DEVELOPING AND DESIGN A WEBSITE FOR MC KALLA OY

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Bachelor's thesis
Autumn 2013
Business Information Technology
Oulu University of Applied Sciences

ABSTRACT

Oulu University of Applied Sciences
Degree in Business Information Technology

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Title of Bachelor's thesis: Design and Development a Website for Mc Kalla
Supervisor(s): Minna Kamula
Term and year of completion: Autumn 2013   Number of pages: 36

This bachelor thesis is about Website development and design. I have a chance to work with Mc kalla Oy. Mc kalla Oy is a construction company from Kempele which was founded 2011. They have projects in Central-Finland, through Northern Finland to Lapland. This thesis is to develop and design a new website to Mc kalla Oy. Wordpress is used to develop the new website. For the development process I use school server (.opiskelijaprojektit.net).

The Thesis contains two main parts designing the website layout and implementing the design. With meeting with the commissioner, I had a good understanding of their expectation. They are expecting, a website easy to maintenance and update. The new website is easy to navigate and has enough information. The new website contains photo galleries, videos, PDF files and music. The new website is connected with companies Facebook page.

As the result of this thesis,www.mckalla.fi is available for Mc Kalla Oy customers. The website is accessible for any device which has internet connection. The website manages to fulfill all the Mc kalla Oy's expectations. From my discussion with the commissioner, the commissioner is satisfied with the result.

Keywords: Website, Wordpress, content management system, Responsive Website, Optimization

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1   INTRODUCTION

The past years I have studied business information technology. This Bachelor's thesis will help me to implement my studies. In my thesis I am implementing most of the courses I have studied. I choose this project based on my interest in website developing and image editing studies.

On this bachelor thesis I am working on a project that develops and design a website. I am developing a website for MC Kalla Oy; a small business which operates in renovating houses and buildings for a private and business owners. The company is based in Kempele northern Finland.

This project covers mainly two parts, the designing part and assembling the actual web page. Since the old website is old-fashioned and out dated (figure 1), the new website needs to be a user friendly design, understanding the visitors and the crafting a site structure that not only makes sense to them but also attains business goals is a tough balance act. Website design is next step of the thesis. And the final part, after determine the graphic and user interface design, assembling the design into a working website.

The output of this project is a website that provides a proper communication media between Mc Kalla Oy and the company's customers.   And is a place where promoting and expose companies' expertise. I expect the final website will help the company to be a better competitor and provide customers with enough information.

1.1   Mc Kalla Oy

MC Kalla Oy is construction company from Kempele which was founded 2011. MC Kalla Oy is specialized on gypsum floors pumping and leveling/ painting works. They are operating all the way from Central-Finland, through Northern Finland to Lapland. MC Kalla Oy brings their expertise in both new construction and renovation projects. They are doing inter alia gypsum floors pumping, floor pumping, design floors, paintings and effects, wall papering and facade plastering. They are happy

to serve all kind of target groups; private, companies, housing cooperative and the public sector. MC Kalla Ltd has years of experience in the construction and renovation, so they can easily serve whether the project is to build a new or planning a renovation for small or a big. The Website is a tool for Mc Kalla Oy to promote their expertise and a media channel communicant with customers.

Figure 1. Mc Kalla Oy website (Previous)

1.2 Project commission

When I was discussing about my thesis with my tutor teacher; I have explained myself that I would like to work on image editing and designing website. This project is perfect for me. In this project I have implement my web designing and web developing skills.

On the start of the project; the title was updating a current web site. Mc Kalla Oy used to have an existing web site 'www.McKalla.fi' (figure 1). But it was old looking and unorganized. Based on this reason I have changed the topic to developing and designing website for Mc Kalla Oy.

Based on the meeting with the commissioner, they are looking for a good looking website, well organized galleries and easy to update. The meetings with the commissioner help me to understand their requirements. The company wants to have a lot of galleries and keep update the website. Wordpress provides a very good glary management system and is compatible to different king of formats. One of the best futures of Wordpress is easy to manage and update a website.

Wordpress is a web application that you can use to create and maintain an online website, even if you have a minimum of technical expertise. Because it is a web application, Wordpress does not need to be installed on your home computer. It can live on the computer that belongs to your website hosting company. It is also free, easy to use, and packed with excellent features. Originally, Wordpress was an application meant to run a blog website, but it has now evolved into a fully-featured Content Management System (CMS). Hayder (2009, 7)

2   WEBSITE

Website is a set of different webpage; which has some kind of connection. A webpage is a single page written on HTML (hypertext markup language). A webpage is either dynamic or static page. A Dynamic page is a webpage which change the content every time accessed. A static webpage has the same content every time it is viewed. These pages are written in PHP, Perl, ASP, or JSP. A web browser is used to translate the pages to HTLM language. Websites are running from a server. The server can be a large network like internet or a local network. The scripts in the pages run functions on the server that return things like the date and time, and database information. All the information is returned as HTML code, so when the page gets to your browser, all the browser has to do is translate the HTML. (Techterms.com, date of retrieval 30. 4. 2013)

2.1   Mobile friendly websites

A present there are a lot of devices on the market. The devices are varying on operating system, process speed and screen size. The main categories of devices are PC personal computers (desktop and laptop), Smart phones and tablets. By making a website a mobile friendly it will make visitors experience more comfortable.

"The development of mobile site should be determined by the kinds of products and services your business provides. Since mobile devices support relatively small screens and a different way of interacting with page content, simply shrinking a text into the device's screen won't give customers that warm and fuzzy feeling about your site." (Sproutsocial.com, date of retrieval 2. 5. 2013.)
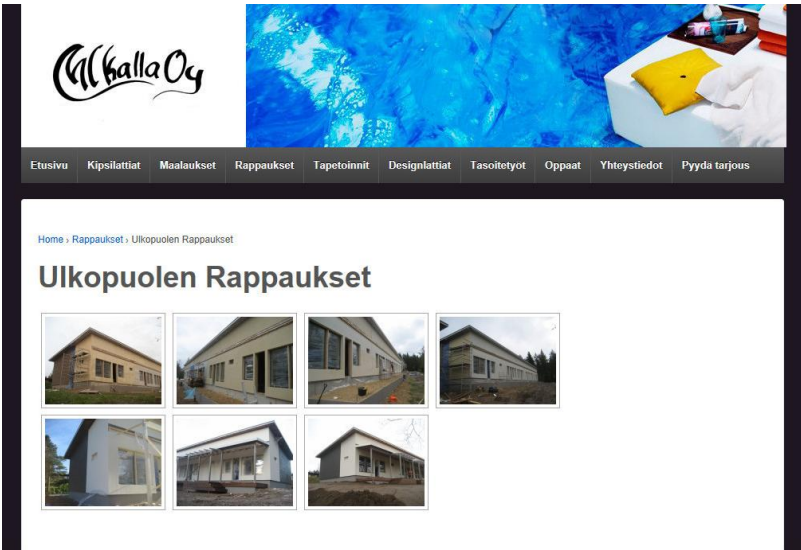
Basically website development is focused on personal computers. Website design is focus on personal computer because of popularity with in the users. Before making a website mobile friendly; there are some points should be in consider. How the business is carried with the customers? What is objective of the business?

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2.1.1 Difference between PC (Personal computer) and mobile friendly websites

The difference in screen size between PC and smart phones has a big impact on the layout of a website. Most PC screen size are 19-inch to 24-inch. The recent PCs' have a diagonal widescreen. Smartphone's' screen size are between 4-inch up to 7-inch. Most smart phones have a touch screen and the dimension of the screen can be changed to vertical or horizontal. In the web design term we are considering the vertical screen. The new generation of device is tablets; table is a device which is fall between PC and smart -phones. Tablets have a screen size between 7-inch to 10-inch. They have the same screen property as smart phones.

Changing the content of a website to a smaller size or zooming-out a website does not make a website mobile friendly. To make a website mobile friendly the whole approach to the layout must be changed. Removing a sidebar, removing unnecessary pictures and choosing smaller pictures are the recommended way of making a website mobile friendly. Pictures are shrunk or in some cases expand to fit screen. (Netforbeginners.about.com, date of retrieval 2. 5. 2013)

Bellow we can see the deference layout of PC and Smart Phone. Figure 2 shows how www.mckalla.fi looks on a PC. Figure 3 is from I phone 4s.As shown below even if two figures has the same content to make it mobile friendly the layout is deferent based on the screen size. This increase the visitors experience easy.

Figures 2. Screen shot from PC (Laptop)

Figures 3. Screen shot from I phone 4s

2.1.2 Approaches of making a mobile friendly website

There are different ways of making a website mobile friendly. The most common ways are two mobile app and mobile friendly website. Mobile app is a software application design to run on smart phones and tablets. Mobile apps have limited functions than PC websites. Apps are focused on smart phones and tablets; they are more suitable to access them from a smart phone and tablets. A used has to download and install to use an app. Apps are popularized by Apple inc. (Techopedia.com, date of retrieval 4. 5. 2013)

The other method is mobile website. Mobile website is a website that is accessible from a smart phone or tablet which has network access. Mobile websites are easy to navigate on smart phones and tablets. They have a make the content suitable to view from the devices.

There are different methods of making a mobile website. The first method is to make a deferent version for mobile devices. This method can be made in a very compatible with smart phone and tablets. This method has a separate website than the original website so pictures and files can be arranged based on smart phone and tablet users. Because this method has a different site it requires having a separate URL. (Guizmodesigns.com, date of retrieval 4.5. 2013)

Responsive web design is more and more commonplace in making a mobile website. Responsive web design is an approach that seeks to adapt or respond to the environment of the user. That means adapting the screen size, platform and orientation. Responsive web design uses different CSS for different devises based on the characteristics or based on the screen size. (McNeil 2011, 120-123)

There are different websites which are developed on these methods. Before decide which way is better there are few point which must be considered. Before making the final decision cost, time frame, design approach and user experience must be considered. (Techrepublic.com, date of retrieval 4. 05. 2013)

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2.2   Advantage of website for a small businesses

On the present day customers are prefer to search what they are looking for online. I am discussing the importance and advantages of having a website for a small business. These points are shows the advantages that Mc Kalla Oy obtained from the website.

Strengthen credibility: - At the present technology customers are looking internet for business. It is unthinkable to have a business without a website. To have a poor design or outdate website has a big impact on customers view toward the company. By providing a good information and well organized website has a big role in winning customers interest on the company. Well organized website is a best media to promote business. roaringm.com/website-improve-business.html. date of retrieval 15. 08. 2013)

Create an impression: -   well organized and a good website can create a very good impression on customers. To create good impression we have to consider the design and color we are using in the website, in addition to that we are using the loading time and the picture arrangements have a big role.

24/7 available: - One of the advantages of a having a website is customers can be use or visit websites any time of the day. As long us our server is running our customers can visit our website. Even if they may not get a instant replay the can leave message. In addition, a customer can visit from anywhere in the world as long as they have internet access.

Expose expertise: A website is a media to present company's expertise. Expertise of a company can be presented in different ways; pictures, videos and different kind of documents can be used. Website can reach various types of customers; internet can reach customers in different part of world. (roaringm.com/website-improve-business.html, date retrieval on 15. 08. 2013)

2.3   Website optimization

As Oxford dictionaries define optimization "Computing rearrange or rewrite to improve efficiency of retrieval or processing". (http://www.oxforddictionaries.com retrieval date 13. 09. 2013). In the present day, we have a many search engines; different kind of devices, operating systems, web browsers, screen sizes and etc, website optimization is making a website compatible to these different factors that can affect websites appearance and factions.

There are different kinds of website optimization a platform optimization, browser optimization, search engine optimization, and so on. In this chapter I am focusing on how to optimizing the website to a search engine. A search engine is "a program that searches for and identifies items in a database that correspond to keywords or characters specified by the user, used especially for finding particular sites on the Internet" (oxforddictionaries.com, date of retrieval 13. 08. 2013)

Most internet browsers uses as major search engines like Google daily to find products, product reviews, and good prices. Websites that appeal on the first page of a search results inevitably attract more potential customers. Again if you offer a high quality product at the right price, you deserve customers, and the combination of a high quality, price is the right product with a first page result will undoubtedly convert potential customers into actual customers. Website optimization gives you more control over how people discover your business. It is an intuitive and inexpensive form of advertisement that reduces your operation costs. With website optimization you can advertise a new product of service around the world instantly. (stepmanseo.com/organic_seo_company/ website_optimization.php, date of retrieval 15.08. 2013)

3 WEBSITE PROJECT

I am showing the process description of Website developing process. Website Development process describes how the process of a website development is done and organized. I have design a small website design and process for this project. This assignment will help me to understand the whole process of my thesis.

The Essence of Business process design can be described as how to do things in good way. Good in a context refers to process efficiency and process effectiveness. The last statement is important; process design is about satisfying customer requirements in an efficient way. An efficient process that does not deliver customer value is useless. A well- design process does the right things in the right way.

The basic requirement of Mc Kalla Oy is developing a website. Form the meeting with the commissioner I have good understanding of their expectation. On this chapter I am trying to show how I perform the whole website development process.

Entry Criteria

Entry criteria is requirements needed to start the project, this requirements can include do we have enough information? Do we have enough inputs like pictures and articles? Do we have enough information about the company? This kind of requirements are I used to for entry criteria for this project. The main and essential entry criteria of website development are the client requirements. One of the first things needs to do before starting work on a Web design project is to be clear about client's goals.

Main Project Entry criteria

- What things are trying to achieve with the website? – I have to analyze the whole project and need to have a good understanding.
- What is the website's main purpose? - I need to define the websites main purpose eg. Need to define the website users, what kind of data it collects for the visitors

Projects inputs

Inputs for the website design are all materials and information we are collecting for clients. The materials includes articles about the clients, information, pictures, logo etc. there are many ways of collecting inputs Interviews with the clients, Mails and supporting docs by the client, Discussions Notes, Online chat, recorded telephone conversations, Model sites/applications etc.,

In this project I have divide the inputs in two categories raw materials and half products. In raw material category pictures that need to be edit, client's information, etc. In the half production material category we can include exciting logo, articles about the client, and these kinds which are processed by professionals that we can used them in the website.

Workflow

Workflow is often defined as the relationship between the activities in the project as it moves from start to finish. Workflow encompasses the standards and protocols that your production team will follow as the outputs from one step in the process become the input for the next step. With all of the heavy machinery in place, workflow standard act as the conveyor belt that moves the parts down the assembly line. (Shelford & Remillard, 2002, 139)

I have design a workflow diagram for this project. The diagram (figure 4) is a system that I followed to develop and design Mc Kalla Oy website. Design a workflow diagram will help to identify faults and increase the time usage. I have try to explain the whole steps below.
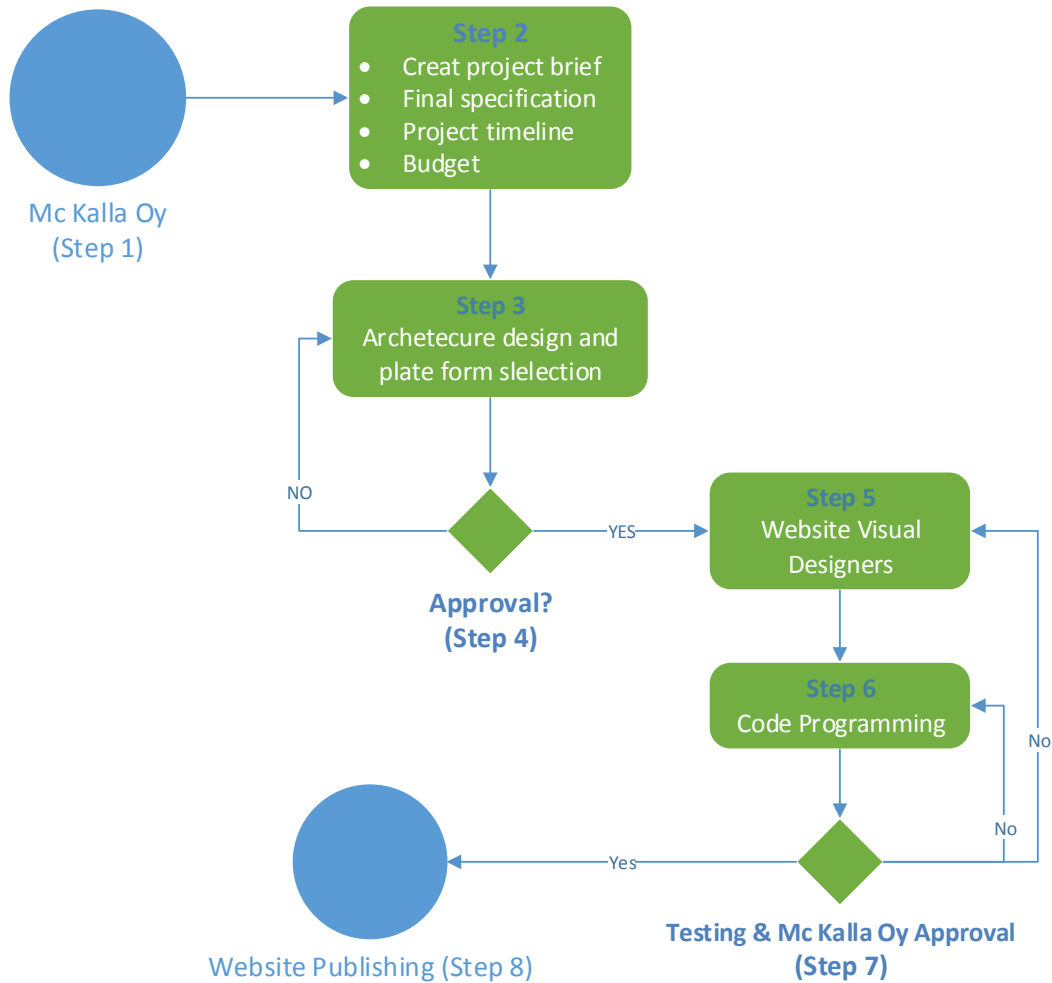
Figure 4. Activity Diagram

Step 1- Request for a website development- Website development request from Mc Kalla Oy is the entry requirement for this the whole process.

Step 2- Create a project brief, final specification, Project timeline, budget- Based on the Mc Kalla Oy request, I start analyzing and specify the projects goal. A client requests a website to the company. The request is basically an idea to develop, renovate of upgrade a website. And specify what kind of website, functions use type of people who are visiting the website.

Step 3- Architecture Design and plate form selection- Information Architects start drawing the whole project and defining the final result.

Step 4- Approval?- Based on the Architecture Design and plate form selection output, evaluat the project if Mc Kalla oy's request and final goal of the project are included. If the result is not satisfactory, the project have to go back to step 3.

Step 5- Website Visual Design – After approval the visual design start designing the websites look

Step 6- Code Programming- On this staged the actual code programming begin. The output will be a website which is ready for testing and evaluation.

Step 7- Testing –start the testing and evaluating the final website. If there are some faults on the website or if commissioner is not satisfy with the final website, it will go back to the design stage and revised.

Step 8- Website Publishing – this is the final stage of the process which is responsible for publishing the website on the web.

Exiting criteria

Exit Criteria is a criteria or requirement that has to complete a project. (en.wikipedia.org, date of retrieval 27.11.2013) This stage is where the project approaches and involves defining and reaching an agreement on the client's requirements for the final process output. Quality Assurance Engineer is the last party how is giving the last test before the website is published on the web. The exiting criterion is if the website meets functional requirements.

- Quality Assurance Engineer (Tester) approval

- Project manager approval

The output for a project is expected to be effective and efficient website. A website that passes the testing and is ready to fulfill Mc Kalla Oy requirement and satisfaction. In this process case the output is electronic product.

3.1 Selecting the Content Management System

"A Content Management system is a computer software program that allows users to publishing, editing and modifying content as well as maintenance from a central interface. Such systems of content management provide procedures to manage workflow in a collaborative environment. These procedures can be manual steps or an automated cascade. Content management system is available since the late 1990s. Content management system is used in different type of websites news, blogs, marketing shopping." (WWW.Wikipidia.org, date of retrieval 30. 10. 2013)

There are different kinds content management systems used to develop websites. Drupla, Joomla and Wordpress are the most popular content management systems. As content management system selection criteria I have taken Mc kalla Oy's requirements.

- Easy to navigate for the customers
- Easy to update and maintenance
- Photo galleries
- Social network connection
- Device compatibility

Wordpress is easy to use in website developing and designing process. It is has enough ability to design and develop an effective website. One of the main reasons I choose Wordpress is easy for the website administrator to update and manage the website. If additional help is needed Wordpress has a very help full forum where we can discuss our problem with other Wordpress users. (www.rackspace.com, date of retrieval 30. 10. 2013.)

Based on these requirements I have chosen Wordpress. Wordpress 3.7.1 is the most recent Wordpress version available on at the time. Wordpress has a good compatibility with mobile and is easy to connect to social media like Facebook, LinkedIn, Twitter and many more. Since Mc Kalla Oy only want to connect with their Facebook page.

3.2   Design and layout

Depending on discussions with the commissioner, I have managed to design the layout of the website. The idea of the design is promoting Mc Kalla Oy. As we discussed with the commissioner I am using their logo and header in every page. Most pages have similar looks and functions, other than" Etusivu" or Home or front page and "Pyydä tarjous" or Contact us page. The front page "Etusivu" contains a sponsor's logo with their link and slid show gallery of Mc Kalla Oy projects.

I used a free theme called Responsive version 1.9.3.3 (Figure 5). I chose this theme because it adapts a website to mobile device and the desktop or any other viewing environment. Responsive version 1.9.3.3 has options to customize, widgets, menus, header and background.
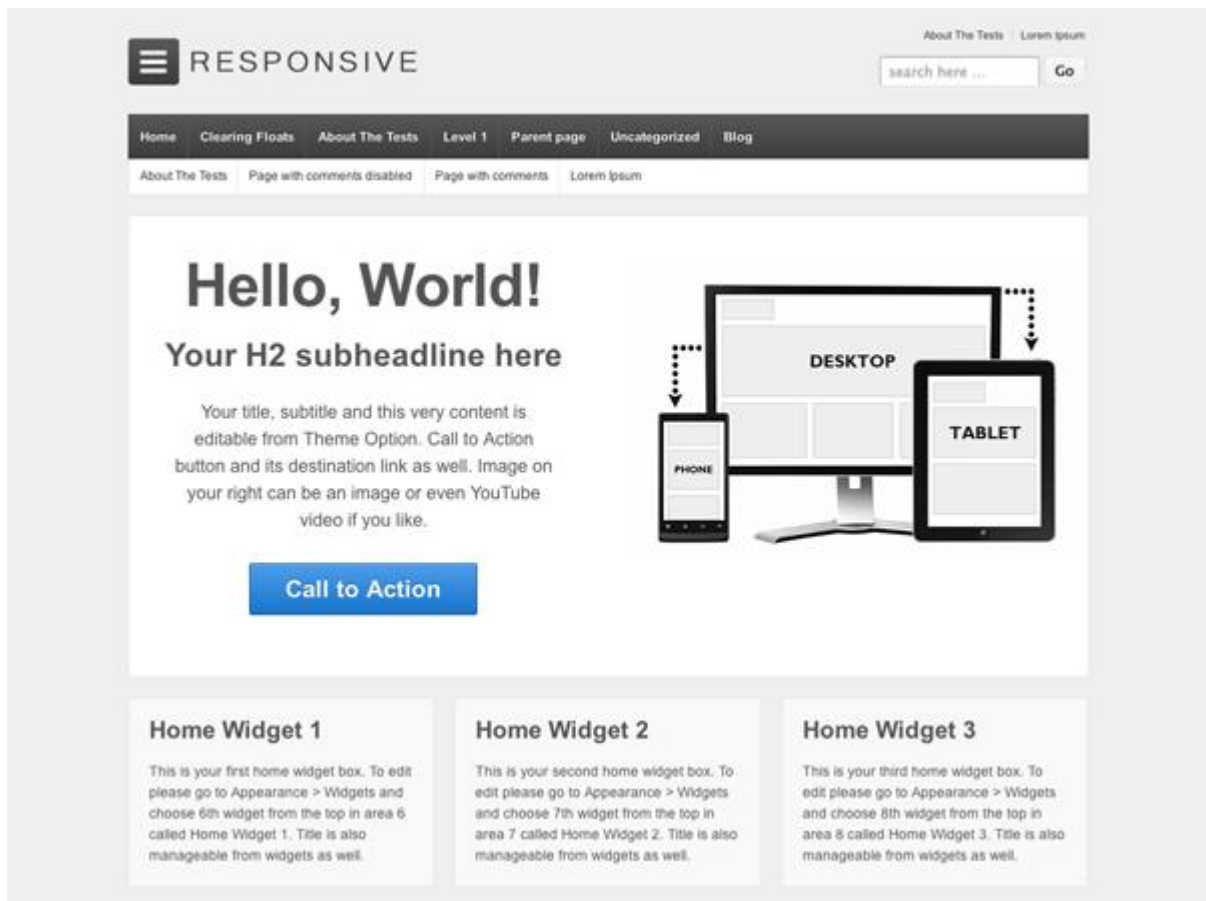

Figure 5 Responsive screen shot

I have decided to use drop down menu. Drop down menu is a common menu for web site developing (Figure 6). "A drop down menu is graphic user interface element similar to a list box. When the mouse moves over the navigation bar; the menus of the page beneath main sections appear dynamically. The visitor can click on any of these links and go straight to these pages. Drop down menus make navigating a site extremely simple. They also remove the need for site maps, since the navigation system itself acts as a dynamic site map." (www.newfangled.com, date of retrieval 30.10. 2013.)

"Wordpress Widgets add content and features to Sidebar. Examples are the default widgets that come with Wordpress for post categories, tag clouds, navigation, search, etc. Plugins will often add their own widgets. Widgets were originally designed to provide a simple and easy to use way of giving design and structure control of the Wordpress theme to the user. Widgets can be used without knowing any coding. Widgets can be added, removed, and rearranged on the Wordpress Administration Appearance > Widgets panel. The order and placement is set by the Wordpress Theme in the functions.php file. Some Wordpress Widgets offer customization and options such as forms to fill out, includes or excludes of data and information, optional images, and other customization features." (codex.Wordpress.org, date of retrieval 15.11.2013.)
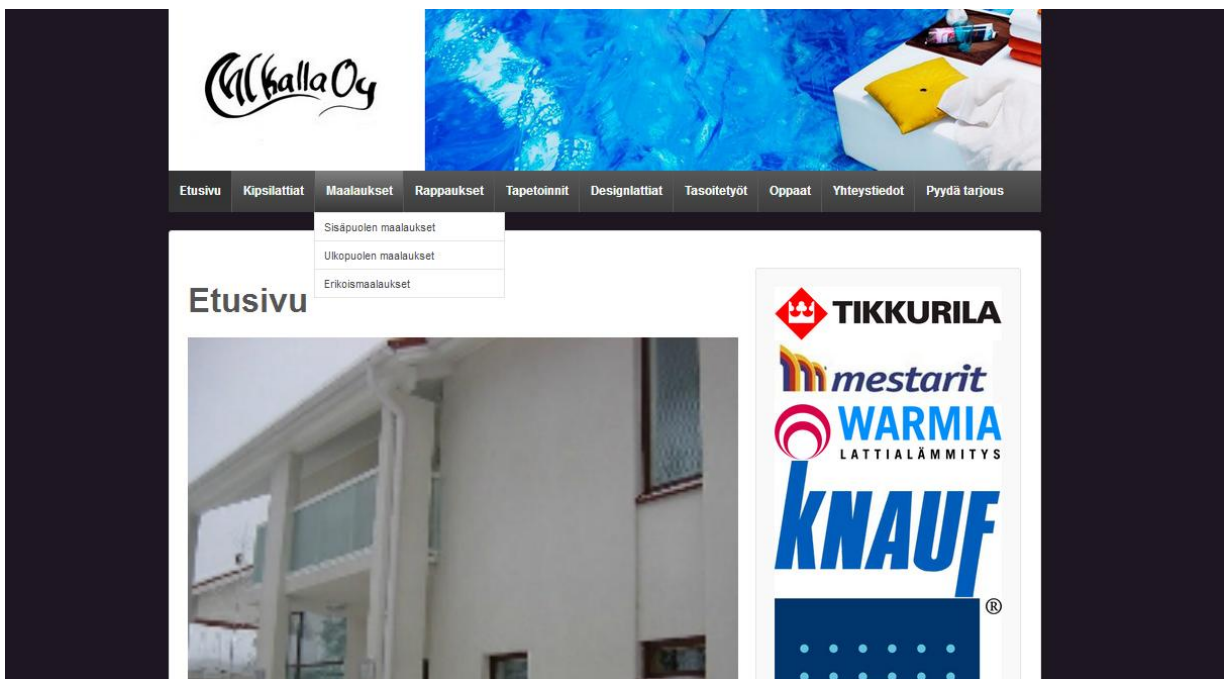

Figure 6 Home page

3.3   Technical development

Plug_in :-

Plug-in is an additional program that adds additional functions to software or website. I have used some plug-in to this site. They have added additional function to the site. I have mentioned plug-ins I used in the project below. The installation of the plug-in in Wordpress is pretty much the same and easy. I used Wordpress forum to find a suitable plug-in for the website. After choosing a plug-in, to install a plug-in go to the plug-in in a dashboard and select a plug-in install. Then search the plug-in and chose the install now. The final process is activating the plug-in from the plug-in menu. There are plug-in for sale but on this project I used all free plug-ins.

Contact Form 7

Contact Form 7 is a plugin;is used to manage a contact form. Contact Form 7 is easily customized based. (http://Wordpress.org/plugins/contact-form-7, Date of retrieval 24.11.2013.) I used this plug-in on "Pyydä tarjous" contact us page. On "Pyydä tarjous" customer can send email to the company. The company get an email with specified subjects.

Facebook Like Box

Facebook Like Box is also a plug-in. Facebook Like Box is used to connect a Facebook page to a website. It has a future that attracts and gain likes and shows a recommendation comments from the Facebook page. Facebook Like Box is enabling users how many like the page have; which of their Facebook friends like it too. .(Wordpress.org/plugins/facebook-like-box-widget, Date of retrieval 24.11.2013) I used this plug-in to connect Mc Kalla oy facebook page to the website. Is used in on the right side menu, which is active on the front page "Etusivu" and the English version "Home".

NextGEN Gallery

NextGEN Gallery is all time most popular Wordpress plug-in with more than 7.5 million downloads. NextGEN Gallery plug-in is a gallery managing plug-in.it has ability to batch upload, import meta data, add, delete, rearrange sort image, edit thumbnails, group galleries into the album and more. NextGEN Gallery provides slideshow and thumbnail galleries display styles. both of which come with a wide array of options for controlling size, style, timing, transitions, controls, lightbox effects, and

more.(Wordpress.org/plugins/nextgen-gallery, date of retrieval 24.11.2013). I have used this plug-in on both slideshow galleries (on "Etusivu" and "Kipsilattiat" pages) and all the galleries found in the website. I choose this plug-in because of it's easy to manage the galleries, which will be easy to manage the website galleries in the future.

Editing picture

On the designing process, I have edited pictures. Mc kalla has provided me with picture which has been taken from their different project sight. The pictures have taken with different formats and have different size so they have to be edited. To edit the picture I used Adobe Photoshop. In Addition to the Editing the picture I also create the heading picture with adobe Photoshop CS5.

Editing video

The website includes short videos (Mckalla.fi/kipsilattiat). The videos are short and show a specific process. When I get the videos they were longer. I used the Microsoft video editor to edit the video. The recommended video format to use on any website is mp4. To change the video format to mp4 I used VLC player.

3.4   Search engine optimization

Wordpress by default is comes ready to embrace search engines. Its allow search engine to go though the posts, pages and categories to help the search engine crawl a site and gather information about it needs to include websites within its database. I have used the responsive theme for the website; Google suggest a responsive design to encourage a better online experience.

Wordpress has tips how to make website search engine friendly.-
Good Clean code- I have tried to keep the codes clean. This means if not necessary do not modify the original code.

Content talks- "Pretty does not talk to a search engine" Search engines cannot evaluate websites based on the look they are using contain of websites. Mc kalla Oy website has good contained I have got the contents from the commissioner. There are some pages without any content for the future the company has to add additional good quality contents. This will increase the visibility of the website on search engines.

Permalink Settings- (Search Engine Friendly URLs), by default Wordpress uses web URLs which has question marks and lot of numbers. The Default URLs are not search engine friendly, to fix this from administrator dashboard setting the permalinks. I used the post name for the permalink.

Link popularity- the link which that are used in a website has affect the websites visibility. Search engines are favorable for website which is linked to good (popular) websites. Mc kalla website is linked to Tikkuril Maalarimestarien Warmia and knauf websites this helps the website visibility on search engines.

3.5   Cross-browser testing

Most computer operating systems has their significant browser as windows internet explorer, apple products safari and most open source operating systems uses Mozilla fire fox. To increase Mc Kalla Oy website visitors I have perform cross browser testing. "Cross-browser refers to the ability of a website, web application, HTML construct or client-side script to function in environments that provide its required features and to bow out or degrade gracefully when features are absent or lacking".(en.wikipedia.org, date of retrieval 23.11.2013.)

The usage of web site browser is also different from region to regions. The website's target visitors are from Finland I have tried to see the statistics of web browsers usage. As of gsstatcounter.com (Stat counter) Google Chrome and Mozilla fire fox are the main web browser used in 2013. Other famous web browsers used in Finland are Internet Explorer (IE), Safari and Opera. For my cross browser testing I have chosen Chrome (figure 7), Firefox, IE (Figure 8) and Safari (Figure 9) as I have attached the screen shot bellow.
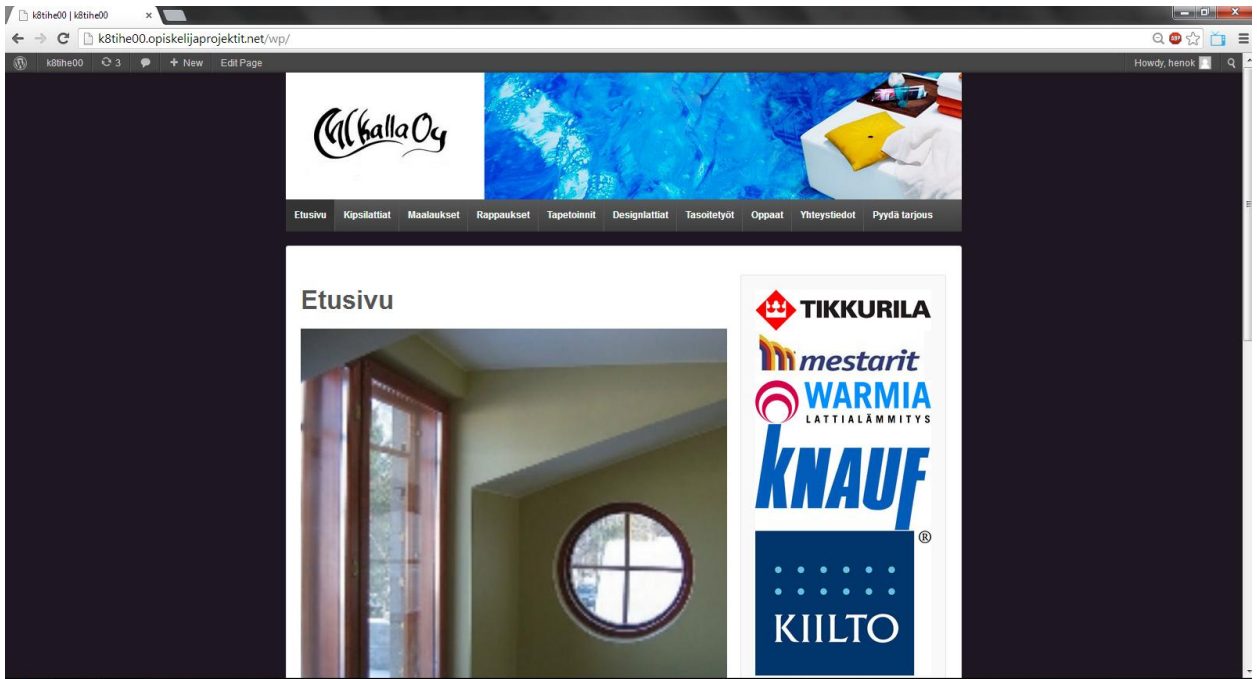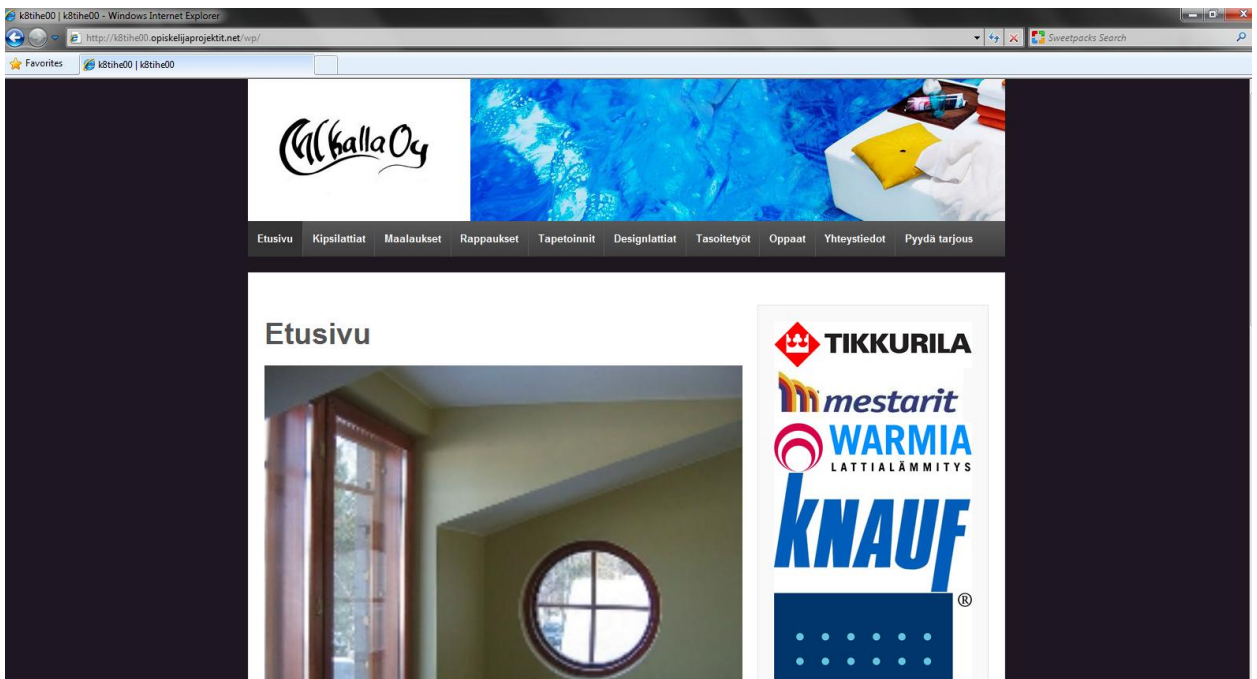
Figure 7 Chrome Screen shot
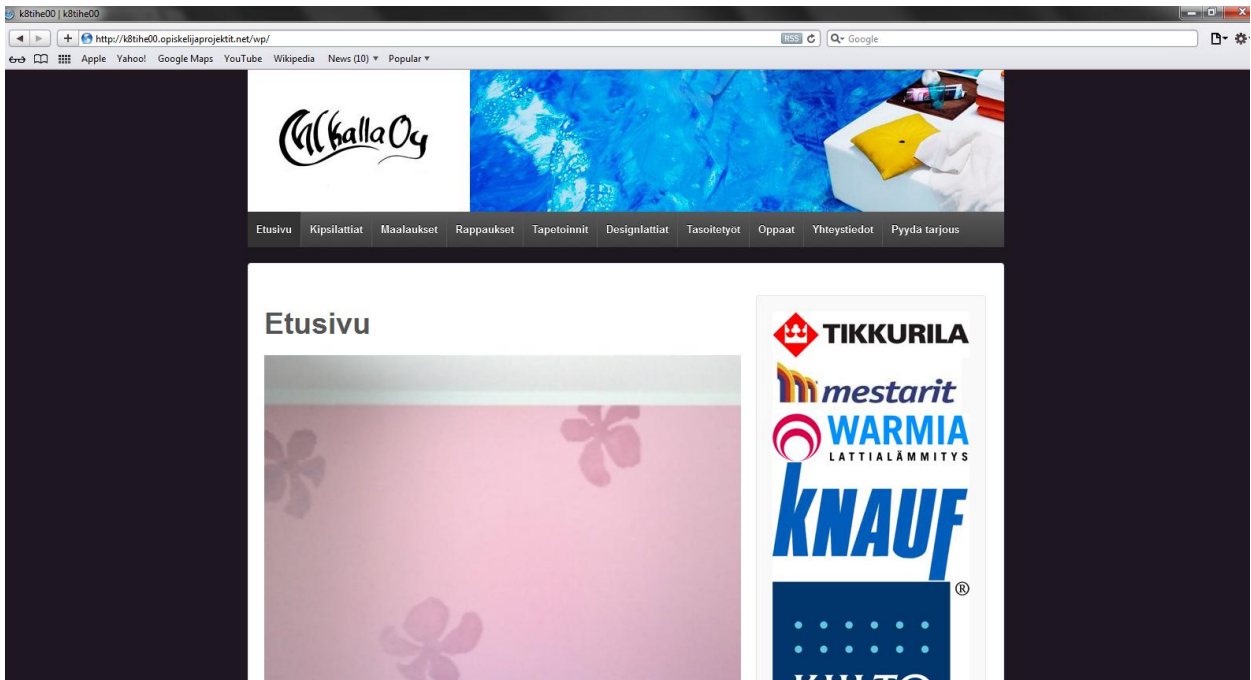

Figure 8 IE screen shot

Figure 9 Safari screen shot

3.6   Website launch

I was developing the website on OAMK's students' server (opiskelijaprojektit.net). I have to transfer the website data to the McKalla's server (www.Mckalla.fi) as part of this project. Transferring a website to another sever or so called changing a host, of Wordpress website, I have found it challenging. It was challenging because I have used responsive theme. Responsive Theme over write the entire page and other properties to default after moving to the new server.

To make a data transferring easy I have used File Transfer Protocol (FTP) software. FTP is a standard network protocol used to transfer files from one host to another host over the Internet. FTP make files transfer easy and faster. I used FileZilla FTP software. I used FileZilla because it is free and open source. The process of downloading the Wordpress file is easy. After connecting Filezilla to the server (opiskelijaprojektit.net) we can copy and paste.

To download the local database (SQL), login to the server and click on the phpMyAdmin (figure 10), select the database from the dropdown menu (opiskeli_k8tihe.sql). Under export field select the entire table. Then thick "Add DROP TABLE / VIEW". After Click on "GO" the database will be downloaded.
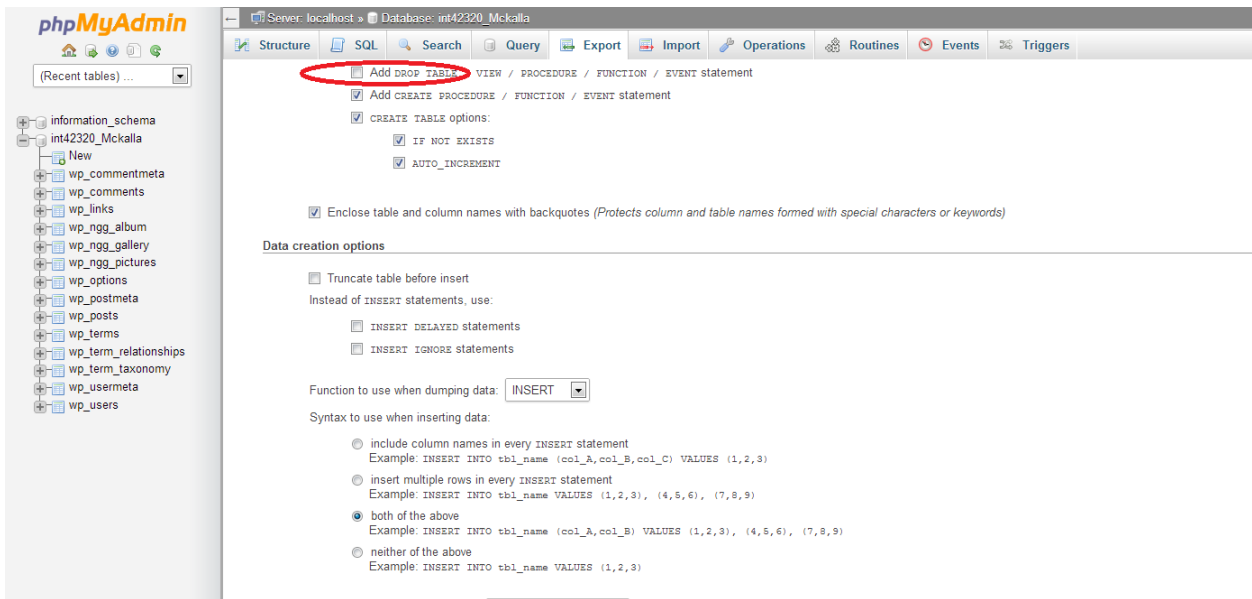

Figure 10 PhpMyAdmin

After downloading the database SQl file the old URL (k8tihe00@opiskelijaprojektit.net) has to replace by a new URL (http://mckalla.fi). I used programmer's notepad to edit the SQL file. To import the database on Mc kalla oy server, the first step is login in to the MySQL database, and creates a new database called Mckalla and user. Then from the phpMyAdmin select the database Mckalla, click "import" then click "Go". After finishing the uploading process there will be database on the new server but the MySQL is still referring to the old server. To change that, open wp-config.php file and change the database name and MySQL user name and password (Figure 11).

```
/** The name of the database for WordPress */
define('DB_NAME', '                    ');

/** MySQL database username */
define('DB_USER', '                    ');

/** MySQL database password */
define('DB_PASSWORD',           );

/** MySQL hostname */
define('DB_HOST', 'localhost');

/** Database Charset to use in creating database tables. */
define('DB_CHARSET', 'utf8');

/** The Database Collate type. Don't change this if in doubt. */
define('DB_COLLATE', '');
```

Figure 11 MySql

An .htcaccess file is a granular configuration file for the apache web server software, used to set or alter the server's configuration setting for the directory in which it is present or its child directories. The last thing to make sure is the access file (.htaccess) has to be the same directory as the previous server or it has to modify to work perfect. Figure 12 show the Wordpress directory is in the wp folder.

```
# BEGIN WordPress
<IfModule mod_rewrite.c>
RewriteEngine On
RewriteBase /wp/
RewriteRule ^index\.php$ - [L]
RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteRule  /wp/index.php [L]
</IfModule>

# END WordPress
```

Figure 12 .htaccess

These steps will work perfect to move a basic Wordpress website to a new server. In my case I have used the Responsive theme for Mc Kalla Oy website, which over write the page prosperities to the theme default properties. It has to be modified again on the new server.

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3.7 Documentation for updating and maintaining the website

A user guide or user's guide, also commonly known as a manual, is a technical communication document intended to give assistance to people using a particular system (Wikipidia.org, 20. 11. 2013). After I finish this project the website have to be kept updated. On this section I will explain how to update the website. As I mentioned earlier one of the future of this website project is easy to update. Easy update is one of the best futures of Wordpress.

On this website www.Mckalla.fi the Administrator is the only party that has a power to change or to update the content of the website. The Administrator or the Admin is can be any person who has the password and the username (Wordpress user name) of this site. In this context the content refers to articles, Pictures, gallery picture, videos, and links. The Admin has an absolute power to the website, he or she can change the design of the website but changing the theme or the plugin used in the development process.

In general Wordpress website we can go to login page by adding "wp-admin" (Figure 13) to the end of URL. As example "www.Mckalla.fi/wp" we can modify it to "www.Mckalla.fi/wp/wp-admin" we can access the login page.

Figure.13 Wordpress login page

After the login process we will find the dashboard (Figure 14). A dashboard is "The main idea of the dashboard is to give you a place where you can get an at-a-glance overview of what's happening with your blog. You can catch up on news, view your draft posts, see who's linking to you or how popular your content's been, quickly put out a no-frills post, or check out and moderate your latest comments. It's like a bird's eye view of operations, from which you can swoop down into the particular details." (Wordpress.org, date of retrieval 21.11.2013.)
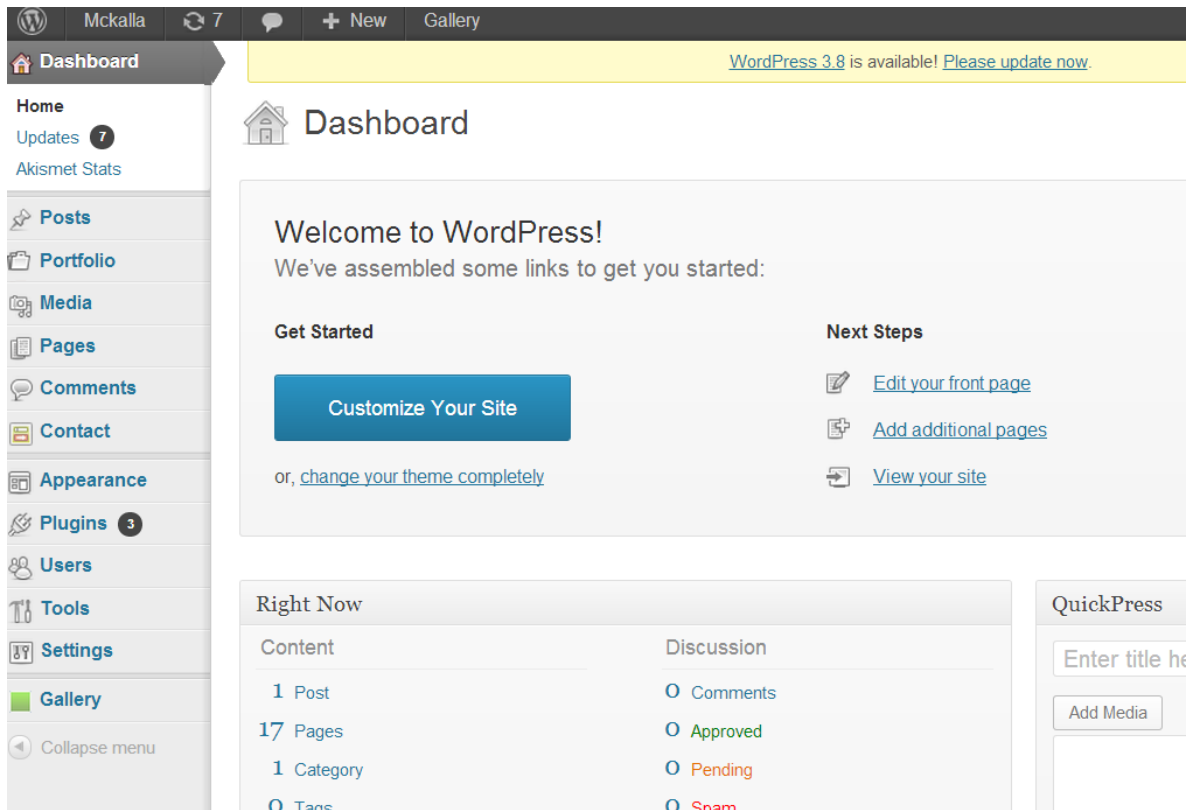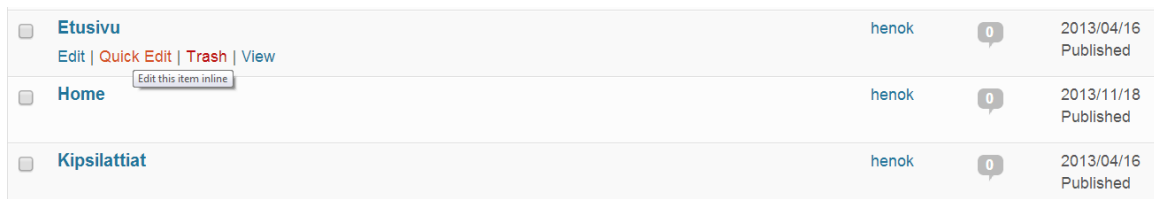

Figure 14. Wordpress Dashboard

3.7.1　How to update page content

To update a page, we select the page we want to update from dashboard. When we put the mouse over any page, we can see there are four choices (Figure 15).

☐	**Etusivu** Edit | Quick Edit | Trash | View `Edit this item inline`	henok	0	2013/04/16 Published
☐	**Home**	henok	0	2013/11/18 Published
☐	**Kipsilattiat**	henok	0	2013/04/16 Published

Figure.15　Page editing options

"**View**"- has a link which go to the pages, it show how it looks on the client side.

"**Trash**"- will move the page to trash folder. In other word it will delete a page

"**Quick edit**" - is use to edit the name of the page, template, created date parent page.

"**Edit**"- has a use to update or modify the content of a page. One of the best futures of Wordpress is easy to modify a page (Figure 16). It is as simple as writing on Microsoft word or any other word editors. Word editor on Wordpress has many functions Bold, underline, italics, Hyperlink and much more .On Edit page we can also add any media file from the database or outside the database. On the upper level menu there is a button for NextGEN Gallery. We can add an exciting NextGEN gallery using the NextGEN Gallery button.
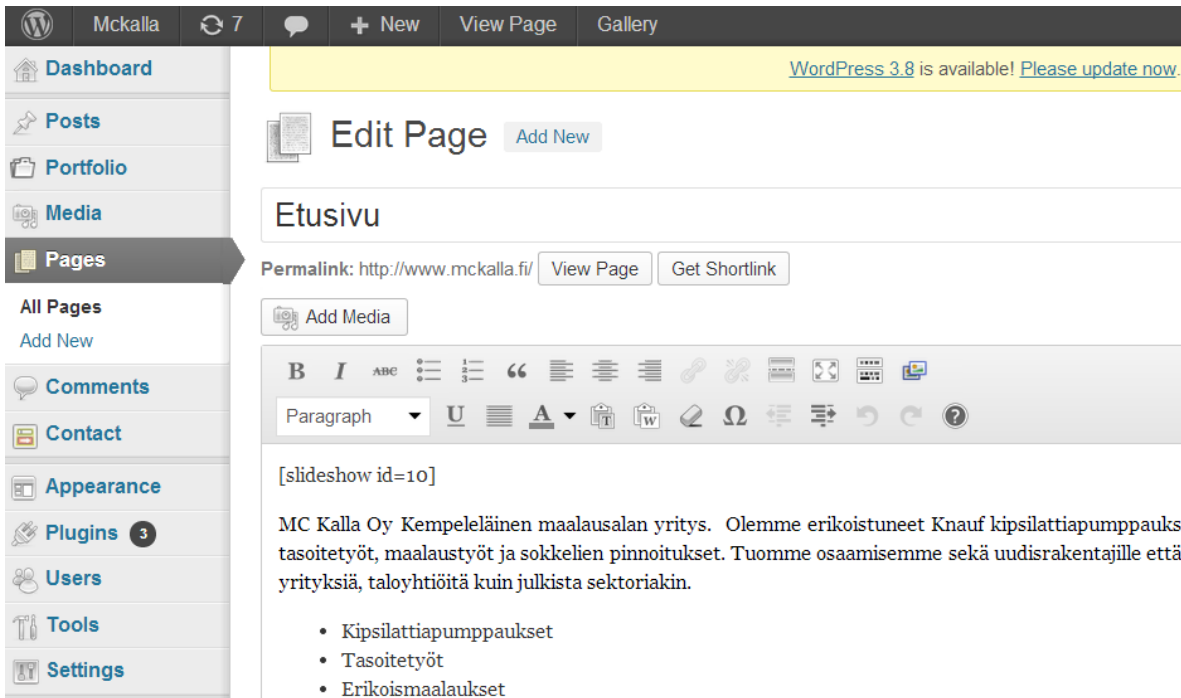
Figure 16. "Edit" screenshot

3.7.2 Adding media file

To add media file select media from the dashboard and then click add new. Admin can upload different format of media file. For the website I have used Videos, PDF files, Picture. Wordpress media library supports wide range of formats. On media library all the files can be seen. By moving the mouse over a file more options can be seen. The options are editing, delete permanently and view.

3.7.3 Adding pictures gallery

Adding a gallery using NextGEN Gallery plug-in is simple steps. Clicking gallery menu from the dashboard will give different options. NextGEN Gallery has overview option, add gallery/ image, manage gallery, manage album, manage tag, gallery settings, and other options and upgrade pro options (figure 17). To add a normal gallery select add gallery/image; after selecting add gallery/image there are two options first is to add a picture to exist gallery or the other option is to

create a new gallery. NextGEN Gallery allows uploading multiple files. A gallery can be managing and modify afterward on if it is necessary.

NextGEN Gallery can be inserted in any page. To attach a NextGEN Gallery selecet a page on the page manu at the right end there is an option "NextGEN Gallery-attach to post". NextGEN Gallery has slideshow, gallery, Thumbnails and combined gallery options.

Figure 17 NextGEN Gallery

4   CONCLUSIONS

The goal of this thesis was to design and develop a website for Mc Kalla Oy. The website was developed on content management system. Wordpress is the most popular content management system. Wordpress is chosen because it can be easily updated and simple to maintain the website.

Wordpress is using PHP, HTML, CSS and Javascript codling. Responsive theme was used for the website and modified to maintain the commission's requirement. Plug-in were installed to add functions to the website. The theme and the plug-in make the web development process easier. In addition to that themes and plug-ins help to save a lot of time.

Mc Kalla Oy has a Facebook page which is updated regularly. The page is well managed and is provides a good information about the company. The new website is connected with their Facebook page; that give the company to reach more visitors. The website has a few photo galleries that show Mc Kalla Oy different projects. The galleries are created by NextGEN Gallery. Photo gallery is one of the main requirements of the commissioner. NextGEN Gallery provides a good looking and easy to navigate galleries. The photo galleries are likely gives a good understanding of Mc Kalla Oy's expertise.

Due to several problems faced in the web developing process and summer season is the busiest season for the Mc Kalla Oy; the launching time was late. Eventually the website was launched under the domain name www.mckalla.fi. I have prepared a user manual for the commissioner. The user manual contains the main functions that are needed to update and maintain the website. The manual is expected to help the company to keep updated the website.

5   DISCUSSION

The approved time period of the project was about three month, but whole project took around six month to finish design and development process. Due to personal reason and busy work season of the company. I could not manage to finish earlier. The final result was satisfactory. The website fulfills all the commissioners' requirement. From the discussion I had with the commissioner the company is satisfied with the result.

The project gave me the opportunity to learn and work with a real environment. Have not had any experience on Wordpress website development process before this project. Though out the project I have learnt and familiarized myself with Wordpress and continent management system. I am glad to have to work and experience working in the outside the school environment

I have faced problems in the development process. At the beginning of the project I had problem finding enough books about Wordpress. The biggest obstacle I faced was at the end of the project, when I transfer the website from opiskelijaprojektit.net to mckalla.fi; the responsive theme was not working properly. With the help of my teachers and Wordpress community forum I have manage to finish the project.

The pictures I was getting form the commissioner were in different formats and size. To have a better look of the gallery I edited the pictures. The other format problem was with the videos, the website developed to be accessed on different devices, to see the video from smart phone and tablets had different experience that the original website. Mp4 is the most recommended video format; I have changed the video formats to mp4 to make it more mobile friendly.

I have experienced a lot from this project. It is also exciting to see the website working in many different environments, devices and different browsers. This project has given me an opportunity to test my skills. From my experience on this project; this kind of projects can teach students topics that cannot be covered in a class room. This project is successful because of the commissioner, project tutor and teachers help.

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