

# Web & Mobile Design & Development 1

## CA Assignment 2

<b>Mode:</b>	Groups (2 or 3 students per group)	
<b>Value:</b>	30% of overall grade	
<b>Out Date:</b>	Wednesday/Thursday	25/26th October 2017
<b>Final Due Date:</b>	Friday 22 <sup>nd</sup> December 2017	5pm

### General instructions:

- Read all parts of the assignment carefully and follow the instructions
- Read the full document as soon as possible and ask for clarification where needed
- This is a group assignment, but students will be graded individually – group members should identify their contributions in all work submitted
- Any submission by the group should be made by one member (no duplicate or triplicate submissions, please)
- Keep backups of anything submitted
- All deliverables must be submitted by the deadline. Later submissions will incur a penalty of 2% per day on the value of the deliverable.
- The text includes some tags in the form **[X1]**. Treat instructions marked in this way as checklist items for the completion of the CA.
- Two submissions are to be made through Moodle: **group declaration** and the **link to the group's git repository** (see Part 0). All the other submissions should be in the form of file addition or updates to the git repository. You should create a private repository for this assignment (you will be able to create free private repositories on GitHub if you upload proof that you are a student; alternatively you can use Bitbucket, which allows private repositories in general). Share your assignment repository with username **jelena-vk-itt** (the same for GitHub and Bitbucket) so that I am able to see the status of your work on the due dates. **Keep backups** of everything you do in a place other than that repository.

### Description

The assignment is to plan, design, and develop a website. The website should have a dynamic element, for example a page that displays a list of products and allows adding, updating, and deleting of products, users, etc. Examples are:

- Sports club website
- A charity website
- Small business website
- A website relating to a personal interest or hobby

## Part 0: Group Formation and Project Proposal (5%) - Wed 01/11/2017 23:55

### **Part 0 Deliverables (5%) - Wed 01/11/2017 23:55**

- **[M1]** Groups (of two or three members) to be declared, listing group members' names and student numbers - **Into Moodle questionnaire "CA2 Groups"**
- **[M2]** Link to the git repository into which you will be putting all the deliverables from now on – **Paste link in Moodle questionnaire "CA2 Git Repository"**
- **[M3]** Proposal - an MS Word or PDF document called "**proposal1**" containing one paragraph that clearly explains the purpose of the website and gives a summary of its main functionality - **Put file into your CA2 git repository**

### Part 1a: Website Structure and Navigation (5%) - Fri 10/11/2017 23:55

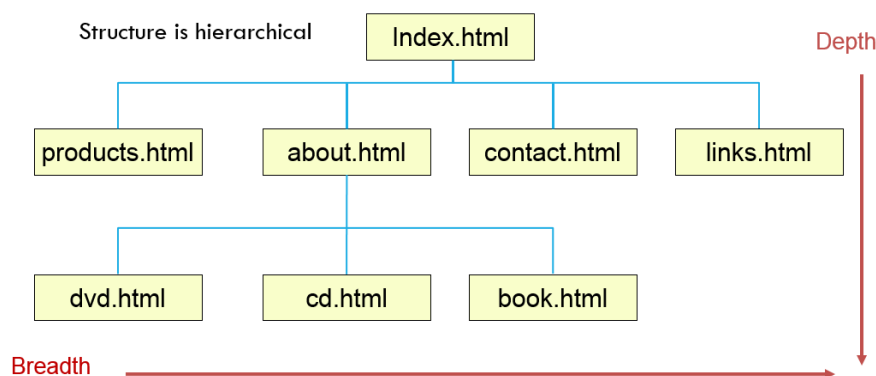
At this stage you will have decided what your website's main theme and purpose will be.

The next step is to define **the different user types** that will access the site (e.g. administrator, who can modify the site, and ordinary users, who view and interact with the site) and **the functionality offered by your website** to these different users. You will have to read ahead to the end of this document in order to work out whether the designed website will meet the non-functional requirements of the assignment as well (e.g. Part 1.c, 2: the website must include a form).<sup>1</sup>

Next decide what actual pages and sections are needed to realise the functional elements from your list. Decide how the information on your website will be organised in terms of **site structure** (see this [article](#) for more information on website structuring) and how this structure will be reflected in **navigation** elements<sup>2</sup> to make it easy for the user to understand what your website contains and how it is meant to be 'read'. The site structure and navigation design should always be led by consideration for user experience. Look at similar websites for ideas, both in terms of what you like and what you don't like about them.

#### **Site structure diagram**

The site structure can be shown in a diagram, such as the one in the picture.



<sup>1</sup> This going back and forth between what you would like to and think should be done on the one hand and what is imposed by the assignment on the other (including non-functional requirements) emulates the real-life task of requirement gathering from a client.

<sup>2</sup> The structure is logical and can be represented using navigation elements in different ways. For example, a hierarchical navigation bar could include links to all the pages and be displayed on all the pages, allowing good overview and full navigability of the small site. Or links to pages could be placed only on parent (in the hierarchy) pages, in which case the logical structure would be embodied but would not be very user friendly, with the user having to navigate down level by level to discover the structure.

### Navigation element tables

The navigation design can be shown in a table such as those shown in the following examples.

Example 1 (based on the site structure in “Site structure diagram”) – A navigation bar includes links to all pages and is shown on all pages

Name of element	Description and links	Included in pages
Main navigation bar	Hierarchical navigation bar with the following elements and indentations: Home (target: index.html) Products (target: products.html) About (target: about.html) dvd (target: dvd.html) cd (target: cd.html) book (target: book.html) Contact (target: contact.html) Links (target: links.html)	All

Example 2 (based on the site structure in “Site structure diagram”) – The main navigation bar includes links to all higher level pages and is shown on all pages. The links to dvd.html, cd.html and book.html are only included on the parent page.

Name of element	Description and links	Included in pages
Main navigation bar	Navigation bar with the following elements: Home (target: index.html) Products (target: products.html) About (target: about.html) Contact (target: contact.html) Links (target: links.html)	All
Media link list	Text-based list containing the links: dvd (target: dvd.html) cd (target: cd.html) book (target: book.html)	about.html

### Part 1a Deliverable (5%) – Fri 10/11/2017 23:55

The deliverable is a document called “**structure\_and\_navigation**” in MS Word or PDF format, which you should **add to your CA2 git repository**. It should include:

- **[D1]** a list of user types (this will have only 2 or 3 items)
- **[D2]** a functional requirement list (a list of functions that will be provided by the completed website), indicating the user types with access to each function
- **[D3]** a site structure diagram (drawn in a tool such as Visio – see example in the picture “Site structure diagram”)
- **[D4]** a navigation element table, including all navigation elements and where they are found (see picture “Navigation element table examples” for how to do this)
- **[M4]** a section called “Contributions”, detailing the contribution by each group member

### **Part 1b: Page Design (5%) - Fri 10/11/2017 23:55**

This step is to design the layout of all the pages that feature in the site structure diagram. Page design should be consistent throughout the site. For each page:

- Sketch layout, indicating what is what (text, image etc.)
- Consider and indicate stylistic elements in the sketch (typefaces, colour scheme, etc.)
- Specify any images and other media content you plan to use (exact URLs or names not needed at this stage but rather descriptions “picture of flower here” etc.)

### **Part 1b Deliverable (5%) - Fri 10/11/2017 23:55**

The deliverable is a document in MS Word or PDF format, called “**page\_design**”. It should include

- **[D5]** images of draft designs for all the web pages from the structure diagram, each labelled with the name of the page it represents (when producing these sketches aim for visual and informational clarity – the format, whether scanned hand-drawings or software-produced pictures, is not important)
- **[M5]** a section called “Contributions”, detailing the contribution by each group member

### **Part 1c: Prototype in HTML and CSS (30%) - Fri 24/11/2017 23:55**

Build user website with HTML and CSS. You may use Twitter Bootstrap if you wish.

- **[I1]** The site should consist of at least **five** pages linked together.
- **[I2]** The website should include a **form** (use HTML5 fields)
- **[I3]** The website should include a HTML **table**
- **[I4]** HTML5 layout elements should be used

Incorporate the designed website into a Play Framework project.

- **[I5]** Some dynamic content should be present
- **[I6]** A site template should be used for common page elements (e.g. header, navigation bar, footer)
- **[I7]** The specified routes should be functional
- **[I8]** There should be no broken links on the website
- **[I9]** Navigation and other links should be dynamically generated from routes.
- **[IA]** The website must work as a whole i.e. provide reasonably good user experience

### **Part 1c Deliverable (30%) - Fri 24/11/ 2017 23:55**

Make sure that your CA2 git repository contains:

- **[M6]** the Play Framework project prepared as described this part (Part 1c)
- **[M7]** annotations indicating authorship in java, html and css files, e.g.:  
    // BEGIN Anna  
        // here the code written by Anna; make sure the annotations do not have spelling  
        // mistakes or they will be impossible to find  
    // END Anna
- **[M8]** a file called “contributions.txt” detailing the non-code contributions from each group member
- **[M9]** a file called “readme.txt”, in which any other relevant information should be placed

## **Part 2: Server side functionality (45%) - Fri 22/12/2017 23:55**

Add server side functionality implemented using Play Framework that meets these requirements:

- **[IB]** The website must include form handling and all the values submitted through the form must either be displayed on a page or saved to the database (or both) as part of it
- **[IC, ID, IE]** The server functionality must include create, delete and read operations on the database i.e. **CRUD** without the 'U' (update is optional) and these must be reflected in the user's view.
- **[IF]** At least one of the user types should be able to log-in and access parts of the website not accessible by other users

## **Part 2 Deliverable (45%) - Fri 22/12/2017 23:55**

At this stage your CA2 git repository should contain the final version of your Play Framework project, including the required server-side functionality described in this part (Part 2) and finalised versions of all previous deliverables. Use the checklist items (indicated with tags like this: **[X1]**) in this document, to make sure you have included everything that is required.

## **Part 3: Participation in the discussion forum during the project (10%)**

- Use this [link](#) to join the **Slack** website **wmdd1-itt**
- Use the **#general** channel for discussion relating to this assignment
- **[M9]** Take part
- **[MA]** Adhere to the following etiquette:
  1. When asking questions:
    - Make sure you have completed the labs relevant to the subject of your question before asking – the answer may be in the lab sheets!
    - Make every effort to solve the problem yourself before posing a question
    - The question should include the following:
      - ✓ A description of the context (e.g. html file, routes file, compile error)
      - ✓ A description of what you are trying to achieve and how
      - ✓ A description of what is actually happening
      - ✓ Screenshots of any error pages or relevant code (this can all be added in Slack)
  2. If you know the answer to a colleague's question, post it, clearly explaining the steps of the solution (I, JV, will also be following the Slack channel and answering your questions as soon as I can, but everyone is expected to contribute what they can)
  3. If you spend time on a problem and find a solution that you think your colleagues would benefit from knowing about, add it as a post on Slack
- Ongoing participation (see Part 3 for more information). The mark for this will be dependent on adherence to the etiquette (see Part 3 or post on Slack) and will be based on three equally valued types of contribution:
  1. Asking questions
  2. Answering questions
  3. Sharing useful information (e.g. solutions to problems you encountered)