

Frontend JavaScript and jQuery.

1. Introduction

1.1 Aim

In this practical you will be required to add specific event driven functionality to your static HTML frontend, by creating a JavaScript file which can be included on all pages throughout the site.

Features to implement include an image rotator for the home page. AJAX pagination for the products' listing. An image gallery. Validation for input forms. And a menu for mobile devices.

1.2 Practical Implementation Specifics

The following must be implemented:

- **General:** Mobile device main menu accessibility.
- **Home Page:** Top Products image rotator.
- **Products Page:** Products' listing pagination.
- **Product Page:** Add product to order and larger gallery image display overlay.
- **Order Page:** Apply validation to the input forms and change product item quantity.

2. General Information

2.1 General

On any page where the mobile menu is visible, the click event on the mobile menu button should toggle a class on the menu wrapper, which either sets the height of the wrapper to hide the menu items and leave only the button visible, or which allows the height to be automatically calculated so all the menu items in the list stack can be seen.

2.2 Home Page

The Top Products listing on the home page should have the image at the top of the stack hidden and placed at the bottom, to add the appearance of images scrolling past. The same code should work similarly when the Top Products widget is in the horizontal orientation.

2.3 Products Page

Use a REST endpoint to populate the products list page with items in a paginated manner. The user clicking the pagination controls should retrieve a new page of products from the web service and then populate the page with them.

2.4 Product Page

When toggling the “Add to Order” button the product id must be appended or removed from a cookie, this is so when the page for order is rendered server side, we will have available a list of products that are to be contained in the order.

Additionally, clicking on one of the thumbnail images from the product gallery should open up an image overlay containing a larger copy of the product image.

2.5 Order Page

For each of the four input fields, custom validation should be performed as per the user requirements. Should any of the fields not pass validation then a notification dialogue with a relevant text message should be displayed, and the default event action prevented.

When clicking on the order quantity buttons, the relevant product quantity should be incremented.

3. Project Specifications

User Requirements

Client Website

1 General

- 1.1 When the mobile menu is visible, it shall have the ability to be expanded or collapsed with its' menu button.

2 Home Page

- 2.1 The list of Top Products shall scroll a new product into view every 3 seconds.

3 View Products

- 3.1 The list of all products must paginate a limited number of items at a time.
 - 3.1.1 A web-service is available at <http://www.cs.sun.ac.za/rw334/products.php?limit=12&skip=0> which returns JSON for AJAX requests.
 - 3.1.1.1 Limit: The limit of the number of items to fetch. (Default 12)
 - 3.1.1.2 Skip: The offset of the first item which should be returned in the list.
 - 3.1.2 The total number of pages must be displayed.

4 View Product

- 4.1 The user must be able to view a larger copy of a gallery image by clicking a thumbnail image.
- 4.2 The currently viewed product should be added to the order by having its product id written into a cookie.
 - 4.2.1 The product id must be read from a URL parameter.
 - 4.2.2 The order cookie should expire 24 hours after modification.

5 View Order

- 5.1 The fields for user input shall be validated with regexes.
 - 5.1.1 The firstname shall be at least 2 characters long, and contain only letters or a hyphen, but the leading and tailing characters must be letters.
 - 5.1.2 The lastname shall be at least 2 characters long, and contain only letters or a hyphen, but the leading and tailing characters must be letters.
 - 5.1.3 The email address shall contain “[user@domain.ext](#)” where “user” can be numbers or letters, “@” is a literal, “domain” is also alphanumeric, and “.ext” consists of a full stop followed by at least two letters, repeated one or more times.
 - 5.1.4 The phone number shall be between the forms “1231231234” and “+23 123 1234”.

4. Resources

Make sure that you understand the content of the Pearson labs:

- Lab 6: [JavaScript: Client-Side Scripting](#)
- Lab 15: [Advanced JavaScript & jQuery](#)

5. Marking Scheme

The following criteria will be used to make up your final mark.

- Adherence to requirements, Project Structure. (50%)
- Coding to standards, Syntax, Code Style, Comments. (50%)