
    expandTable(saturday);
    expandTable(sunday);
}

function expandHours(hoursTable) {
    createHeading(hoursTable);
    createHours(hoursTable);
}

function createHeading(table) {
    var row = document.createElement('tr');
    table.appendChild(row);
    var heading = document.createElement('th');
    row.appendChild(heading);
    // heading.style.border = "1px solid black";
    heading.innerHTML = table.id;
}

function createHours(table) {
    for (var i = 0; i < 24; i++) {
        var row = document.createElement('tr');
        table.appendChild(row);
        var cell = row.insertCell();
        cell.style.border = "1px solid black";
        cell.innerHTML = i + ":00";
    }
}

function expandTable(table) {
    createHeading(table);
    for (var i = 0; i < 24; i++) {
        var row = document.createElement("tr");
        table.appendChild(row);
        var cell = document.createElement("td");
    }
}

```

```

        row.appendChild(cell);
        cell.className = i;
        cell.addEventListener("click", displayForm);
        cell.style.border = "1px solid black";
        cell.rowspan = "2";
        var div = document.createElement("div");
        cell.appendChild(div);
        div.style.height = "24px";
        div.style.width = window.innerWidth / 8 + "px";
        div.style.overflow = "auto";
        // div.style.maxWidth="100px";
        div.appendChild(document.createElement("br"));
        // cell.innerHTML = "<div id = 'mydiv' style =
'background-color: green'><br></div>";
        // cell.innerHTML = "<div id = 'mydiv'
style.visibility = 'hidden'>aaa<br></div>";
        // var mydiv = document.getElementById("mydiv");
        // mydiv.style.cssText = "visibility : hidden";
        // cell.innerHTML = "&nbsp";
        // cell.innerHTML = "<p>a</p>";
    }
}

function displayForm() {
    // alert("length " +
this.parentNode.parentNode.children.length);
    // " inner " + this.innerHTML);
    document.getElementById("coverDiv").style.visibility =
"visible";
    var formDiv = document.getElementById("formDiv");
    formDiv.style.visibility = "visible";
    currentCell = this;
    var box = document.getElementById("details");
    box.cols = (window.innerWidth * 0.8) / 13;
    var startTime = document.getElementById("startTime");
    var endTime = document.getElementById("endTime");
    document.getElementById("duration").value = "01:00";
    var startHour = currentCell.className;
    var endHour = parseInt(currentCell.className) + 1;

    if (startHour < 9) {
        startTime.value = "0" + startHour + ":00";
        endTime.value = "0" + endHour + ":00";
    } else if (startHour == 9) {
        startTime.value = "0" + startHour + ":00";
        endTime.value = endHour + ":00";
    } else {
        startTime.value = startHour + ":00";
        endTime.value = endHour + ":00";
    }
    // if(overlapCheck()){
    // testOutput.innerHTML = "overlapCheck " + overlapCheck
    ( );
    // }
    // testOutput.innerHTML = "getBoundingClientRect() " +
currentCell.getBoundingClientRect();
    // testOutput.innerHTML = " parseInt " + parseInt

```

```

("051:21");
    // alert(screen.availWidth);
    // alert(window.width);
}

function putDataIn(form) {
    var details = form.details.value;
    var startTime = document.getElementById
("startTime").value;
    var endTime = document.getElementById("endTime").value;

    var duration = document.getElementById("duration").value;
    var split = duration.split(":");
    durationHour = parseInt(duration);
    durationMinutes = parseInt(split[1]);
    ("0" + durationHour).slice(-2);

    if (durationInHours() > 8) {
        durationError.innerHTML = " Duration must be 8
hours or less. ";
        return;
    }

    if (endTime <= startTime) {
        durationError.innerHTML = " Appointment has to
finish on the same day and can last at most 8 hours. ";
        // durationError.innerHTML = " End time must be
after start time. ";
        return;
    }

    var appointment = document.createElement("div");
    var appointments = document.getElementById
("appointments");
    appointments.appendChild(appointment);
    appointment.className = "appointment";
    // appointment.addEventListener("mouseover",
displayImages);
    // appointment.addEventListener("mouseout",
removeImages);
    appointment.addEventListener('mouseover', mouseEnter
(displayImages), true);
    appointment.addEventListener('mouseout', mouseEnter
(removeImages), true);
    if (normal === true) {

        appointment.style.left =
currentCell.getBoundingClientRect().left + "px";
        appointment.style.top =
currentCell.getBoundingClientRect().top + "px";
        appointment.style.width =
(currentCell.getBoundingClientRect().right -
currentCell.getBoundingClientRect().left) + "px";
        appointment.style.height =
((currentCell.getBoundingClientRect().bottom -
currentCell.getBoundingClientRect().top) * durationInHours())
+ "px";
    }
}

```



```

    } else {
        // alert(currentEditWidth);
        appointment.style.left = currentEditLeft;
        appointment.style.top = currentEditTop;
        appointment.style.width = currentEditWidth;
        appointment.style.height = currentEditHeight;
        normal = true;
    }
    appointment.setAttribute("data-startTime", startTime);
    appointment.setAttribute("data-endTime", endTime);
    appointment.setAttribute("data-details", details);
    appointment.innerHTML = appointment.getAttribute("data-
startTime") + " - " + appointment.getAttribute("data-endTime")
+ " " + appointment.getAttribute("data-details");
    // appointment.innerHTML = "aaa";
    appointment.style.background = colour.value;

    var rect2;
    rect2 = appointment.getBoundingClientRect();
    // alert("updated appoi " + rect2.left + " " +
rect2.right);
    // alert(appointment.innerHTML);
    if (inputIsOk(form)) {
        // alert(currentCell.getBoundingClientRect().top);
        document.getElementById("formDiv").style.visibility
= "hidden";
        document.getElementById
("coverDiv").style.visibility = "hidden";
        durationError.innerText = "";
        errorText.innerText = "";
        form.details.value = "";
    } else {
        appointments.removeChild(appointment);
    }
}

function durationInHours() {
    var startTime = document.getElementById
("startTime").value;
    var endTime = document.getElementById("endTime").value;
    var duration = document.getElementById("duration").value;
    var endSplit = endTime.split(":");
    var startSplit = startTime.split(":");
    durationHour = parseInt(endTime) - parseInt(startTime);
    durationMinutes = parseInt(endSplit[1]) - parseInt
(startSplit[1]);
    return durationHour + (durationMinutes / 60);
}

function inputIsOk(form) {
    var details = form.details.value;
    var startTime = document.getElementById
("startTime").value;
    var endTime = document.getElementById("endTime").value;
    var duration = document.getElementById("duration").value;

```

```

    var errorText = document.getElementById("errorText");
    if (details == "") {
        errorText.innerHTML = "Must enter details. ";
    }
    if (duration == "") {
        durationError.innerHTML = " Must enter duration. ";
    }
    if (endTime == "") {
        durationError.innerHTML = " Must enter duration. ";
    }
    return details != "" && startTime != "" && endTime != ""
    && noOverlap();
    // return details != "" && duration != "" && noOverlap();
}

function noOverlap() {
    var duration = document.getElementById("duration").value;
    durationHour = parseInt(duration);
    var errorText = document.getElementById("errorText");
    var appointments = document.getElementById
("appointments");
    var rect1 = appointments.lastChild.getBoundingClientRect
();
    var rect2;
    rect2 = appointments.children[0].getBoundingClientRect();
    // alert(rect2.left + " " + rect2.right);
    // alert(rect1.left+" "+rect1.right);
    // alert(appointments.children[0]);
    // alert(appointments.children.length);
    for (var i = 0; i < appointments.children.length - 1;
i++) {

        // alert(appointments.children.length);
        rect2 = appointments.children
[i].getBoundingClientRect();

        // alert(rect1.left+" "+rect1.right);
        // alert(rect2.left+" "+rect2.right);
        if (rectangleOverlap(rect1, rect2)) {
            errorText.innerHTML = "This appointment
coincides with another appointment. ";
            // (usually a later appointment)
            return false;
        }
    };
    return true;
}

function rectangleOverlap(rect1, rect2) {
    var overlap = !(rect1.right <= rect2.left || rect1.left >
= rect2.right || rect1.bottom <= rect2.top || rect1.top >=
rect2.bottom);
    // testOutput.innerHTML = testOutput.innerHTML + "
rect1.right < rect2.left " + (rect1.right < rect2.left);
    // testOutput.innerHTML = testOutput.innerHTML + "
rect1.bottom < rect2.top " + (rect1.bottom < rect2.top);
    // testOutput.innerHTML = testOutput.innerHTML + "

```

```

rect1.left > rect2.right " + (rect1.left > rect2.right);
    // testOutput.innerHTML = testOutput.innerHTML + "
rect1.top > rect2.bottom " + (rect1.top > rect2.bottom);
    // alert("rect1.bottom" + rect1.bottom + "rect1.top" +
rect1.top);
    // alert("rect2.bottom" + rect2.bottom + "rect2.top" +
rect2.top);
    // alert("Overlap "+overlap);
    return overlap;
}

function closeForm(form) {
    document.getElementById("coverDiv").style.visibility =
"hidden";
    document.getElementById("formDiv").style.visibility =
"hidden";
    durationError.innerText = "";
    errorText.innerText = "";
    form.details.value = "";
}

function displayImages() {
    // var startTime;
    // document.getElementById("pageTest").innerHTML = '<span
class="pencil_icon" id="edit" onclick="alert()"></span><button
onclick="alert()"></button><p>aaaaa' + '<input type="button"
value="button text" onclick="test()" />';
    // alert(this.getAttribute("data-details"));
    // alert(document.getElementById
("testOutput").innerHTML);
    // this.innerHTML = this.innerHTML + '<span
class="pencil_icon" id="edit" onclick="editAppointment
(this.parentNode)"></span>';
    this.innerHTML = this.getAttribute("data-startTime") + "
- " + this.getAttribute("data-endTime") + " " +
this.getAttribute("data-details") + '<span class="pencil_icon"
id="edit" onclick="editAppointment(this.parentNode)"></span>
<span class="x_icon" id="close" onclick="removeAppointment
(this.parentNode)"></span>';
    // this.innerHTML = this.getAttribute("data-startTime") +
" - " + this.getAttribute("data-endTime") + " " +
this.getAttribute("data-details") + '<img align="right"
class="pencil_icon" id="edit" onclick="alert()"></span>';
    // var pencil = document.createElement("img");
    // pencil.href = "pencil20.png";
    // appointment.appendChild(pencil);
    // alert(this.innerHTML);
}

function removeImages() {
    this.innerHTML = this.getAttribute("data-startTime") + "
- " + this.getAttribute("data-endTime") + " " +
this.getAttribute("data-details");
    // alert("mouse out");
}

function mouseEnter(_fn) {

```

```

        return function(_evt) {
            var relTarget = _evt.relatedTarget;
            if (this === relTarget || isAChildOf(this,
relTarget)) {
                return;
            }

            _fn.call(this, _evt);
        };
    }

function isAChildOf(_parent, _child) {
    if (_parent === _child) {
        return false;
    }
    while (_child && _child !== _parent) {
        _child = _child.parentNode;
    }

    return _child === _parent;
}

function editAppointment(appointment) {
    // alert(appointment.innerHTML);
    currentCell = appointment;

    currentEditLeft = currentCell.getBoundingClientRect
().left + "px";
    currentEditTop = currentCell.getBoundingClientRect().top
+ "px";
    currentEditWidth = (currentCell.getBoundingClientRect
().right - currentCell.getBoundingClientRect().left) + "px";
    currentEditHeight = ((currentCell.getBoundingClientRect
().bottom - currentCell.getBoundingClientRect().top) *
durationInHours()) + "px";

    var appointments = document.getElementById
("appointments");
    appointments.removeChild(appointment);
    // appointment.parentNode.removeChild(appointment);
    var box = document.getElementById("details");
    box.cols = (window.innerWidth * 0.8) / 13;
    var startTime = document.getElementById("startTime");
    var endTime = document.getElementById("endTime");
    startTime.value = appointment.getAttribute("data-
startTime");
    // alert("here");
    endTime.value = appointment.getAttribute("data-endTime");
    box.value = appointment.getAttribute("data-details");
    // document.getElementById("duration").value =
appointment.get;
    // var startHour = currentCell.className;
    // var endHour = parseInt(currentCell.className) + 1;

    document.getElementById("coverDiv").style.visibility =
"visible";
    var formDiv = document.getElementById("formDiv");

```

```

        formDiv.style.visibility = "visible";

        var rect2 = appointments.children
[0].getBoundingClientRect();
        normal = false;
        // alert(rect2.left + " " + rect2.right);

        // alert(appointments.children.length);
        // appointment.removeChild(pencil);
        // alert("image clicked " + appointment.innerHTML);
    }

function removeAppointment(appointment) {
    appointment.parentNode.removeChild(appointment);
    // alert("image clicked " + appointment.innerHTML);
}

function test() {
    alert("here");
}

function empty() {

}

function createOutsideTable() {
    // alert("hello");
    var main = document.getElementById("main");
    var table = document.createElement("table");
    main.appendChild(table);
    table.style.width = '100%';
    table.style.border = "1px solid black";
    var row = document.createElement("tr");
    table.appendChild(row);
    var cell = document.createElement("td");
    row.appendChild(cell);
    createHoursTable(cell);
    for (var i = 0; i < 7; i++) {

    }

    // cell.innerHTML = "aaimg";
    var tuesday = document.getElementById("tuesday");
    td.innerHTML = "aaa";
    tuesday.appendChild(tbl);
}

function tableCreate() {
    var main = document.getElementById("main");
    var tbl = document.createElement('table');
    tbl.style.width = '100%';
    tbl.style.border = "1px solid black";

    var tr = tbl.insertRow();
    main.appendChild(tbl);
    for (var i = 0; i < 7; i++) {

```

```

        var td;
        tr.appendChild(td);
        td.innerHTML = "bbb";
        // createDayTable();
    }

    //
    // // tr.appendChild(td);
    // td = tr.insertCell();
    //
    // innerTable = document.createElement('table');
    // // innerTable.style.border = "1px solid black";
    //
    // row = document.createElement('tr');
    // innerTable.appendChild(row);
    // var heading = document.createElement('th');
    // // cell = row.insertCell();
    // row.appendChild(heading);
    // heading.style.border = "1px solid black";
    // heading.innerHTML = "Start Hour";
    // for (var j = 0; j < 24; j++) {
    // row = document.createElement('tr');
    // innerTable.appendChild(row);
    // // row = innerTable.insertRow();
    // cell = row.insertCell();
    // cell.style.border = "1px solid black";
    // // cell.appendChild(document.createTextNode(j + ":"));
    // cell.innerHTML = j + ":00";
    // }
    // td.appendChild(innerTable);

}

function createDayTable() {

    // var td;
    // tr.appendChild(td);
    // var td = tr.insertCell();

    for ( j = 0; j < 24; j++) {
        var row = document.createElement('tr');
        innerTable.appendChild(row);
        var cell = row.insertCell();
        cell.style.border = "1px solid black";
        cell.innerHTML = "aaa";
    }
    td.appendChild(innerTable);
}

```

```

/*css*/

body {
    font-family: sans-serif
}

h1 {
    text-align: center
}

.container {
    /*border-collapse: collapse;
    border: 1px solid black;*/
    max-width: 100%;
}

.appointment {
    position: absolute;
    outline: 2px solid #1166ff;
    outline-offset: -2px;
    background-color: #0000ff;
    overflow : auto;
}

.pencil_icon {
    position: absolute;
    bottom: 0;
    left: 0;
    display: inline;
    width: 20px;
    height: 28px;
    float: right;
    z-index: 20;
    background-image: url(images/pencil20.png);
    background-repeat: no-repeat;
}

.x_icon {
    position: absolute;
    bottom: 0;
    right: 0;
    display: inline;
    width: 20px;
    height: 28px;
    float: right;
    z-index: 20;
    background-image: url(images/x.jpg);
    background-repeat: no-repeat;
}

#testH {
    position: absolute;
    top: 100px;
    left: 100px;
}

#testAppointment {

```

```

        position: absolute;
    }

    #hours, #monday, #tuesday, #wednesday, #thursday, #friday,
    #saturday, #sunday {
        border-collapse: collapse;
        max-width: 100%;
        border: 1px solid black;
    }

    #main {
        display: block;
        max-width: 100%;
    }

    /*table {
        border-collapse: collapse;
        display: block;
        max-width: 10%;
        background-color: green;
    }

    table, td, th {
        border: 1px solid black;
    }

    td {
        display: block;
        max-width: 100px;
        max-height: 23px;
        background-color: yellow;
    }*/

    .error {
        color: #ff0000;
    }

    #formDiv {
        position: absolute;
        top: 10%;
        left: 10%;
        /*background-color: green;*/
        background-color: #80ffff;
        width: 80%;
    }

    #coverDiv {
        /*position: absolute;*/
        position: fixed;
        top: 0px;
        left: 0px;
        z-index: 10;
        width: 100%;
        height: 100%;
        background-color: rgba(0, 0, 0, 0.5);
        visibility: hidden;
    }

```