Activity: Creating Custom Objects

Problem Statement

Fun&Fantasy Books Inc. is a leading publisher of books and journals in Philadelphia, USA. The company has decided to add a new Web page to their Web site that provides review information about widely acclaimed books. Dorothy is given the task of developing the Web page. Dorothy wants to ensure that the Web page is divided into two frames and includes a Current Releases section, which contains the name of the books in a combo box. When the visitor selects a book entry from the combo box, specific information related to the book, such as author name, price, and publisher appears in the second frame in a tabular format. How can you help Dorothy to build the Web site using custom objects?

Solution

To solve the preceding problem, perform the following tasks:
1. Create the custom objects.
2. Create the frame window.
3. Verify the solution.

Task 1: Create the Custom Objects

To create the custom object to store book information, perform the following steps:
1. Open a text editor such as Notepad.
2. Write the following HTML code:

```
<HTML>
<HEAD>
<TITLE> Book Information </TITLE>
<SCRIPT LANGUAGE="JavaScript">
function book_details()
{
var result="<HTML><BODY><CENTER><TABLE BORDER=2>"
result=result+"<CAPTION> <ALIGN=TOP> BOOK NAME: <B>" + this.name +
"</B> </CAPTION>"
result=result+"<TR> <TD ALIGN=RIGHT> AUTHOR: </TD> <TD>" +
this.author + "</TD> </TR>"
result=result+"<TR> <TD ALIGN=RIGHT> PRICE: </TD> <TD>" + this.price
+ "</TD> </TR>"
result=result+"<TR> <TD ALIGN=RIGHT> PUBLISHER: </TD> <TD>" +
this.publisher + "</TD> </TR>"
result= result + "</TABLE></CENTER></BODY></HTML>"
```

```
parent.Frame2.document.write(result)
parent.Frame2.document.close()
}

function book (name, author, price, publisher)
{
this.name=name
this.author=author
this.price=price
this.publisher=publisher
this.book_details=book_details
}

C=new book("Learning C", "Smith Robinson", "$100", "Esteem
Publication")
Java=new book("Advance Java Programming", "Gloria Anniston", "$120",
"IT Publication")
Perl=new book("Perl Fundamentals", "Andrew Gillespie", "$80", "Esteem
Publication")
</SCRIPT>

<BODY>
<H1> Fun&Fantasy Books Inc.</H1>
<HR>
<FORM NAME="myForm">
<SCRIPT LANGUAGE="JavaScript">

var page=""
page=page+" Select a book of your choice:"
page=page+"<SELECT NAME='books' onChange='doDisplay(this)'>"
page=page+"<OPTION> C"
page=page+"<OPTION> Java"
page=page+"<OPTION> Perl"
document.write(page)

</SCRIPT>
</FORM>
<SCRIPT LANGUAGE="JavaScript">
function doDisplay(popup)
{
i=popup.selectedIndex
eval(popup.options[i].text + ".book_details()")
}
doDisplay(document.forms[0].books)
</SCRIPT>
</BODY>
</HTML>
```
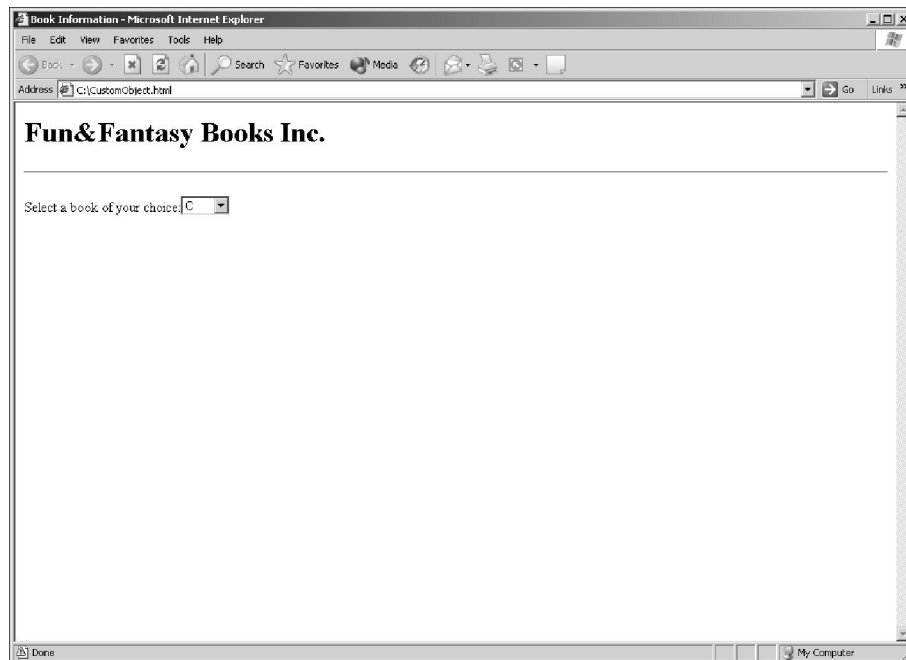
3. Save the file as **CustomObject.html**.

In the preceding code, the `books()` constructor function has four property slots reserved for each instance of the object, such as C, Java, and the Perl object. The `book_details()` method is called when the user selects the options such as C and Java from the drop-down

list. For example, when the user selects the option Java the object Java calls the function `books_details` that displays the details of the Java book in the lower frame.

The following figure displays the output of the preceding code.

Output of CustomObject.html

Task 2: Create the Frame Window

To create the lower and upper frame window:

1. Open a text editor such as **Notepad**.
2. Write the following HTML code:

```
<HTML>
<HEAD>

<SCRIPT LANGUAGE= "JavaScript">
function blank(){
return "<HTML><BODY></BODY></HTML>"
}
</SCRIPT>
</HEAD>
<FRAMESET ROWS="50%, 50%">
<FRAME NAME="Frame1" SRC="CustomObject.html">
<FRAME NAME="Frame2" SRC="javascript:parent.blank()">
</FRAMESET>
</HTML>
```
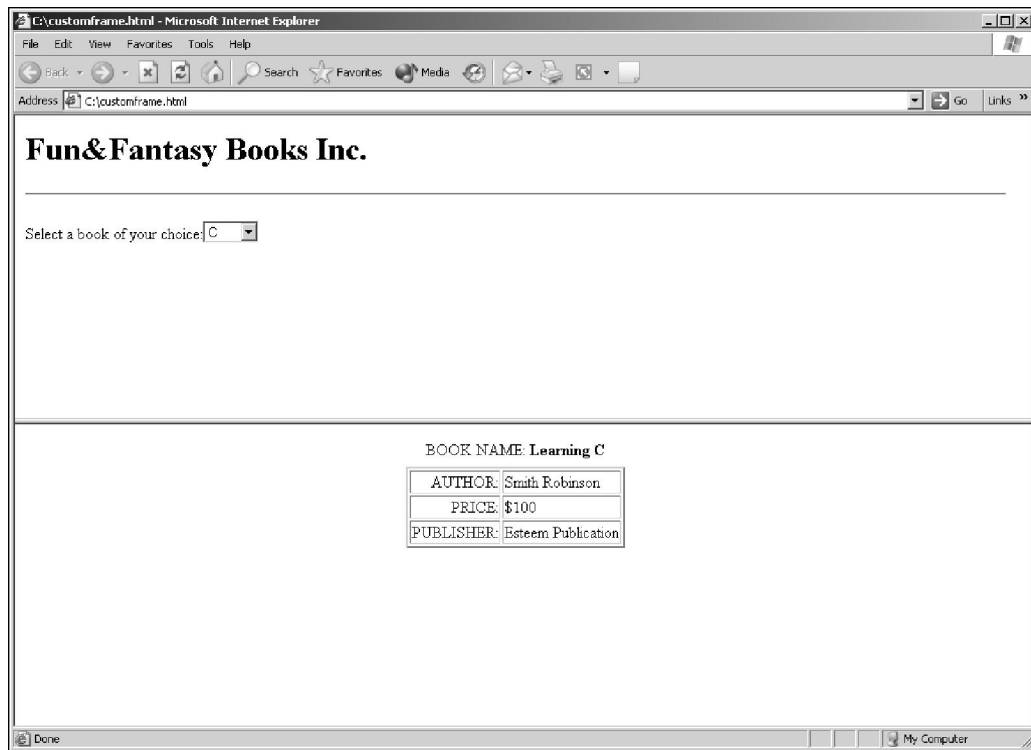
3. Save the file as **customframe.html**.

The preceding code divides the window into two frames. Because the lower frame is not loaded unless the upper frame is loaded, the `SRC` attribute of the Frame2 is set to `javascript:parent.blank()`. The `navigator` object has an empty document in its internal URL. The following figure displays the output of the preceding code.

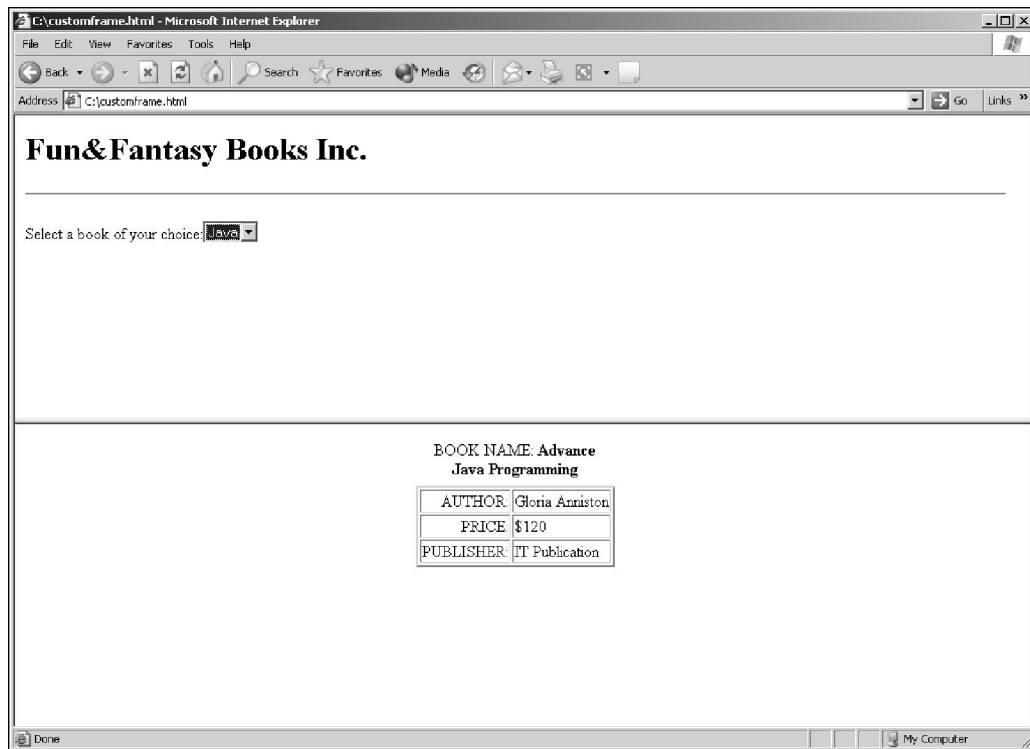*Output of the File customframe.html*

The upper frame allows the user to select books of his choice. In addition to the book name, the lower frame displays additional information about the selected book, such as **AUTHOR**, **PRICE**, and **PUBLISHER**.

Task 3: Verify the Solution

To verify the solution, perform the following steps:

1. Open the file, **customframe.html**, in a Web browser such as Internet Explorer.
2. Select the option, **Java**, from the **Select a book of your choice** field. The corresponding information such as the author and price is automatically displayed in the lower frame, based on the option selected.

The following figure displays the final output, when the user selects the **Java** option.

Code Output