

JS Advanced: Exam 19 December 2016

Problems for exam preparation for the ["JavaScript Advanced" course @ SoftUni](#). Submit your solutions in the SoftUni judge system at <https://judge.softuni.bg/Contests/375/>.

Problem 4. List Builder (Object Interacting with DOM)

You are given the following **HTML code** (with CSS styles), intended to draw a list of items:

```
<!DOCTYPE html>
<html>

<head>
  <meta charset="UTF-8">
  <title>List Items: Up / Down</title>
  <style>button { margin: 3px 0 3px 8px }</style>
  <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>
</head>

<body>

<div id="main"></div>

<script>
  function listBuilder(selector) {
    // TODO: return the list builder
  }
</script>

<script>
  $(function() {
    let builder = listBuilder("#main");
    builder.createNewList();
    builder.addItem("Sofia");
    builder.addItem("Varna");
    builder.addItem("Sofia <new>");
    builder.addItem("Pleven");
  });
</script>
</body>
</html>
```

The function **listBuilder(selector)** takes as input a DOM selector (string) and returns an object holding the functions **createNewList()** and **addItem(text)**.

createNewList clears the contents of the selector and appends an empty **** element to it:

```
<div id="main">
  <ul></ul>
</div>
```

addItem appends the specified string item into the previously created **** as a **** element, along with two buttons for moving the item:

```
▼ <li>
  Sofia
  <button>Up</button> ev
  <button>Down</button> ev
</li>
```

Implement functionality to **move** each item in the list: when the buttons are **clicked**, the corresponding item should move up or down, relative to the rest of the items (reordered in the DOM tree).

Your task is to write the body of the **listBuilder(selector)** function to get the above page working as expected (see the screenshots). Do not modify the HTML code and CSS styles, just **write the missing JS function**.

Examples

When the missing JS function **listBuilder(selector)** is implemented correctly, the page should look as follows (after the page loading is completed):

The screenshot displays a web application interface on the left and its DOM structure in a browser's developer tools on the right. The interface shows a list of four items, each with 'Up' and 'Down' buttons. The 'Down' button for the second item, 'Varna', is highlighted with a blue border. The DOM structure on the right shows a `<div id="main">` containing a `` with four `` elements. Each `` contains the item name, an `<button>Up</button>`, and an `<button>Down</button>`. The items are ordered: Sofia, Varna, Sofia <new>, and Pleven. The 'Down' button for the second `` (Varna) is highlighted in the DOM tree, corresponding to the highlighted button in the UI.



- Sofia Up Down
- Sofia <new> Up Down
- Varna Up Down
- Pleven Up Down

```

<div id="main">
  <ul>
    <li>
      Sofia
      <button>Up</button> ev
      <button>Down</button> ev
    </li>
    <li>
      Sofia <new>
      <button>Up</button> ev
      <button>Down</button> ev
    </li>
    <li>
      Varna
      <button>Up</button> ev
      <button>Down</button> ev
    </li>
    <li>
      Pleven
      <button>Up</button> ev
      <button>Down</button> ev
    </li>
  </ul>
</div>

```

Submission

Submit your `listBuilder(selector)` function as “JavaScript code (DOM unit tests)”.