

JS Advanced: Exam 18 March 2018

Problems for exam preparation for the ["JavaScript Advanced" course @ SoftUni](#). Submit your solutions in the SoftUni judge system at <https://judge.softuni.bg/Contests/974/>.

Problem 4. Payment Manager (Object Interacting with DOM)

Write a JS **class** with the name **"PaymentManager"** that generates and controls a **payment manager** table. It contains **three columns** for payments data (**Name, Category, Price**) and **one column** for **Actions** - **[Add]** and **[Delete]** buttons. The **last row** of the table consists of **three input fields** and a **[Add]** button. There can be **multiple payment manager tables** – i.e. instances of the JS class. *See the examples and templates for more details.*

The **constructor** of your class needs to take **one** argument – **title** (string). The **title** should be used in the table's title (<caption>). *See the table's HTML template for more details below.*

Additionally, the **class** should contain the following **functionality**:

- Function **render(id)** – takes **one** (string) argument, **generates the table's HTML element** and **appends** it to the **element in the DOM with ID equal** to the argument

The **table** consists of a **title**, **four columns** (name, category, price and actions), **three input fields** and **two types of buttons** (add, delete). You **should use** the following **HTML structure** for generating the **table**:

Template Table

```
<table>
  <caption>{Title} Payment Manager</caption>
  <thead>
    <tr>
      <th class="name">Name</th>
      <th class="category">Category</th>
      <th class="price">Price</th>
      <th>Actions</th>
    </tr>
  </thead>
  <tbody class="payments">
    <tr>
      <td><!-- Payment's name --></td>
      <td><!-- Payment's category --></td>
      <td><!-- Payment's price --></td>
      <td><button>Delete</button></td>
    </tr>
    <tr>...</tr>
  </tbody>
  <tfoot class="input-data">
    <tr>
      <td><input name="name" type="text"></td>
      <td><input name="category" type="text"></td>
      <td><input name="price" type="number"></td>
      <td><button>Add</button></td></tr>
    </tfoot>
  </table>
```

Types of values in a payment's columns:

- Name – string
- Category – string
- Price – number

Every **input box** corresponds to the **payment's column** it is **placed on**, where the data should be added.

Furthermore, when **clicked** the table's **buttons** should have the following **functionality**:

[Add] button:

- Appends the **text** received from the **input boxes** and a [Delete] button as a **new row at the end** of the **table's payments**
- Clears the **input boxes** after the **payment's information** is submitted
- Do nothing if either of the **text boxes** is empty

[Delete] button:

- Should **remove** the table's **row**, where it is placed on

Note that, **every button's functionality** should work **only** for the **table where it is located on**.

Submission

Submit only your **PaymentManager** class.

Examples

You can use the following HTML skeleton to test your functionality:

index.html
<pre><!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8"> <title>Payment Manager</title> <style> body{padding:30px}div{margin-bottom:20px}table{border:1px solid #000;border-collapse:collapse;margin:auto}caption{font-size:20px;font-weight:700;color:#fff;background:#000;padding:5px}td,th{padding:5px 20px;text-align:center}tfoot td,th{background:#ccc}tr:nth-child(odd){background:#eee}tr:nth-child(even){background:#ddd}tfoot{border-top:1px solid #000}tfoot>tr td{font-style:italic;font-weight:700}button{margin:auto;cursor:pointer} </style> <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script> </head> <body> <div id="amazon"></div> <div id="ebay"></div> <div id="walmart"></div> <script src="./solution.js"></script></pre>

```

<script>
$(function() {
  let paymentMangersData = [
    ['amazon', 'Amazon'],
    ['ebay', 'eBay'],
    ['walmart', 'Walmart'],
    // Others
  ]

  for (let [target, title] of paymentMangersData) {
    let paymentManager = new PaymentManager(title)
    paymentManager.render(target)
  }
})
</script>
</body>
</html>

```

The sample page contains three main table's element and a script. The script will create two different payment manager tables that should look like the examples, if your code is correct. There is a third commented out manager's data that you can use in the script. You need to put the files – index.html and solutions.js (where is your PaymentManager class) – in the same directory for them to work with the default code.

In the **first example** we will use only the first payment manager's data in the script and generate only one table.

Initial table rendering:

Amazon Payment Manager			
Name	Category	Price	Actions
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

<div id="amazon">
  <table>
    <caption>Amazon Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments"></tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>

```

Use the "Template Table" skeleton to build your table.

Adding the first payment:

Amazon Payment Manager			
Name ▲ ▼	Category ▲ ▼	Price ▲ ▼	Actions
Dell XPS 13	Computers	999.99	Add

We add the first payment and two more after that, becoming the total of three payments.

Amazon Payment Manager			
Name	Category	Price	Actions
Dell XPS 13	Computers	999.99	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

<tbody class="payments">
  ...
  <tr> == $0
    <td>Dell XPS 13</td>
    <td>Computers</td>
    <td>999.99</td>
    <td>
      <button>Delete</button>
    </td>
  </tr>
</tbody>

```

Then we add two more payments – "JavaScript The Good Parts" and "Audeze LCD-3" and click to delete a payment:

Amazon Payment Manager			
Name	Category	Price	Actions
Dell XPS 13	Computers	999.99	Delete
JavaScript: The Good Parts	Books	29.99	Delete
Audeze LCD-3	Headphones	1945	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

▼<tbody class="payments">
  ▶<tr>...</tr>
  ▼<tr>
    <td>JavaScript: The Good Parts</td>
    <td>Books</td>
    <td>29.99</td>
    ▶<td>...</td>
  </tr>
  ...
  ▼<tr> == $0
    <td>Audeze LCD-3</td>
    <td>Headphones</td>
    <td>1945</td>
    ▶<td>...</td>
  </tr>
</tbody>

```

After deleting the payment with column name's value – "Audeze LCD-3":

Amazon Payment Manager			
Name	Category	Price	Actions
Dell XPS 13	Computers	999.99	Delete
JavaScript: The Good Parts	Books	29.99	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

▼<tr>
  <td>Dell XPS 13</td>
  <td>Computers</td>
  <td>999.99</td>
  ▼<td>
    <button>Delete</button>
  </td>
</tr>
▼<tr>
  <td>JavaScript: The Good Parts</td>
  <td>Books</td>
  <td>29.99</td>
  ▶<td>...</td>
</tr>

```

In the **second example** we will use two payment manager's data in the script to generate two tables.

Initial tables rendering:

Amazon Payment Manager			
Name	Category	Price	Actions
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

eBay Payment Manager			
Name	Category	Price	Actions
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

▼<div id="amazon">
  ▼<table>
    <caption>Amazon Payment Manager</caption>
    ▶<thead>...</thead>
    <tbody class="payments"></tbody>
    ▶<tfoot class="input-data">...</tfoot>
  </table>
</div>
▼<div id="ebay">
  ▼<table>
    <caption>eBay Payment Manager</caption>
    ▶<thead>...</thead>
    <tbody class="payments"></tbody>
    ▶<tfoot class="input-data">...</tfoot>
  </table>
</div>

```

Chain of **commands** to the tables:

- **Adding** payments to Amazon Payment Manager
 - ["Logitech MX Master", "Mouses", "149.99"]
 - ["Dell XPS 13", "Computers", "999.99"]
 - ["Oree Board", "Keyboards", "80"]
- **Adding** payments to eBay Payment Manager
 - ["V60 Cherry Dolch", "Keyboards", "105"]

Amazon Payment Manager			
Name	Category	Price	Actions
Logitech MX Master	Mouses	149.99	Delete
Dell XPS 13	Computers	999.99	Delete
Oree Board	Keyboards	80	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

eBay Payment Manager			
Name	Category	Price	Actions
V60 Cherry Dolch	Keyboards	105	Delete
Asus Zenbook 13	Computers	1035.34	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

<div id="amazon">
  <table>
    <caption>Amazon Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments">
      <tr>...</tr>
      <tr>...</tr>
      <tr>...</tr>
    </tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>
<div id="ebay">
  <table>
    <caption>eBay Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments">
      <tr>...</tr>
      <tr>...</tr>
    </tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>

```

○ ["Asus Zenbook 13", "Computers", "1035.34"]

More commands:

- Delete the payment with column name "Logitech MX Master" from Amazon Payment Manager

Amazon Payment Manager			
Name	Category	Price	Actions
Dell XPS 13	Computers	999.99	Delete
Oree Board	Keyboards	80	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

eBay Payment Manager			
Name	Category	Price	Actions
V60 Cherry Dolch	Keyboards	105	Delete
Asus Zenbook 13	Computers	1035.34	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

<div id="amazon">
  <table>
    <caption>Amazon Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments">
      <tr>...</tr>
      <tr>...</tr>
    </tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>
<div id="ebay">
  <table>
    <caption>eBay Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments">
      <tr>...</tr>
      <tr>...</tr>
    </tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>

```

More commands:

- Adding a payment to eBay Payment Manager:
 - ["Oree Board", "Keyboards", "80"]
- Delete the payment with column name "Oree Board" from Amazon Payment Manager
- Adding a payment to Amazon Payment Manager:
 - ["V60 Cherry Dolch", "Keyboards", "105"]
- Delete the payment with column name "Asus Zenbook 13" from eBay Payment Manager
- Delete the payment with column name "V60 Cherry Dolch" from eBay Payment Manager

Amazon Payment Manager			
Name	Category	Price	Actions
Dell XPS 13	Computers	999.99	Delete
V60 Cherry Dolch	Keyboards	105	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

eBay Payment Manager			
Name	Category	Price	Actions
Oree Board	Keyboards	80	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	Add

```

<div id="amazon">
  <table>
    <caption>Amazon Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments">
      <tr>...</tr>
      <tr>...</tr>
    </tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>
<div id="ebay">
  <table>
    <caption>eBay Payment Manager</caption>
    <thead>...</thead>
    <tbody class="payments">
      <tr>...</tr>
    </tbody>
    <tfoot class="input-data">...</tfoot>
  </table>
</div>

```