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## **WORDPRESS WEBSITE DEVELOPMENT**

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Bachelor's thesis  
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Information Technology  
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## ABSTRACT

Oulu University of Applied Sciences  
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The aim of this Bachelor's thesis was to develop a WordPress mobile-first style website for the customer, Pohjois-Suomen Pesis. The main purpose of the development was to learn website designing principles and create a responsive website for the mobile and desktop platforms.

The development process began defining the requirements of the website and creating the requirements document. Then next step was learning how to design a website layout and to choose the colour scheme for the site. The website was constructed by WordPress and Bootstrap.

The result of the website was as desired. The website scaled all the different platforms, and all the required requirements were fulfilled.

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Keywords: WordPress, Bootstrap, responsive website

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## VOCABULARY

|       |                                 |
|-------|---------------------------------|
| CSS   | Cascading Style Sheet           |
| FTP   | File Transfer Protocol          |
| HTML  | Hyper Text Markup Language      |
| JS    | JavaScript                      |
| MySQL | Open-Source Database            |
| Unzip | Extract file from a zip archive |
| URL   | Uniform Resource Locator        |

# 1 INTRODUCTION

The aim of this thesis was to create a responsive, mobile-first style website for an association because the use of mobile devices, like smartphones and tablets, has grown in the recent years so much that almost everyone has some smart mobile device. This trend allows people to use the Internet nearly everywhere because there are comprehensive mobile networks and free Wi-Fi networks in public places. Hence, organisations need to keep up on trend and upgrade their websites working correctly on mobile devices so that their customers will get an enjoyable experience with their website on mobile devices and desktops.

The work started by defining the requirements of the website with the executive director of the association. We decided to use WordPress publishing platform because the previous website of the association was created by WordPress. For that reason, the executive director was already familiar with the publishing platform, and he knew how to use it. The next step was designing a website layout, which should be user-friendly and easy to use by every mobile device and desktop. After creating a clear design, it was easy to code the front-end of the website layout.

The organisation for which the thesis work was done is a registered association called Pohjois-Suomen Pesis. Pohjois-Suomen Pesis is an association in northern Finland, it promotes Finnish baseball and encourages playing it in the northern Finland. Also, it organises competition events and other Finnish baseball events.

## **2 PLAN**

Planning is the first and the most important thing to do before starting to build a website. “Building a website without a plan is like constructing a building without blueprints” (1). Without a plan, the website will be a maze to a customer, things are in the wrong places, and there are too many features. The plan identifies the purpose of the website, assigns team roles, and identifies the structure of the website. After it has been decided what pages the website will contain the mock-up of the website could be sketched. The next step is designing the website and the last but not the least step is testing the website and ensuring that the appearance of the website is in a necessary way in all browsers. (1.)

The project was started by defining the requirements of the website with the executive director of the association. The next step was planning and creating a sitemap for the website. After creating a sitemap, it was time to sketch some mock-ups and with the mock-ups create the website design.

### **2.1 Requirements document**

The requirements document contains all functional and non-functional requirements of the website. The document should be written in the future tense because it is established before development. Before starting any coding, it is important to determine requirements because then there is a guide to follow, ensuring that the website meets its specifications.

The very first version of the requirements document was created in the meeting with the executive director. In that meeting, we decided that the website will be built on WordPress, and the website needs a new domain name and a new web hosting server. Also, features of the website should be at least the same as the previous version of the site, and it has to work flawlessly on mobile devices and desktops. After the meeting, I created the first version of the requirements document. When the first version of the document was ready, I sent it to the executive director and he added one important requirement to the document which



was that the website should contain a member area where he could share all documents from meetings with other board members. Also, board members should have an own login system.

### **2.1.1 Functional requirements**

Functional requirements specify what website should do. In our case a functional requirement could be: (2)

- The web application shall be able to let the user share news to social media.

### **2.1.2 Non-functional requirements**

Non-functional requirements describe system attributes like reliability and usability. In our case a non-functional requirement could be: (2)

- The web application shall be easy to use with every mobile device and desktop.

## **2.2 WordPress**

WordPress is a free and priceless web software you can use to create a website, a blog or an application. You can transform your website into almost anything that you can imagine, thanks to thousands of plugins and themes available. (3.) “The core software is built by hundreds of community volunteers” (3). WordPress is used by over 60 million websites and therefore, it is the most popular blogging system in use on the web. (4.)

WordPress was already used in the older version of the website. Therefore, the executive director knew how to use the platform, and it was logical and easy to stay on WordPress.

## 2.3 Bootstrap

“Bootstrap is the most popular open source HTML, CSS, and JS framework for developing responsive, mobile first projects on the web. Bootstrap makes front-end web development faster and easier” (5). Bootstrap is designed for everyone and every device because it easily scales your websites and applications working for every mobile and desktop platform with a single code base. Millions of websites are built with Bootstrap, for example Vogue and NASA see figure 1.

(5.)

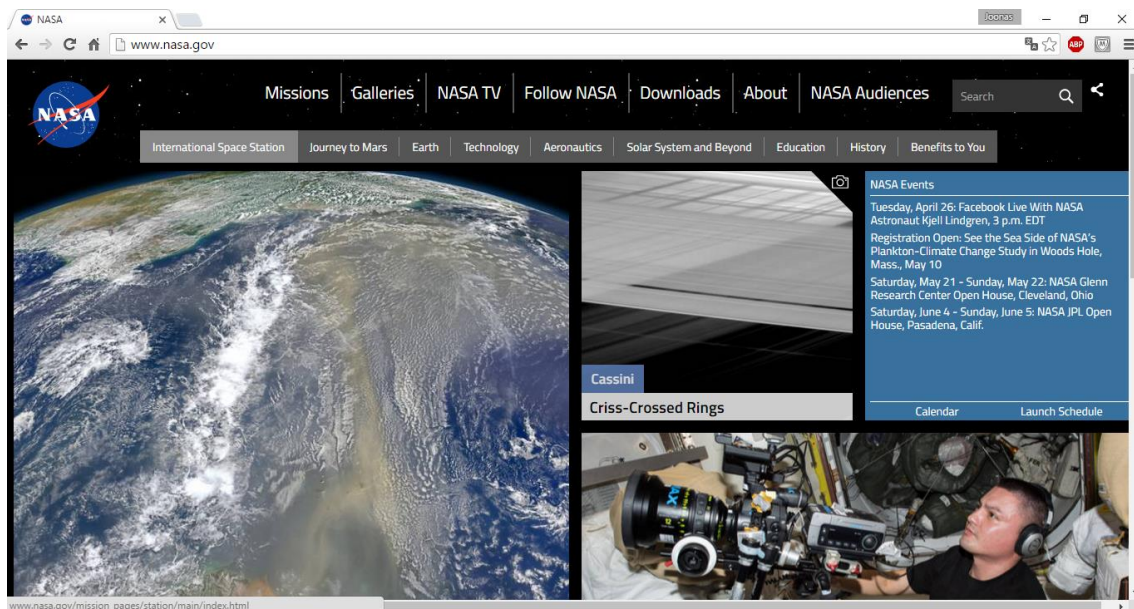


FIGURE 1. NASA's website landing page (6.)

The author of this thesis had made earlier a couple of website front-ends with Bootstrap, he knew that Bootstrap is a powerful framework and had only positive experiences of using it. Therefore, it was an easy decision to build a front-end of the website with Bootstrap.

## 2.4 Web hosting

Web hosting is a service that allows companies and private persons maintain and share their websites via the World Wide Web (7). Web hosting usually contains email accounts with their own domain part which is generally the same as a wanted domain name.

The Internet is overflowing all kinds of web hosting providers. The biggest difference between providers is price and features. Usually, when the provider price is higher, the features are better than those of the low-cost provider. Sometimes the price of one service of one provider may be much higher than that of another whereas the features are much worse. That is exactly how the former web hosting provider of Pohjois-Suomen Pesis was, expensive with poor features. After checking up all kinds of web hosting providers, we ended up choosing a provider called Suncomet. Suncomet suited up perfectly to our purpose with a low price and encompassing features.

**Suncomet** is a Finnish company, which was established in 2001. It offers their customers web hosting, domain name and server services with quality and very affordable prices. (8.)

### 2.4.1 Domain name

A domain name known as a web address, is a service which allows web addresses of companies and brands to be in a recognisable form. Web addresses would be too hard to remember without a domain name servers, like e.g. 194.485.249.1. With a domain name, you can use a personal name or word on your website and email addresses. (9.)

Pohjois-Suomen Pesis needed a new domain name because of the previous domain name, [www.sporttilinja.com](http://www.sporttilinja.com), was too misleading. It was easy to get a new domain name while buying a new web hosting service. Luckily, a wished and much more recognisable domain name, [www.pohjois-suomenpesis.fi](http://www.pohjois-suomenpesis.fi), was available.

## 2.5 A sitemap

A sitemap is a planning tool which helps to organise and clarify a website structure. It helps you decide which sites need to be on your website and to exclude unwanted pages. A sitemap is usually a flowchart or a draft of the content that your website needs and it should be a starting point for your new website design. (10.)

A Slickplan sitemap design tool was used to create a flowchart sitemap (figure 2) for the website. It contains all main pages and subpages of the website. Slickplan is a web app, which allows you to plan any website project. You can plan everything from your website's sitemap structure to a user flow. Slickplan has a 30-day free trial period. (11.)



FIGURE 2. The sitemap of the website created by Slickplan

## 2.6 Schedule

Scheduling is a crucial part of managing projects. Without scheduling, the project will not complete in time. Scheduling describes a guidance and a pathway for a project to run. Scheduling defines certain milestones that need to be achieved on time for a successful completion of a project. "Monitoring the schedule provides an idea of the impact the current problems are having on the project and provides opportunities to enhance or reduce the scope of a mile-

stone in the project” (12). It also provides feedback on how the project is progressing and if there are issues that need to be dealt with or if the client needs to be told about a delay in delivery. (12.)

## 3 DESIGN

Creating a website design was a new thing to the author. He had to learn how to create a colour scheme for a website. Luckily, he found on the Internet an excellent article about a colour theory written for people who are just starting to learn formal design principles (13).

### 3.1 Colour theory

Colour theory is “the interaction of colours in design through complementation, contrast, and vibrancy.” (13.)

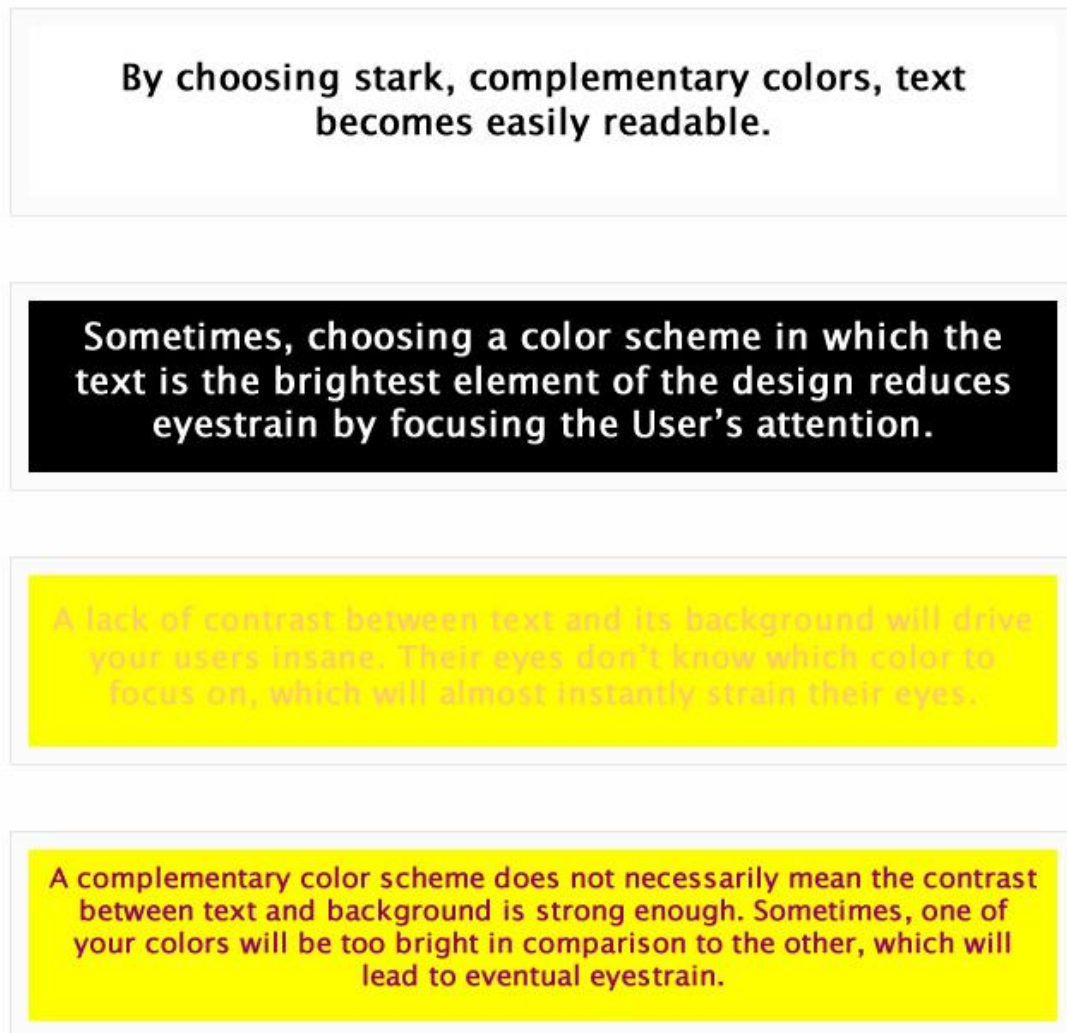
“**Complementation** refers to the way we see colors regarding their relationships with other colors. When colors occupy opposite ends of the color spectrum (figure 3), they lead people to consider a design visually appealing by establishing a happy medium the eye can reside in. Rather than straining to accommodate for a particular area of the color spectrum, the eye is provided with balance.” (13.)



*FIGURE 3. Colour spectrum (14.)*

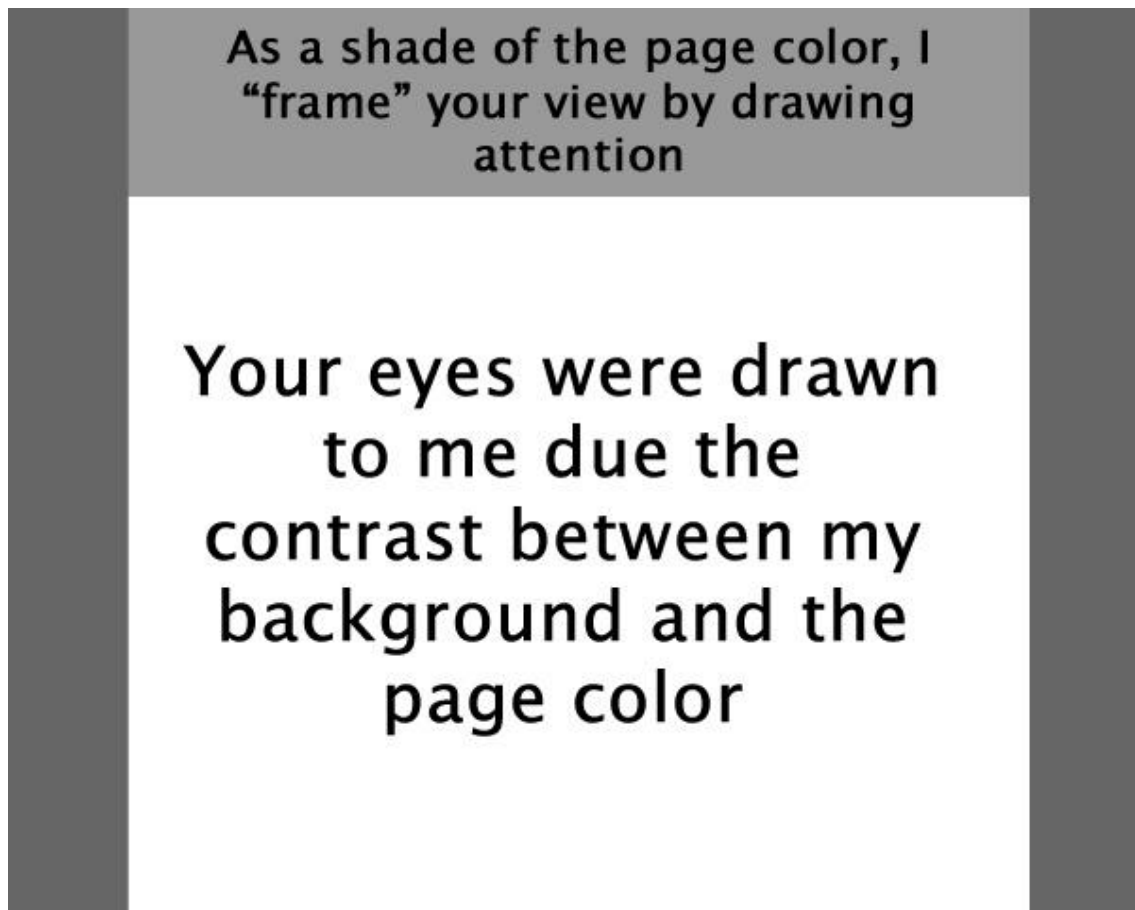
“**Contrast** reduces eyestrain and focuses user attention by clearly dividing elements on a page. The most common example of contrast is a powerful selection

of text and background color” see figure 4 (13).



*FIGURE 4. Contrast between background and text colour (13.)*

The best way is usually to choose a very light colour for the background and a very dark colour for the text. You can also draw the viewer's attention towards a specific part of the page with a contrast as shown in figure 5. (13.)



*FIGURE 5. Contrast between background and the page colour (13.)*

**Vibrancy** determines the emotion of your design. Brighter colours lead the user to feel more energetic of your website. Brighter colours are typically used in advertising a product. Darker colours are commonly used when you want the user to relax and allow their mind to focus on other things. (13.) “CNN’s website (figure 6) features a stark red banner across the top, which leads to heightened emotions from users as they are stimulated by the vibrancy of the design (and the contrast between red, white, and black- the primary colour scheme of the



website)” (13).



FIGURE 6. CNN's website (13.)

### 3.1.1 Colour scheme

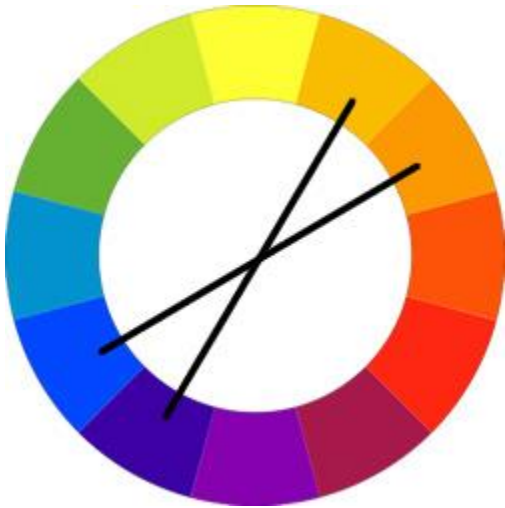
Triadic, compound, and analogous colour schemes are three commonly accepted structures for a good colour scheme. (13.)

**Triadic colour scheme** (figure 7) is “composed of 3 colors on separate ends of the color spectrum” (13). “By using an Equilateral Triangle, you can ensure the colors have an equal vibrancy and compliment each other properly” (13).



*FIGURE 7. Triadic colour scheme with equilateral triangle (13.)*

**Compound colour scheme** (figure 8) “is based on providing a range of Complementary Colors: two colors are chosen from opposite ends of the color spectrum” (13).



*FIGURE 8. Compound colour scheme (13.)*

**Analogous colour scheme** (figure 9) “is based on a careful selection of colors in the same area of the color spectrum. Usually, the colors are differentiated by their vibrancy, and their contrast” (13), e.g. shades of yellow and orange shown in figure 9.



*FIGURE 9. Analogous colour scheme (13.)*

Luckily, there are a few tools on the Internet which make it to create a colour scheme. With these applications, it is possible to learn how to apply colour theory principles without becoming frustrated when things are not working as wanted. (13.)

### **3.2 Choosing the colour scheme**

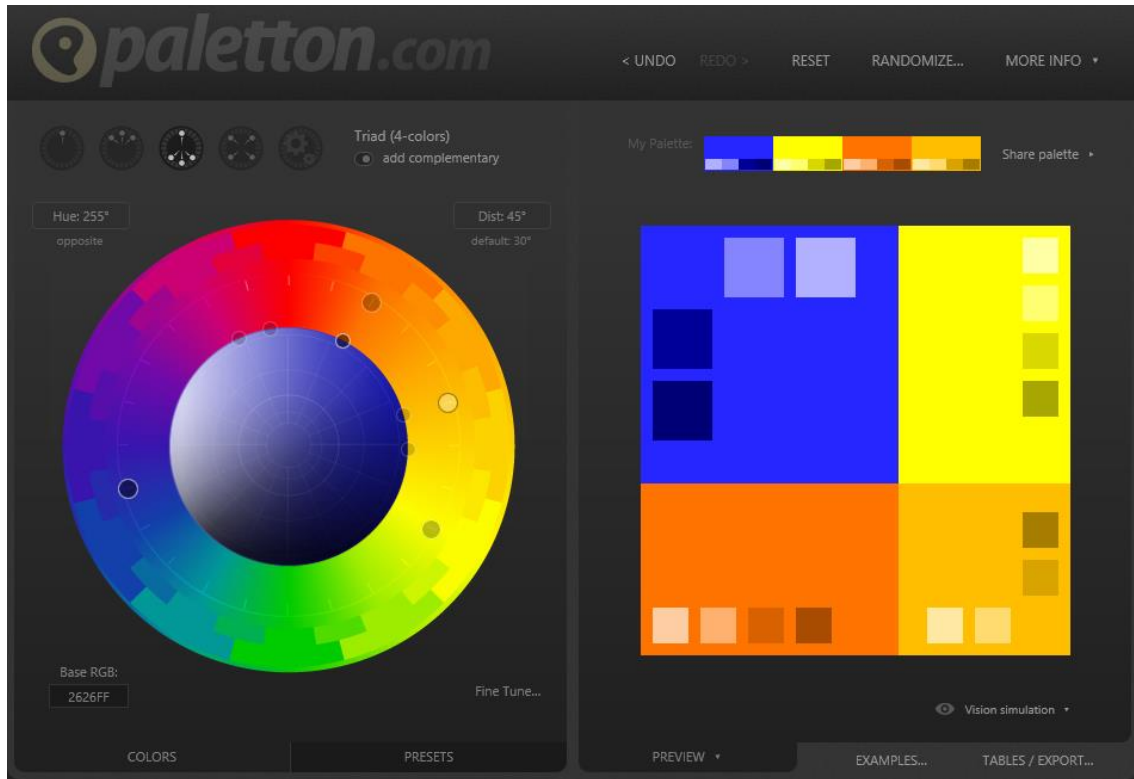
After learning colour theory basics, the author had to choose the colour scheme for the website. It was logical to choose colours of the company logo (figure 10) for the website colour scheme because usually a website colour scheme is based on the colours of the company logo.



*FIGURE 10. Logo of the company*

At first, Adobe Color CC web application was used to create a colour scheme for the website because Adobe Color CC can create a colour scheme from the

picture. After creating the colour scheme with Adobe Color CC, the blue base colour of the colour scheme was taken and a triadic colour scheme (figure 11) with the web application called Paletton was created. Paletton is easier to use than Adobe Color CC, and it is possible to save your colour scheme without registration.



*FIGURE 11. Triadic colour scheme for the website*

The website base colour is a shade of blue. Therefore, the first primary colour is a shade of yellow and the second primary colour is a darker shade of orange. The complimentary colour is a lighter shade of orange. (15.)

### **3.3 Creating the design**

Structuring the layout and creating the mock-up for the landing page is the first steps of creating the website design. Inspiration for the landing page layout was searched on the Internet. The biggest websites for inspiration were lippo.fi and superpesis.fi. Lippo.fi had a great news feed style shown in figure 12 and the





FIGURE 13. Superpesis.fi layout design

The second phase was creating the design for the website. The author had seen a couple of designs created by Photoshop, therefore, he also used Photoshop for creation. He created designs for the landing page (figure 14), article page (figure 15) and contact information page (figure 16).

The background colour of the website is white and the text colour is dark blue because of the contrast between those colours. It is much easier to read the dark colour text on a white background. Navigation and footer colours are a darker shade of blue, like this, we can draw a user attention to the news. Every page has a navigation bar on top of the page. Also, every page has the logos of the partners and the footer on the bottom of the page. The company logo and search button are on the navigation bar.

The landing page (figure 14) is divided into three vertical sections. Two first sections are for news, and the last one is for social media feeds and for the events



calendar. Every news has social sharing buttons, so a user can quickly share interesting news in their social networks.




FIGURE 14. Landing page design

The article page (figure 15) has two vertical parts; one is two-thirds of the page, and the other is one-third. The bigger area is for the news, and the smaller one is for the news archives, where a user can search the old news by year and month. This page also has social sharing buttons.

[Etusivu](#)
[Pöytäkirjat](#)
[Harrastepesis](#)
[Tuomarit](#)
[Koulutus](#)
[Leirit](#)
[Seurat](#)
[Materiaalisalkku](#)
[Yhteystiedot](#)

## Tero Haipus palasi johtokuntaan !

Julkaistu 5.11.2015






[Facebook](#)
[Twitter](#)
[LinkedIn](#)

**ARKISTOT**

- ▼ 2015 (52)
- ▼ Joulukuu (1)
- Lähden osuilleni
- marraskuu (15)
- lokakuu (18)
- syyskuu (12)
- elokuu (14)
- heinäkuu (11)
- kesäkuu (15)
- toukokuu (10)
- huhtikuu (14)
- maaliskuu (14)
- helmikuu (12)
- tammikuu (16)
- 2014 (113)
- 2013 (110)
- 2012 (10)

Pohjois-Suomen Pesis ry:n syyskokouksessa ke 4.11.15 Oulussa hyväksyttiin vuoden 2016 toiminta- ja taloussuunnitelma sekä valittiin 3 henkilöä kausiksi 2016-2017 johtokuntaan.

Martti Holma Kempelästä ja Esa Pietiläinen Oulaista valittiin uudelleen tehtäviinsä ja "tulena" toimijana valittiin Tero Haipus Mutukoselta. Tero toimi Pohjois-Suomen Pesis ry:n hallituksessa yhdistyksen alustaa vuosiina 1999-2000 jolloin hän toimi yhdistyksen varapuheenjohtajana. Nyt tämä uusi pesti on vuosiksi 2016-2017. Tervetuloa Tero takaisin.

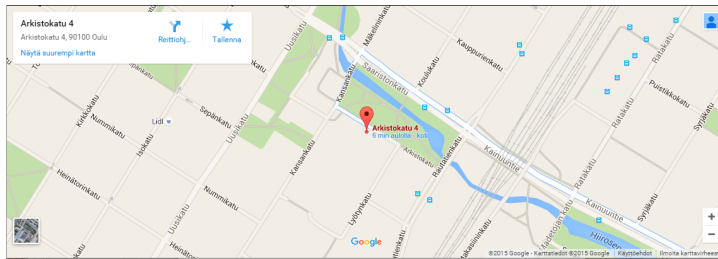
Copyright © 2015 Pohjois-Suomen Pesis

FIGURE 15. Article page design

On the top of the contact information page (figure 16) there is a map, which shows the location of the company office. The map is created by Google Maps. Under the contact details is a contact form.



## Yhteystiedot



### Pohjois-Suomen Pesis ry.

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# OTA YHTEYTTÄ BOKSI



FIGURE 16. Contact information page design

## 4 IMPLEMENTATION

### 4.1 Setting up WordPress

Installing WordPress is quite easy because nowadays web hosting servers have a quick installation for web applications. The author did not want to use quick installation, instead he installed WordPress manually. A manual installation is slightly harder. First, you have to download the newest version of WordPress on their website, [wordpress.org](http://wordpress.org). Then you need to unzip the downloaded file and move it to the web server via the FTP client. You have to create a new database on your web server for WordPress before you can start the installation. At the beginning of the installation, you need to run the WordPress installation script by accessing the URL via a web browser. The URL you want to access is your WordPress directory name. If you moved all the files in the root directory, you could access the installation page by <http://example.com>. If you moved the whole folder called “mywebsite” to your web server, you could access the setup page by <http://example.com/mywebsite>. As all WordPress were moved files to a root directory of the web server, the configuration file was accessed by <http://www.pohjois-suomenpesis.fi>. (16.)

The first thing you have to do when running the installation script is filling the database form (figure 17). In the form, you need to enter the name of the created database, your MySQL username, and your MySQL password. Database Host and Table Prefix fields can be left unchanged.



The image shows the WordPress database configuration form. At the top is the WordPress logo. Below it is a note: "Below you should enter your database connection details. If you're not sure about these, contact your host." The form contains five input fields, each with a label, a value, and a description:

| Field Label   | Value     | Description  |
|---------------|-----------|--|
| Database Name | wordpress | The name of the database you want to run WP in.  |
| User Name     | username  | Your MySQL username  |
| Password      | password  | ...and your MySQL password.  |
| Database Host | localhost | You should be able to get this info from your web host, if localhost does not work.    |
| Table Prefix  | wp_       | If you want to run multiple WordPress installations in a single database, change this. |

At the bottom left of the form is a "Submit" button.

FIGURE 17. Database form (16.)

In the next form (figure 18) the title of the website, a decide admin username and password and your e-mail address are given. Also, you need to decide if

you allow search engines to find your website.



The image shows the WordPress installation 'Information needed' form. At the top is the WordPress logo. Below it is a 'Welcome' section with a horizontal line. The text says: 'Welcome to the famous five minute WordPress installation process! You may want to browse the [ReadMe documentation](#) at your leisure. Otherwise, just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.'

Below this is the 'Information needed' section, also with a horizontal line. The text says: 'Please provide the following information. Don't worry, you can always change these settings later.'

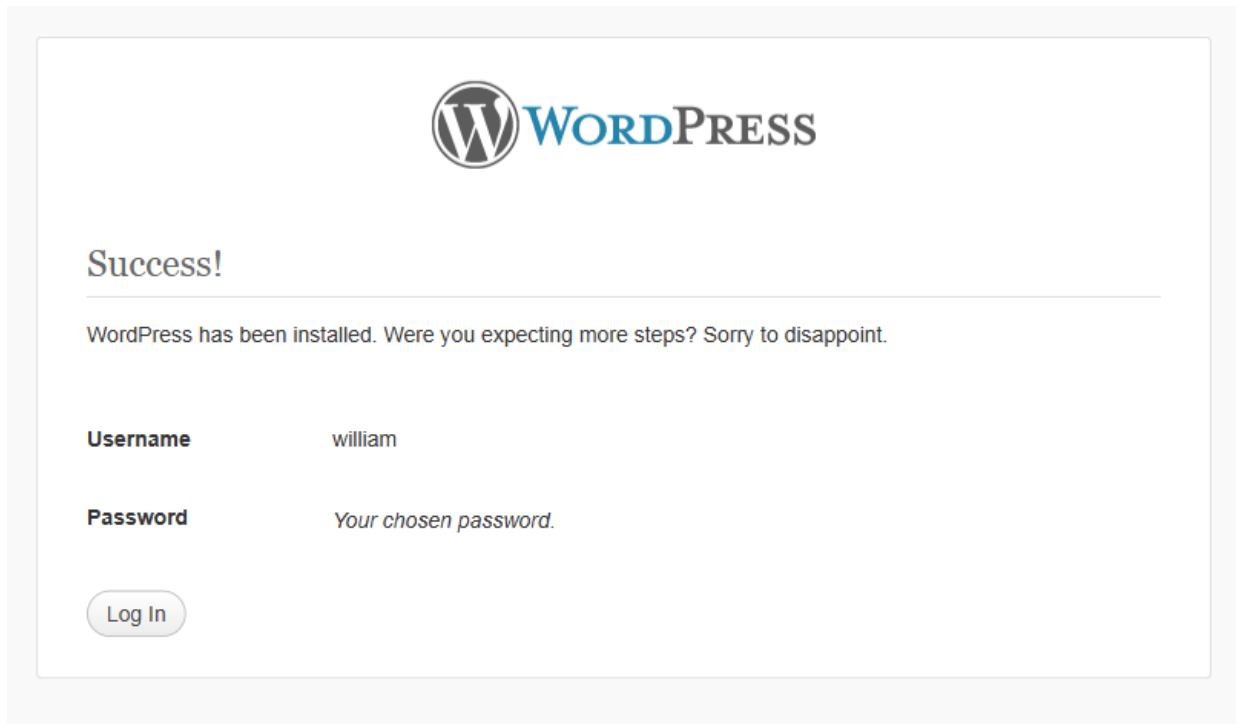
The form fields are:

- Site Title**: An empty text input field.
- Username**: A text input field containing 'admin'. Below it is a note: 'Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods and the @ symbol.'
- Password, twice**: Two empty text input fields. Below them is a 'Strength indicator' button. A hint reads: 'Hint: The password should be at least seven characters long. To make it stronger, use upper and lower case letters, numbers and symbols like ! " ? \$ % ^ & ; .', etc.'
- Your E-mail**: An empty text input field. Below it is a note: 'Double-check your email address before continuing.'
- Privacy**: A checkbox that is checked, with the text 'Allow my site to appear in search engines like Google and Technorati.'

At the bottom left is a rounded button labeled 'Install WordPress'.

FIGURE 18. Website information form (16.)

When everything has been done properly, WordPress lets log into the website with your chosen username and password (figure 19).



*FIGURE 19. Website login form (16.)*

## **4.2 Template**

After a successful installation of WordPress, it was time to implement the created design on the website. At first, it was needed a WordPress theme, which was set up on Bootstrap. Thankfully, thousands of themes are available on the wordpress.org website. The most basic Bootstrap theme on available was downloaded because the style of the template needed to be customized radically.

The Bootstrap website has a customization tool with which you can create a configuration file. You can customise all Bootstrap's component colours, sizes, etc. with the tool and it speeds up your work because you do not need to code all of those things yourself. After the customization, you just download the file and add it into your Bootstrap theme.

The author defined all the colours in the configuration file with the previously mentioned tool. The rest of the website design was coded by the author using CSS and PHP scripting languages.

### 4.3 Features

WordPress plugins were used for the website features. WordPress plugins are useful when the website requires some special features. Plugins were needed in the event calendar, social sharing buttons, member area and the contact form.

WordPress plugins are easy to install. You can install plugins via a WordPress dashboard on the plugins page. After the installation, you navigate back to the plugins page and activate the installed plugins.

#### 4.3.1 Event calendar

Google Calendar was used to add events on the event calendar of the website. For that purpose, a Simple Calendar plugin was installed (figure 20), it allows you to add Google Calendar events on your WordPress site. The hardest part to make this plugin to work was to create a Google API Key, which gives the plugin access to your Google calendar data (17). The plugin has a comprehensive website, which guides you how to create a Google API Key.



FIGURE 20. Simple Calendar plugin

### 4.3.2 Social sharing buttons

The author ended up using a Super socializer plugin because it was the easiest to use and it suited the best for the website purpose. “Super Socializer is all-in-one WordPress Social Plugin fulfilling all the social needs of your website like - Social Login, Social Share and Social Comments” (18). Only the social sharing feature was needed on to the website. It is possible to choose what social sharing features are visible on the site. Facebook, Twitter, and e-mail sharing buttons were chosen as shown in figure 21.



*FIGURE 21. Social sharing buttons*

### 4.3.3 Member area

The best member area plugin was User Access Manager because it was easy to use and maintain. The plugin manages the access to your posts, pages, categories, and files. The author created this page and allowed only logged users to see the page. (19.)

### 4.3.4 Contact form

A contact form plugin was hardest to find because you needed to pay some of the plugins, and the rest of plugins were too hard to use. Finally, a plugin called Contact Form to Email was found. It was free and worked as expected. (20.)

## 4.4 Design

The biggest changes of design were the landing page layout and article page layout. Text colours were originally dark blue, but they were changed black because the text was clearer to read in that way. Also, the navigation bar and footer obtained a darker shade of blue colour to make the content area more attractive (figure 22).

The latest news area was bigger than the older news area in the landing page design (figure 14) but in the released version all news areas were of the same size (figure 22).

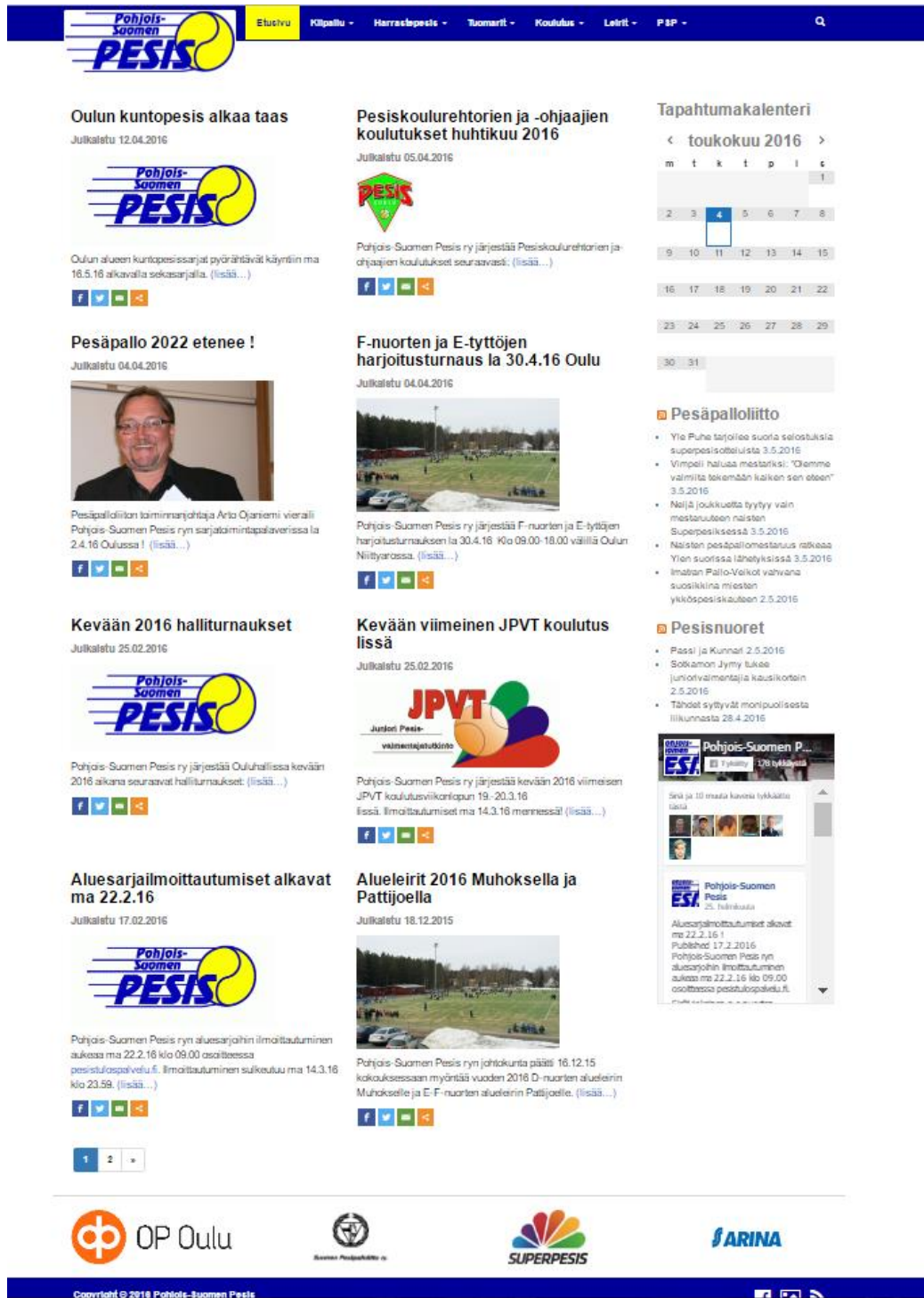


FIGURE 22. Landing page of the released website



The article page (figure 23) style was changed to pesis.fi article page (figure 24) style, hence all pesis.fi users are more familiar with the pohjois-suomenpesis.fi website.

FIGURE 23. Pohjois-suomenpesis.fi article page

FIGURE 24. Pesis.fi article page

## 4.5 Testing

The aim of the website testing is to make sure that a user has a good experience on the website regardless of what system they have. The biggest problem is older browsers so that the website may look great in a newer browser and not so great in the older browser. Another problem is mobile devices with their smaller screens and resolutions. Luckily, Bootstrap solved both of these problems. The author only needed to check that everything was working on different browsers and screen sizes. There was only one issue with mobile devices, some of longer headers broke the width of the website. After testing, the code was revised and it fixed the problem. (21).

A website may look astonishing but if it does not function as it should, it is doomed. Testing functionality ensures that users are not getting tripped up anywhere on the website. (21). In this case, the client's professional of communication friend checked the functional issues of the website. He found a couple of critical issues; the sitemap was too messy, and some of the names were misleading. Also, the functionality of the navigation bar was illogical, some of the main navigation buttons opened a new page, and some just opened a list of subpages. After the updates, the navigation bar always opens the list of subpages, and the sitemap structure was changed and made clearer. Every visible page has now subpages and their names are more understandable to the user. The first version of the sitemap had nine pages, and the subpages were too hard to find see figure 2. The new sitemap has only seven pages, and all the subpages are easy to find as shown in figure 25.

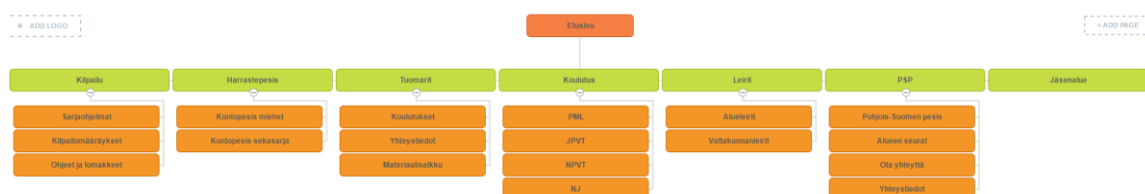


FIGURE 25. The new sitemap created by Slickplan

Also, the security of the website should be tested. Security testing is a process which determines that confidential data stay confidential, and users can perform only those tasks that they are authorised to perform. Only third party applications were used on this website, like WordPress and its plugins. Automatic updates are enabled on WordPress, thus security problems should always be updated. (22).

## 5 REFLECTIONS OF THE PROJECT

The project starting meeting was on 14 October 2015 with the client and the project supervisor. In the meeting, we discussed what the project will contain and how I need to specify the requirements of the website. After the meeting, the project supervisor sent me a schedule where he had defined some milestones of the project. The milestones were:

- 25.10.2015 – Requirements document for the website
- 8.11.2015 – New design and structure overview of the website with the client
- 13.12.2015 – Functional overview of the website with the client
- 17.1.2106 – Functional overview of the website with the client
- 21.2.2016 – Final review of the website with the client

I changed the first milestone deadline to 1 November 2015 because the original deadline was during the autumn holiday. I had a conversation with the customer via email about the requirements document and after a couple of changes, the website requirements document was ready on time.

I also needed to change the second milestone deadline because I changed the first milestone deadline, the new deadline was 15 November 2015. On that day, the website design and the sitemap should be ready. In this point, I should have divided the milestone into smaller parts and specify for, example on a weekly basis, what I should achieve in that week. I did not do that, so my deadline expired over and over again. Finally, almost one month later the design of the website and the plan of the functional components of the website were ready. I kept a meeting with the supervisor and the client on 9 December 2015. I combined the next milestone, 13 December 2015, in that meeting because I could get the functional components plan ready on the previously extended milestone.

The next milestone should be ready on 17 January 2016. That milestone extended because of Christmas time and I could not get all the data from the old

server where the old website was published. The customer asked the old server provider if I could get the user account information from the server. It took for about two weeks to get the account information. Meanwhile I installed a virtual server on my computer, and I completed the website design coding. On 24 February 2016, I kept a meeting with the client. In that meeting, I live demonstrated the new website in a virtual server on my laptop. After the meeting, I knew what enhancements I needed to add to the website.

The last milestone, 21 February 2016, had already been expired so my job was to get the website ready as quick as possible. The first thing I needed to do after the meeting was to move the website from the virtual server to the new web hosting server. Before the release, the client wanted his professional of communication friend to check out the website functionalities. I sent a test user account to the friend on 9 March 2016. Again there was a holiday, winter vacation, which extended the schedule. The friend suggested a couple of improvements to the website. I fulfilled the improvements and finally on 23 March 2016 the website was ready to be published.

## 6 CONCLUSION

When I started this thesis, I only knew how to set up a website by WordPress and how to create responsive websites with Bootstrap. I did not know how to design a website layout, and how to use colours to have a balanced colour scheme.

I have learned a lot about layout design, especially how to create a complex website layout and still, it can be clear to use. I have also learned how to use colours in an efficient way on the website, and how to draw a user attention to some specific part of the website.

The plan creation was the most unpleasant job, but the good plan helped me a lot during the implementation part. If I started this project again, I would specify more clearly the project deadlines because in this project I did not specify the deadlines enough clearly and the project schedule was always late. Luckily, during the implementation part, one large requirement dropped out. In the first plan the website needed an application for keeping track on game results and having standings in different series. Also, a user had to be able to send a match result in the application. The application implementation would be massive and time-consuming. Thankfully, the executive director decided to start using a third party application, which is meant to maintain all Finnish baseball series and match results.

All in all, this project gave me a clear picture of how in the future I should structure and maintain a website development, and how important the decided deadlines are. During this project, I have become a better website programmer and learned some design skills, which would be useful for future website projects.

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