Major Web Project

Part 2 – Design Implementation

The major Web project requires you to conceptualise, sketch and implement WordPress–driven ITU.film website (or other that you are developing) that is intended to deliver an optimal user experience on both desktop and mobile devices.

In Part 2 of the major Web project, you are asked to implement your designs from Assignment 1 as a working, fully functional, WordPress–driven site. You are required to use standards–compliant HTML and CSS to layout the site, and implement these layouts as a custom WordPress theme so that content can be deployed and updated. The layouts also need to be responsive so that they are optimized for viewing on both smartphone and desktop devices.

The objectives of the assignment are as follows:

- Construct layouts and web pages using best practice HTML5 and CSS3.
- Employ Responsive Web Design techniques to produce optimized layouts for smartphone and desktop devices.
- Familiarise yourself with the WordPress blogging platform.
- Understand the process of WordPress theme development, and to construct a fully functioning site based on a custom theme.

This assignment is worth 35% of the subject mark. It is due Friday Week 16, 5:00 PM (namely, Friday April 17, 2015).

This is a large assignment. We recommend you start early.

This assignment forms the technical component of the major Web project. You will be assessed on your ability to demonstrate your understanding of HTML, CSS and the WordPress templating system.

Although the laboratories up to Week 16 are intended to assist you with some of the key technical aspects of the assignment, we expect a certain degree of independent learning for the completion of this assessment. Specifically, we encourage you to:

- Attend and follow the laboratories — they are there to help you learn and practice the required skills you need to complete this assessment.
- Refer to the lecture slides, laboratory materials and sample code on LearnIT.
- Refer to the WordPress codex, an excellent and well-documented resource for WordPress theme development: http://codex.wordpress.org/Theme_Development and http://codex.wordpress.org/Page_Templates for the more ambitious

The assignment is divided into three parts and should be completed in the following order:

- Part A — Produce desktop-only static HTML and CSS mock-ups (15 marks)
- Part B — Optimize your mock-ups for smartphone devices using responsive design (9 marks)
- Part C — Implement your HTML and CSS mock-ups as a dynamic, WordPress-driven site (11 marks)

Part A – Produce desktop-only static HTML and CSS mock-ups (15 marks)

The first part of this assignment requires you to implement your designs using HTML and CSS for the desktop version of the site. Completing this part of the assignment should result in HTML and CSS mock-ups, i.e., static pages of your design implemented in HTML and CSS with appropriate placeholder content.

After you have completed this part of the assignment, your site should look like a proper movies website, i.e., you are expected to provide placeholder content that you can get from the actual ITU.Film site, another similar movies site, or other online resources including:

- IMDB for movie synopses, reviews and information about directors and actors: http://www.imdb.com/
- Rotten Tomatoes for film reviews, etc: http://www.rottentomatoes.com/
- From other cinema web/sites like http://www.kino.dk or http://valbykino.dk or others.

You are required to implement the THREE designs for the DESKTOP version of the site that you have created in your first Assignment.

The marking criteria is as follows:

- Implementation of the THREE desktop designs from Assignment 1, each being 2 marks each. For this component, you will be assessed on the degree of completeness of your HTML and CSS implementation. (6 marks)
- Quality of code, understanding of HTML and CSS, correct usage of elements and style rules, robustness of design, appropriateness of placeholder content (5 marks).
    - A site that has clear, well-documented code that demonstrates understanding of HTML and CSS with appropriate placeholder content will result in a higher mark for this component.
    - A site that has obscure, poorly documented code that demonstrates a lack of understanding of HTML and CSS with irrelevant placeholder content will result in a lower mark for this assessment.
- Adherence to the visual designs from Assignment 1 (4 marks)
    - An HTML and CSS implementation that matches, or closely matches your design will receive full marks for this component.
    - An HTML / CSS implementation that looks and feels completely different to your design will result in a lower mark for this component.

Part B – Optimize your mock-ups for smartphone devices using responsive design (9 marks)

The second part of this assignment requires you to modify your CSS so that your page mock-ups from Part A are optimized for viewing on mobile devices. You are required to do this by following a Responsive Web Design approach, specifically via the use of `@media` queries.

For this part you _must not_ create new, separate HTML and CSS pages. Instead, you must _modify_ the CSS for the pages that you've created in Part 1 so that they are responsive, i.e., their layouts change in response to the width of the browser's viewport. Since the width of the browser's viewport is different for mobile, tablet and desktop devices, this will result in a layout that is adaptive for a wide range of mobile devices. Your responsive design needs to target smartphones and desktop devices only. You do not need to implement a responsive design that targets tablet devices but note that the principle is the same. Implement the response design to your own SmartPhone's screen resolution.

You must use CSS `@media` queries to implement your responsive design. You cannot use browser-sniffing or other feature detection methods but you should maybe investigate what these are.

There may be cases where your mobile designs from Assignment 1 do not correspond exactly to their desktop counterparts: for example, you may have produced a 'Home', 'About Us' and 'Now Showing' page designs for the desktop version of your site, and 'Home', 'About the Venue' and 'Past Films' page designs for the mobile version of the site. In cases such as these where your desktop and mobile designs don't match, you will be required to implement _smartphone-optimized versions_ of your desktop designs – even if you didn't produce wireframes and visual designs for these pages in Assignment 1. This is because, for this part of the assignment, you are directly modifying your desktop HTML and CSS pages from Part 1 so you may have not anticipated this process now being requested in Assignment 1, namely reusing the CSS from the desktop designs.

The marking criteria is as follows:

- Modifying your THREE HTML / CSS layouts from Part A of the assignment so they are optimized for viewing on mobile devices using media queries, 3 marks each. (9 marks)
  - For this component, you will be assessed on the quality of code, your understanding of CSS and media queries – specifically in the context of responsive web design for

smartphone devices, and the soundness and appropriateness of your smartphone optimized layouts.

- o If your implementation demonstrates an understanding of Responsive Web Design principles, CSS and media queries, and that the layout changes induced by your media queries are functional and non-trivial (i.e., they actually alter the site to provide an optimal viewing experience on mobile devices), then you will receive a high mark for this component of the assessment.
- o If your implementation demonstrates a lack of understanding of Responsive Web Design principles, CSS and media queries, and that the layout changes induced by your media queries are trivial (e.g. they may just simply alter the width or font-size of the existing layout without actually providing an optimal viewing experience for mobile devices), then you will receive a lower mark for this part of the assessment.

Part C – Implement your HTML and CSS layouts as a responsive, WordPress-driven site (11 marks)

WordPress is a powerful blogging platform and content-management system that can be used to run content-driven websites. WordPress provides 'back-end' functionality that allows end users to easily create and update content on their website while using themes to control how a site looks and feels. Themes allow the ability to switch how a site looks and feels without altering the information structure or content of a site. *Custom themes* can be built to create completely customisable, content-driven WordPress sites. The final part of the assignment requires you to implement your HTML and CSS layout as a fully functioning WordPress theme.
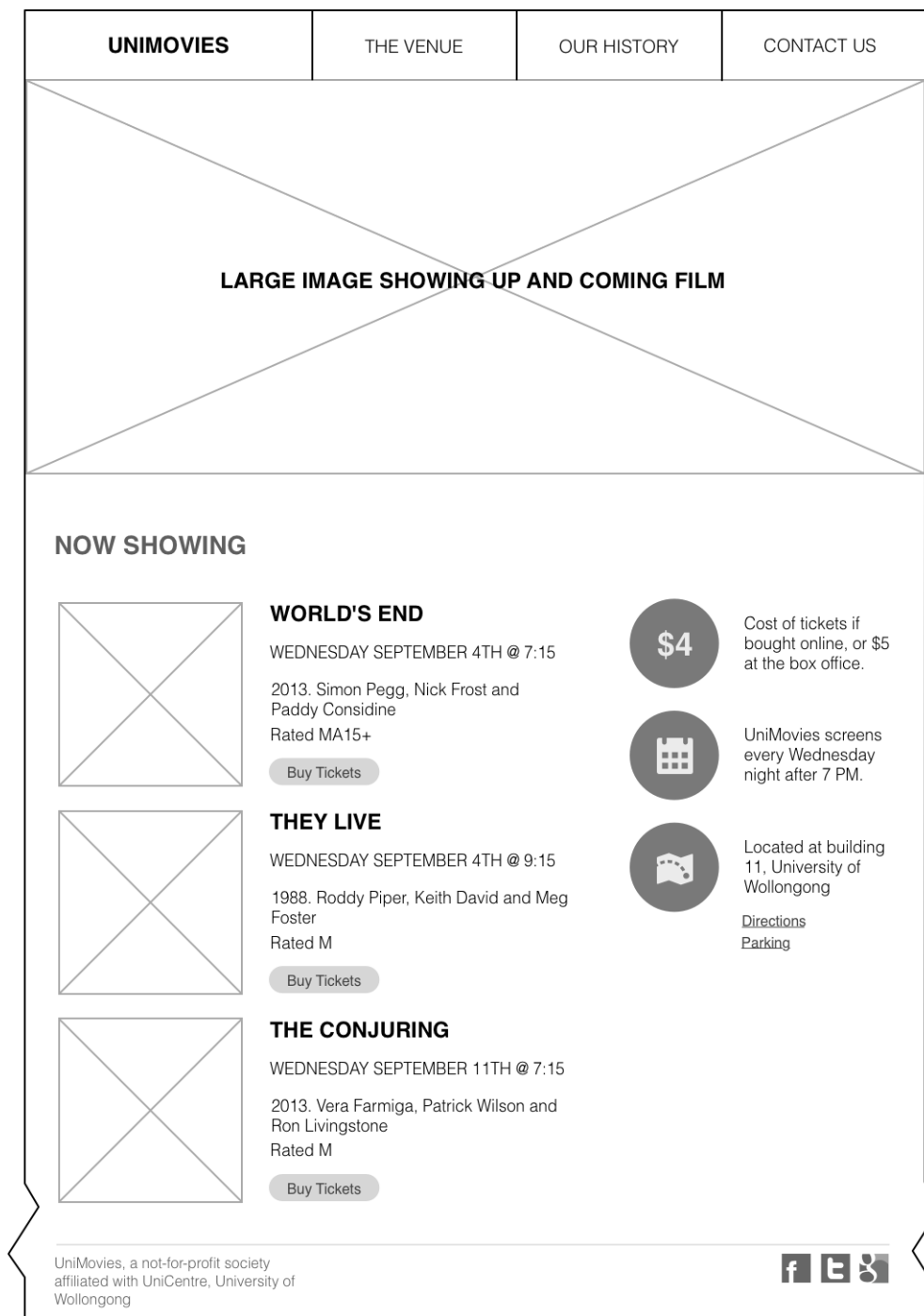
In order to understand how you can implement your assignment using the WordPress platform, it is important to understand the types of content that it manages. Specifically, WordPress presents two main types of content:

- *Posts* represent frequently occurring, time-based content, such as blog posts and news articles, most commonly presented in reverse order that they were created. Newest posts usually appear first.

- *Pages* represent separate pages or sections of a site that may be updated only occasionally.

A museum website built using WordPress, for example, may use *posts* to present news and information about up and coming exhibitions and other events, because these events frequently occur and are *time-based*. Likewise, more static sections of the site, such as the site's *About* or *Contact Us* sections, may be presented as *Pages* –

these aspects of the site, while they may be updated from time-to-time, are not as time-based as events and exhibitions.

To further convey how you might implement this part of the assignment, the following sample site wireframe of a Uni film website (one from a couple of years back) is provided. The sample site wireframe demonstrates what a re-designed home page might look.

| **UNIMOVIES** | THE VENUE | OUR HISTORY | CONTACT US |

LARGE IMAGE SHOWING UP AND COMING FILM

NOW SHOWING

WORLD'S END

WEDNESDAY SEPTEMBER 4TH @ 7:15

2013. Simon Pegg, Nick Frost and Paddy Considine
Rated MA15+

Buy Tickets

THEY LIVE

WEDNESDAY SEPTEMBER 4TH @ 9:15

1988. Roddy Piper, Keith David and Meg Foster
Rated M

Buy Tickets

THE CONJURING

WEDNESDAY SEPTEMBER 11TH @ 7:15

2013. Vera Farmiga, Patrick Wilson and Ron Livingstone
Rated M

Buy Tickets

$4 — Cost of tickets if bought online, or $5 at the box office.

UniMovies screens every Wednesday night after 7 PM.

Located at building 11, University of Wollongong

Directions
Parking

UniMovies, a not-for-profit society affiliated with UniCentre, University of Wollongong

Sample wireframe of the home page of a re-designed ITU.film website.
This is a sample only. Do not base your WordPress theme on this design.

WordPress provides the ability to present the *information content* of a site in the form of *posts* and *pages.* If we observe the **information content** of the above site wireframe, we could take note that:

- The *Now Showing* section of the page represents frequently updated, time-based content presented in chronological order. We could use *Posts* to present this kind of content. These posts also contain *featured images* that showcase a thumbnail of each up and coming film.
- The navigation bar at the top of the design links to different sections of the site — *The Venue, Our History* and *Contact Us* — that may be updated from time-to-time. We could use *Pages* to present this kind of content.
- The design also contains a large image at the top of the page that presents an enticing preview, showing a film still or poster of an up and coming film. We can use a *featured image* or *featured header image* to present this kind of content.
- The site contains relatively static sections, such as the content area to the right of the page that describe where the ITU.film is and how much the tickets or membership cost (nothing is my guess). As these aspects of the site are not likely to change much over time, they could be embedded 'directly' into the WordPress theme.

We can also observe the **structure** of the above site wireframe:

- The site's *header* section consists of its top-navigation menu and featured image.
- The main *body* or *index* section of the site is represented by the series of *posts* in chronological order — the films listed under the site's *Now Showing* section.
- The static *sidebar* section that contains information about the cost of tickets and the location of the venue.
- The site's *footer* section at the bottom of the page.

A custom-built *WordPress theme* is constructed from a series of *templates* that present different aspects of its *information content*. In WordPress, separate templates may exist for:
- Presenting home-page content, such as index of the latest posts, or in this case, the list of *Now Showing* films, `index.php`, `home.php` or `front-page.php`.
- Presenting the header content of a site that may also contain a site's navigation — `header.php`.
- Presenting the footer section of a site — `footer.php`
- Presenting single, individual *posts* of a site — `single.php`
- Presenting single, separate *pages* of a site — `page.php`.
- Use the native Menu plugin in Wordpress and implement that in the theme (if you need and use a menu).

For this part of the assignment, you are required to implement your ITU.Film site as a WordPress-driven site with a custom theme based on the static HTML and CSS mock-ups that you have produced in Parts A and B of the assignment.

Details and examples on how to do this will be demonstrated in the tutorials in the coming weeks via the on-going *Anonymous Museum* example.

The marking criteria is as follows:

- Dynamic site content is presented in the form of *pages* and *posts*, where appropriate. (4 marks)
    - You are not permitted to use static pages to present your content. Your WordPress theme needs to be built in a way so that all *page* and *post* – type content can be created and embedded within the WordPress dashboard, i.e., not embedded within the theme itself.

- Correct use of template system (7 marks), specifically:
    - Use of the index template `index.php`, `home.php` or `front-page.php` to present home or generic page content (1 mark).
    - Separation of site structure and common elements into `header.php`, `footer.php` and `sidebar.php` (where appropriate) (2 marks)
    - Correct and appropriate implementation of the *WordPress loop* to present an index of chronologically ordered site content (2 marks).
    - Correct and appropriate implementation of a WordPress template to display individual *post* items using `single.php` (1 mark).
    - Correct and appropriate implementation of a WordPress template to display individual *pages* using `page.php` (1 mark).
    - Marks will not be awarded for inappropriate use of the WordPress templates, or for implementations that demonstrate a lack of understanding of the WordPress templating system.

Submission Guidelines

The assignment is due for submission on Friday of Week 16 which is Friday 17th April 2015 at 17:00.

Parts 1 and 2 of the assignment require you to produce static HTML and CSS files. These HTML and CSS files should be submitted as a ZIP file on LearnIT.

- Please ensure that your files are submitted to LearnIT no later than Friday 17th April 2015 at 23:55.

Part C of the assignment requires you to create a WordPress theme based on your HTML and CSS files. We will examine your WordPress theme as it resides on your directory on frwaw.itu.dk. There is no need to submit your theme files to LearnIT.

- It is your responsibility to ensure that you upload your theme files to frwaw.itu.dk by the due date if they are not already on there.

- Your theme must be activated as the current theme on your WordPress installation, and therefore your theme must reside as a folder within WordPress's /wp-content/themes. Your theme and ITU.Film site should be viewable by the public by navigating to your site's URL on http://studentname.frwaw.itu.dk/. *It is not acceptable to simply put theme files as a stand-alone directory or ZIP file on* frwaw.itu.dk

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Feb 27, 2015