

# **Open Source Content Management Systems: A case study using WordPress**

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## **Abstract**

This thesis concerns the creation of a dynamic website that will act as the main page for the department of Mechanical Engineering of the University of Applied Sciences of Piraeus. As an educational institution website, it contains information about all the courses of the department and the study structure as well as functions that help teachers and the administration department in managing announcements and news and also information handling towards students regarding the department issues. For the creation of the website we used the open source Wordpress Content Management System.

## **1. Introduction**

In today's modern educational system, having a website that is functional and dynamic is a standard for any self-respecting institution. Content management systems provide a fitting solution to the need for appealing, high end design. WordPress, one of the world's most popular Open Source CMS is an ideal fit for the purpose of creating a modern website for an educational institution since it has features that give the more advanced user the freedom to modify the portal to the client's needs and it is also very easy to use in order to post articles, news and updates, even for users with little technical knowledge on web development.

## **2. Overview**

This thesis has focused on explaining the various aspects of the modern web as well as some of its history, before trying to investigate what is web development, analyzing the tools developers have in their disposal. We make an effort to go through the most popular technologies, including, but not limited to, HTML, PHP, CSS and JavaScript and provide definitions as well as examples on those tools.

We then explain what Content Management is and we focus on Content Management for the Web and we analyze the various Content Management Systems that exist, pointing out the usage of the most popular ones that are available to us. We try to give a glimpse on the history of WordPress and how it became one of the most popular Systems around and we justify why we picked this over the thousands of other Web CMSs that were on the Open Source market.

Lastly, we described the process through which we created the webpage, step by step, trying to spell out everything, from the smallest detail to the most obvious

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element, in order for everyone reading this paper to be able to recreate the result, be that for another educational institute, or even for a website of his own design.

### **3. Experimental Results**

By using the WordPress software in order to create a fully functional website, I realized its advantages over other Content Management Systems, as well as the advantage of using a Content Management System instead of trying to create something so massive and dynamic by writing it in code (HTML, CSS, PHP). Not only did I gain a lot of experience on the modern way of web development, I also understood the various aspects of content management and the features of WordPress in particular .

### **4. Conclusions**

In this thesis we used the WordPress software to modernize and rebuild the website of the Department of Mechanical Engineering of the University of Piraeus TT. WordPress is a personal publishing system that uses a PHP and MySQL platform. The platform provides everything we may need to create our own website and to publish our material. It is particularly important that WordPress is easy to use for both people with programming skills, giving them the ability to create additional functionalities by creating their own plugins, as well as for those without the necessary expertise regarding the issue of web development. So this particular site we created will remain as a useful tool for the Mechanical Engineering Department members, allowing them to display and edit the contents of their pages, without the need for specialized external assistance.

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