# Chapter 5

# Creating Dynamic Web Pages

## Activity 5.1: Designing an HTML Form

### Problem Statement

You have been assigned the task to design a form for online booking of movie tickets on the ShowOnWheels website. For this, you need to design the Online Booking Web page. The page needs to be designed according to the following guidelines:

* The page should display the form with the header, Book Your Tickets Online.
* It should have various fields, such as Name, Date of Bookings, Movie, Show Timings, Select Class, Price, Number of Tickets, and Total Price.
* The title of the movies and show timings should be displayed in a drop-down list.
* The form should have provision to accept the class that the customer would prefer as platinum, gold, and exclusive.
* The Price and Total Price fields should be disabled.
* The form should have two buttons, Submit and Reset.
* The Web page should display the alerts and updates to the users on the right side of the form.

How will you implement the preceding tasks to create the desired form?

**Prerequisite**: You need to use the **ShowOnWheels** file that you have created in Activity 4.1 to perform this activity. Ask your faculty to provide you the same.

### Solution

To create a form for online booking of movie tickets, you need to perform the following tasks:

1. Create the OnlineBooking.html file.
2. Apply styles on elements.
3. Update the nav.html file.
4. View the form.

#### Task 1: Creating the OnlineBooking.html File

To create the **OnlineBooking.html** file, you need to perform the following steps:

1. Open Notepad.
2. Add the following code snippet in Notepad:

<!DOCTYPE HTML>

<HTML><TITLE>OnlineBookings Page</TITLE>

<HEAD>

</HEAD>

<BODY>

<FORM name="form1">

<TABLE>

<TR>

<TH colspan="2">Book Your Tickets Online</TH>

</TR>

<TD>Name</TD>

<TD><INPUT type="text" name="usrname" placeholder="Enter Your Name" required></TD>

</TR>

The preceding code snippet creates a form named form1 and displays the header, Book Your Tickets Online. In addition, it creates a text field to accept the users’ name.

1. Add the following code snippet after the <TD><INPUT type="text" name="usrname" placeholder="Enter Your Name" required></TD></TR> line of code:

<TR>

<TD> Date of Bookings</TD>

<TD><INPUT type="date" id="bookingdate" required></TD>

</TR>

The preceding code snippet creates the date field to accept date for ticket bookings.

1. Add the following code snippet after the <TD><INPUT type="date" id="bookingdate" required></TD></TR> line of code:

<TR>

<TD>Movie</TD>

<TD><SELECT id="sel">

<OPTION value="0">Select Movie</OPTION>

<OPTGROUP label="Drama">

<OPTION value="1">Nightmare</OPTION>

<OPTION value="2">Along Polly Came</OPTION>

</OPTGROUP>

<OPTGROUP label="Thriller">

<OPTION value="3">Source Code</OPTION>

<OPTION value="4">If only</OPTION>

</OPTGROUP>

<OPTGROUP label="Romantic">

<OPTION value="5">A walk to remember</OPTION>

<OPTION value="6">Angel</OPTION>

</OPTGROUP>

</SELECT></TD>

</TR>

<TR>

<TD>Show Timings</TD>

<TD><SELECT id="timing">

<OPTION value="7">Select Time</OPTION>

<OPTION value="8">10:30AM</OPTION>

<OPTION value="9">5:30PM</OPTION>

<OPTION value="10">12:30PM</OPTION>

</SELECT></TD>

</TR>

The preceding code snippet creates the drop-down lists showing the movie names and the show timings of the movies.

1. Add the following code snippet after the <OPTION value="10">12:30PM</OPTION></SELECT></TD></TR> line of code:

<TR>

<TD>Select Class</TD>

<TD>

<INPUT type="Radio" name="RB" required">Platinum</INPUT>

<INPUT type="Radio" name="RB" required>Gold</INPUT>

<INPUT type="Radio" name="RB" required>Exclusive</INPUT>

</TD>

</TR>

The preceding code snippet creates radio buttons to select the movie class.

1. Add the following code snippet after the <INPUT type="Radio" name="RB" required>Exclusive</INPUT></TD></TR> line of code:

<TR>

<TD>Price </TD>

<TD><INPUT type="text" name="price" disabled> </TD>

</TR>

<TR>

<TD>Number of Tickets</TD>

<TD><INPUT type="text" name="num" placeholder="Enter Tickets" required> </TD>

</TR>

<TR>

<TD>Total Price</TD>

<TD><INPUT type="text" name="totalprice" disabled> </TD>

</TR>

The preceding code snippet creates the text field to accept the number of tickets. In addition, it creates the price and totalprice fields, which are kept disabled.

1. Add the following code snippet after the <TD><INPUT type="text" name="totalprice" disabled> </TD></TR> line of code:

<TR>

<TD>

<Input ID="submit" type="submit"></TD><TD>

<Input type="reset">

</TD>

</TR>

</TABLE>

</FORM>

The preceding code snippet creates the submit and reset buttons on the form.

1. Add the following code snippet after the </FORM> tag:

<H2>Alerts & Updates</H2>

<DIV class="auto-style">

<P>New Payment Options has been introduced for ticket bookings.</P>

<P>Mobile Booking is now resumed w.e.f. 05-April-2012.</P>

<P>ID proof is required for getting student concession on tickets.</P>

<P>Ticket Bookings On Mobile: Now book your movie ticket -ANYWHERE ANYTIME through your Mobile Phones. </P>

<P>You are advised not to carry inflammable/dangerous/explosive articles as part of their luggage and also to desist from smoking in the movie halls. Please update your mobile number in our profile to receive SMS alerts for your ticket booking.</P>

<P>Never purchase e-ticket from unauthorized agents or persons.</P>

<P>No refund will be granted on cancellation of tickets.</P></DIV>

</BODY>

</HTML>

The preceding code snippet creates a heading and paragraphs showing the alerts and updates for the user.

#### Task 2: Applying Styles on Elements

To apply styles on elements, you need to perform the following steps:

1. Add the following code snippet after the <HEAD> tag:

<STYLE type="text/css">

#submit{

margin-left:100px;

}

th{

font-size:20px;

background-color:green;

}

td{

text-align:left;

font-size:20px;

}

table{

border:1px solid green;

}

form{

float:left;

margin-right:20px;

}

The preceding code snippet applies styles on the form elements.

1. Add the following code snippet after the margin-right:20px;} line of code:

p{

font-size:20px;}

h2{

background-color:green;

border:1px solid green;

margin-left:460px;}

.auto-style{

/\* Chrome \*/

overflow-x:-webkit-marquee;

-webkit-marquee-direction: up;

-webkit-marquee-style: scroll;

-webkit-marquee-speed:normal;

-webkit-marquee-increment: small;

-webkit-marquee-repetition: infinite;

}

</STYLE>

The preceding code snippet applies styles on the paragraphs and headings. It also applies the marquee effect on the elements. A marquee is an effect, where the content in the HTML element can be moved horizontally or vertically. In HTML, you can add the marquee effect to the HTML elements with CSS.

1. Save the file with the name, **OnlineBooking.html**,in the **ShowOnWheels** folder.
2. Close the **OnlineBooking.html** file.

#### Task 3: Updating the nav.html File

To update the **nav.html** file, you need to perform the following steps:

1. Open the **nav.html** file.
2. Add the following code snippet after the <A href="upcomingMovies.html" target="frame5">Upcoming Movies</A> | line of code:

<A href="OnlineBooking.html" target="frame5">Online Booking</A> |

The preceding code snippet creates a link for the Online Booking Web Page.

1. Save and close the **nav.html** file.

#### Task 4: Viewing the Form

To view the form, you need to perform the following steps:

1. Open Google Chrome.
2. Type **D:\HTML\ShowOnWheels\mainframe.html** in the address bar.
3. Press the **Enter** key. The home page appears, as shown in the following figure.

*The Home Page*

1. Click the **Online Booking** link. The Online Booking Web page appears, displaying the form and alerts and updates, as shown in the following figure.

*The Online Booking Web Page*

1. Close the Web browser.

## Activity 5.2: Manipulating the Components of a Web Page

### Problem Statement

The Online Booking Web page has been created. Now, you want to incorporate the ticket booking functionality on the page according to the following guidelines:

* When the user selects the desired class, the price applicable for the class should be displayed in the Price field.
* When the user specifies the number of tickets, the Total Price field should get populated automatically on the basis of the formula, price \* number of tickets.
* Apply a constraint to the Number of Tickets field in such a way that that the user can enter only numeric values in it. In addition, apply validation in such a way that the user is unable to book more than 20 tickets at a time.
* The Date of Bookings field should not accept the date less than the current date.
* The ticket booking confirmation should be displayed only if all the details have been entered by the user.

**Prerequisite**: You need to use the **ShowOnWheels** file that you have created in Activity 5.1 to perform this activity. Ask your faculty to provide you the same.

### Solution

To incorporate the ticket booking functionality on the Online Booking Web page, you need to perform the following tasks:

1. Update the OnlineBooking.html file.
2. View the form.

#### Task 1: Updating the OnlineBooking.html File

To update the **OnlineBooking.html** file, you need to perform the following steps:

1. Open the **OnlineBooking.html** file.
2. Add the following code snippet after the <HEAD> tag:

<SCRIPT>

var date = new Date();

var month = date.getMonth()+1;

var day = date.getDate();

var year = date.getFullYear();

var output= month + '/' +day + '/' + year;

The preceding code snippet retrieves the current day, month, and year.

1. Add the following code snippet after the var output= month + '/' +day + '/' + year; line of code:

function compareDate()

{

if(Date.parse(document.form1.bookingdate.value)<Date.parse(output)){

  alert("You cannot select a date less than the current date");

  }

}

The preceding code snippet displays a message to the user, if the user enters a date less than the current date.

1. Add the following code snippet after the alert("You cannot select a date less than the current date");}} line of code:

function checkNum()

{

x = event.charCode;

if (( x >= 65 && x <=90) || (x >= 97 && x <=122))

{

  alert("Enter Numeric Value");

  document.form1.num.value='';

}

}

function total()

{

if(document.form1.num.value>20)

{

  alert("You cannot book more than 20 tickets at a time");

  document.form1.num.value='';

}

else

document.form1.totalprice.value=(document.form1.price.value)\*(document.form1.num.value);

}

The preceding code snippet displays a message to the user, if the user enters non numeric value or a value greater than 20 in the Number of Tickets field. Further, it calculates the total price for the tickets.

1. Add the following code snippet after the document.form1.totalprice.value=(document.form1.price.value)\*(document.form1.num.value);} line of code:

function check()

{

for( i = 0; i <= document.form1.RB.length; i++ ){

  if(document.form1.RB[0].checked==true) {

       document.form1.price.value=100;

  }else if(document.form1.RB[1].checked==true) {

       document.form1.price.value=140;

  }else if(document.form1.RB[2].checked==true) {

       document.form1.price.value=200;

  }

}

}

The preceding code snippet displays the price of the movie ticket on the basis of class selected by the user.

1. Add the following code snippet after the document.form1.price.value=200;}}} line of code:

function sub()

{

if((document.form1.usrname.value!='')&&(document.form1.num.value!='')&&(Date.parse(document.form1.bookingdate.value)>Date.parse(output))&&(document.form1.sel.value!=0)&&(document.form1.timing.value!=7))

{

  alert("Your tickets have been booked.");

}

}

function validate()

{

if((document.form1.sel.value==0)||(document.form1.timing.value==7)||(Date.parse(document.form1.bookingdate.value)<Date.parse(output)))

{

  alert("Please select the date, movie name, and movie timings.");

  return false

}

else

return true

}

</SCRIPT>

The preceding code validates the form.

1. Add the following code snippet after the <FORM name="form1" line of code:

onsubmit="return validate();"

The preceding code snippet calls the validate() function when a Web page is submitted.

1. Add the following code after the <INPUT type="date" id="bookingdate" line of code:

onchange="compareDate();"

The preceding code snippet calls the compareDate() function on the date field.

1. Add the following code snippet after each <INPUT type="Radio" name="RB" line of code:

onclick="check();"

The preceding code snippet adds the check() function to the radio button fields.

1. Add the following code snippet after the <INPUT type="text" name="num" placeholder="Enter Tickets" required line of code:

onchange="total();" onkeypress="checkNum();"

The preceding code snippet adds the total() and onkeypress() functions to a text field.

1. Add the following code snippet after the <INPUT ID="submit" type="submit" line of code:

onclick="sub();"

The preceding code snippet adds the sub() function to the submit button.

1. Save and close the **OnlineBooking.html** file.

#### Task 2: Viewing the Form

To view the form, you need to perform the following steps:

1. Open Google Chrome.
2. Type **D:\HTML\ShowOnWheels\mainframe.html** in the address bar.
3. Press the **Enter** key. The home page appears.
4. Click the **Online Booking** link. The Online Booking Web Page appears, as shown in the following figure.

*The Online Booking Web Page*

1. Click the **Submit** button. A message, **Please fill out this field**, appears, as shown in the following figure.

*The Online Booking Web Page*

Similarly, if you keep any of the fields empty, the form will not be submitted and the appropriate validation message appears.

1. Type **John Smith** in the **Name** field.
2. Select **06/05/2013** from the **Date of Bookings** field.
3. Select **Source Code** from the **Movie** field.
4. Select **5:30PM** from the **Show Timings** field.
5. Select the **Gold** option. The price for the gold class automatically appears in the **Price** field, as shown in the following figure.

*The Price of the Gold Class Displayed in the Price Field*

1. Type **3** in the **Number of Tickets** field. The total price for the tickets automatically appears in the **Total Price** field, as shown in the following figure.

*The Total Price of the Tickets Displayed in the Total Price Field*

1. Click the **Submit** button. An alert specifying that the tickets have been booked appears, as shown in the following figure.

*An Alert*

1. Close the Web browser.

# Exercises

### Exercise 1

Skylight University organizes short-term training programs for its existing students to enhance their technical and professional skills. For this, you need to create a Web page named Register displaying the details about the training sessions in the upcoming weeks. In addition, you need to add a link to the online registration form on the Register Web page.

However, to participate in such programs, the students need to enroll by filling the online registration form. For this, you need to create a form that contains the following fields:

* First Name
* Last Name
* Email ID
* Training Program
* Roll Number
* Contact Number

In addition, you need to add two buttons, Reset and Submit, on the form, as shown in the following figure.

*The Online Registration Web Page*

**Prerequisite**: To perform this exercise, you need to use the solution file created for Exercise 1 of Chapter 4. In addition, you need the **Register Me.png** image file and save this file in the Images folder. Ask your faculty to provide you the same.

### Exercise 2

After creating the online registration form, you need to incorporate the following constraints on the form elements:

1. The fields, First Name and Last Name, should accept alphabets only.
2. The field, Email ID, should accept the email address in the format, characters@alphabets.alphabets.
3. The fields, Roll Number and Contact Number, should accept numeric values only.
4. The form should be submitted only if all the fields are filled.
5. On submitting the form, an alert message showing the details about the training program, such as start date, timings, and fee submission date, should appear, as shown in the following figure.

*An Alert Message*

In addition, the training details should vary from one training program to another.

How will you perform the preceding task?

**Prerequisite**: To perform this exercise, you need to use the solution file created for Exercise 1 of Chapter 5.

### Exercise 3

### Exercise 4