Czech University of Life Sciences Prague

Faculty of Economics and Management

System Engineering and Informatics

Bachelor Thesis

Implementation of e-shop: methods and approaches

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BACHELOR THESIS ASSIGNMENT

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Informatics

Thesis title

Implementation of e-shop: methods and approaches

Objectives of thesis

The main thesis objective is to implement an e-shop for selected company.

Partial goals of the thesis are such as:
-To make a overview of the state of the art of technologies used for e-commerce websites.
-To analyse and design e-shop web pages for selected company.
-To evaluate and test final solution.

Methodology

Methodology of this thesis is based on using different kinds of website building tools to build an online fashion store. The practical aspects will focus on building an ecommerce website using HTML, CSS, PHP and MySQL. The evaluation of the proposed solution will be made by using selected empirical method. Based on theoretical part and practical outcomes, final recommendations will be formulated.

Figure 1 First Page of Assignemnt

The proposed extent of the thesis
30 – 40 pages

Keywords

E-commerce, PHP, Html, mySQL, security, database, website, shopping cart, product catalog,ssl, Internet, E-shop, fashion beauty world,

Recommended information sources

Ahmad Ghandour, 2015. ECOMMERCE WEBSITE VALUE MODEL FOR SMES. International Journal of Electronic Commerce Studies Vol.6, No.2, pp.203-222, 2015 doi: 10.7903/ijecs.1403

Creating an ecommerce website; a do it yourself guide. www.geotrust.com, 2011

Chetan Mate, 2015. Product Aspect Ranking using Sentiment Analysis: A Survey. International Research Journal of Engineering and Technology (IRJET) Volume: 03 Issue: 01

Niranjanamurthy M. et. al., 2013. The study of E-Commerce Security Issues and Solutions. International Journal of Advanced Research in Computer and Communication Engineering Vol. 2, Issue 7, July 2013

Savan K. Patel et al. Performance Analysis of Content Management Systems- Joomla, Drupal and WordPress. International Journal of Computer Applications (0975 – 8887) Volume 21– No.4

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Figure 2 Second Page of Assignemnt

Declaration

I declare that I have worked on my bachelor thesis titled "Implementation of E-shops; Methods and Approaches" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 15th of March, 2017 _____

Acknowledgement

First and foremost, I would like to first thank God for seeing me through this process. Also, my parent for their support and of course, my supervisor Ing. Miloš Ulman, Ph.D. for his advice and help all through my thesis writing. Thank you all.

Title of Bachelor Thesis in Czech

Souhrn

Summary in the Czech language (approx. 15 lines).

Klíčová slova: Keywords in the Czech language (approx. 10)

Implementation of e-shop: methods and approaches

Summary

This Thesis was based on the methods and steps to take in the development of e-shop. The author was able to develop an e-shop website using WordPress as content management system, in other to add some extra features to author's e-shop, the author introduced the use of plugin and also was able to build a custom-made WordPress plugin to display news about fashion shows across Europe.

Keywords: E-shop, E-commerce, WordPress, CMS, HTML, PHP, CSS, Plugin, Woo-commerce, MySQL, Shopping, Cart, Payment, SSL

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1 Introduction

E-commerce websites is a broad online store which plays a vital role in the application of new technologies in the business world. Technologies like shopping for clothes online, online purchase, online transactions, online conference, video calls etc. Nowadays, most things are done via the Internet (online).

There are basic tools that can be used in the development of an e commerce website. Programming languages like HTML, CSS, PHP, MYSQL etc. and Content Management System like WordPress, Joomla, Drupal etc.

HTML is a Hypertext Mark-up Language used in the structural development of every webpages. PHP (Hypertext Pre-processor) is a server side scripting language which is embedded into our HTML code and as well serves as the intermediary between our webpage and database. PHP is used in communicating with the database whereby data are saved from the webpage and, we can request to display already saved data from the database on the webpage. MySQL is a type of Structured Query Language which is as well used to develop a database. MySQL query can be used to create, update, select and drop database tables. CSS is used in giving the webpage a professional and attractive interface design as it is one of the major qualities of a webpage used to catch customers attention. CSS can be linked internally or externally to the HTML code.

The functions required on the website will determine the website building or developing tools which will be suitable for all the functionalities the user want in it.

There are certain things to be considered when user wants to choose ecommerce web host such as;

- Price; the cheapest does not mean it is the best. so, choose something that will be best to host the site.
- Authenticity - make sure the site is secure from virus or it is virus free.
- Availability to public view uptime (longer).
- User web host should support PHP and MySQL. (www.geotrust.com, 2011)

2   Objectives and Methodology

2.1 Objectives

The main thesis objective is to implement an e-shop for Ash beauty Fashion.

Partial goals of the thesis are such as:

- To make an overview of the state of the art of technologies used for e-commerce websites.

- To analyse and design e-shop web pages for Ash Beauty World with WordPress content management system.

- To build Fashion Show Events Display plug-ins for WordPress

- To evaluate and test final solution.

2.2 Methodology

The methodology of this project is based on using different kinds of website building tools to build an online fashion store. The practical aspects will focus on building an ecommerce website using WordPress as my content management system in which basic knowledge of HTML, CSS, PHP and MySQL is required. The evaluation of the proposed solution will be made by using user experience and graphical method such as mobile responsiveness. Based on theoretical part and practical outcomes, final recommendations will be formulated.

3 Literature Review

3.1 What is E-commerce?

E-commerce is a platform whereby different kinds of businesses such as; consumer based, retail based, etc. runs through a website where the products and transaction information can be shared no matter the distance and the kind of goods. E-commerce existence has made life easier for both the business company and the consumer. i.e. goods and services can be sold remotely irrespective of the distance and the consumer can as well purchase goods from their home. (RIYA KHANDELWAL, 2014).

An E-commerce website can either be built on existing Content Management System (CMS) such as; Joomla, WordPress, Drupal etc. or from the scratch using HTML, CSS, PHP and MySQL. E-commerce website built from the scratch are said to be flexible i.e. it allows the ability to be able to add different features at any point in time. While, e-commerce website built on CMS can only use the available features from the CMS site or plugins.

3.1.1 Database Driven E-commerce Website

Since it is difficult for a content writer to edit html files and the web developer might not have that time to keep updating the website, then the need for database driven website arise to build a dynamic website in other to allow the content writer to update the website without the knowledge of coding. In developing a database driven website, two web building tools are important that is; PHP which is the server-side scripting language and MySQL which is the relational database language. (Kevin Yank, 2003).

WordPress is one of the popular CMS and was originally known to be a blogging system, but the increasing number of WordPress plugins gives every functional part of the website a professional look and this has increased the number of people using

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WordPress as their content management system. WordPress as a content management is user friendly and it allows users to manage their websites efficiently without writing codes (Savan K. Patel et al.).

A research was made to focus on the web usage benefits and satisfaction which is known as the dependent variable and the quality of the website is known as the independent variable of the research and it was concluded that to ensure customer or user's satisfaction the website or system quality needs to be considered using Indonesia as a case study. (Albar et al., 2013).

There is a study that explains the relationship between web analytic measure which can be as well regarded to as the operational measure and the financial measure. The analytic measure does not only provide the possible estimation of the profit that can be realized from the e-commerce website, it also measures the quality and the standard of the e-commerce website. (Ahmad Ghandour, 2015).

3.1.2 Ecommerce Product Review

In e-commerce website, there's an important aspect where the customers discuss on a product. The consumer review the positive and negative side of a product which is used to rank that same product. This ranking will go through different kinds of processes in other to determine the overall rating. This overall rating will give a new customer a clue and insight on the quality and customer satisfaction of the product. (Chetan Mate, 2015).

3.1.3 Ecommerce Advantage

The advantages of e-commerce are it enables fast buying and selling process and makes it easier to find product. The buying and selling is non-stop meaning 24/7. The customers can easily select products from different brands or vendors without physical movement. Customers can easily compare prices of products. (Niranjanamurthy M. et. al.,2013).

3.1.4   Ecommerce Disadvantages

Since anyone can start business, then it means that even a bad person can start without restriction and this often leads to lack of security of customer's credit card information. The quality of goods is not guaranteed. Usually bad sites attract hackers and cannot easily detect scams, the customers can not actually feel the product physically before purchasing. Sometimes, delivery is delayed. (Niranjanamurthy M. et. al.,2013).

3.2   Ecommerce Web Security

Security and privacy are the most important things to put into consideration as they are the biggest challenges faced in the ecommerce world. Identity theft can be used to bypass authorization and authentication; Trojan horse is a big threat malware that can be installed remotely to a computer through email attachment. Trojan horse can be used to get control of your computer and it can be used to bypass any kind of security measure on the ecommerce website. (Niranjanamurthy M. et. al., 2013).

The increasing number of web application increases the existence of applications that are security critical, as the number of web application increases there's also increase in the number of activities such as web hacking which serves as a con to the e-commerce business world. Web application undergoes certain test; this is to measure the vulnerability of these applications against different kinds of cyber-attack and there are certain tools available for the determination of this vulnerability test. (Saleh M. Al-Saleem, 2015).

3.3   Content Management System

Content management system (CMS) is a system whereby we can update, create, modify, maintain, manage information of a company, institution or organization's products and services by the staff or an administrator without any knowledge of coding (Wiga et. al, 2013).

The content management system provides maintenance and helps with the navigation of the site for the users. Content management system helps in storing data into the databases of the website which makes it easier for the developer as a dynamic website does not require building a lot of pages (Wakode and Chaudhari, 2013).

3.3.1   Joomla

Joomla is one of the most popular open source content management platform in the world. Because of its popularity, Joomla provides ease of extensibility and usability among users, usability which means user can easily access the page. In addition, Joomla is written in scripting language (PHP) and it uses MySQL database for the backend. Joomla can be installed and run on Linux, windows and Mac Operating system, the advanced component of Joomla 1.5 is built using the design pattern called Model-View -controller (MVC). Joomla content are kept in its database to provide dynamic formatting which means that the files are not static on different computers (Wakode and Chaudhari, 2013).

Joomla is one of the most popular content management system platform for creating websites, news magazine, blogs and portals. since Joomla is an open source content management system, it has pre-built plug-ins and user can customize it, choose the template the user want or wish. There are some core features of Joomla which are search, web services, user management, contact management, content management and template management (Savan Et. Al, 2011).
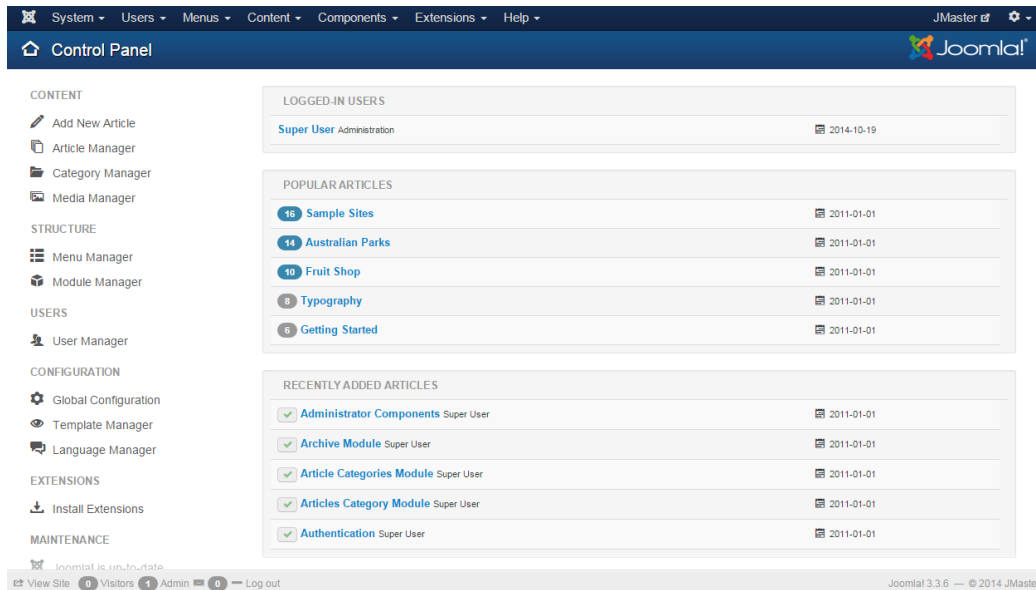
Figure 3 Joomla Admin Panel

3.3.2 Drupal

This is another free open source content management system which is written in PHP and MySQL for database. It can be installed or setup on windows, Linux or mac OS. websites, blogs and e-commerce sites are built by Drupal platform. The developers of Drupal are always there to maintain, update the tools of Drupal and make it better always (Wakode and Chaudhari, 2013).

It is an open source platform for creating flexible websites based on content management system. Drupal is a dynamic platform and allows users to modify their web pages easily without technical knowledge. The Drupal community makes it better and better (Savan Et. Al, 2011).
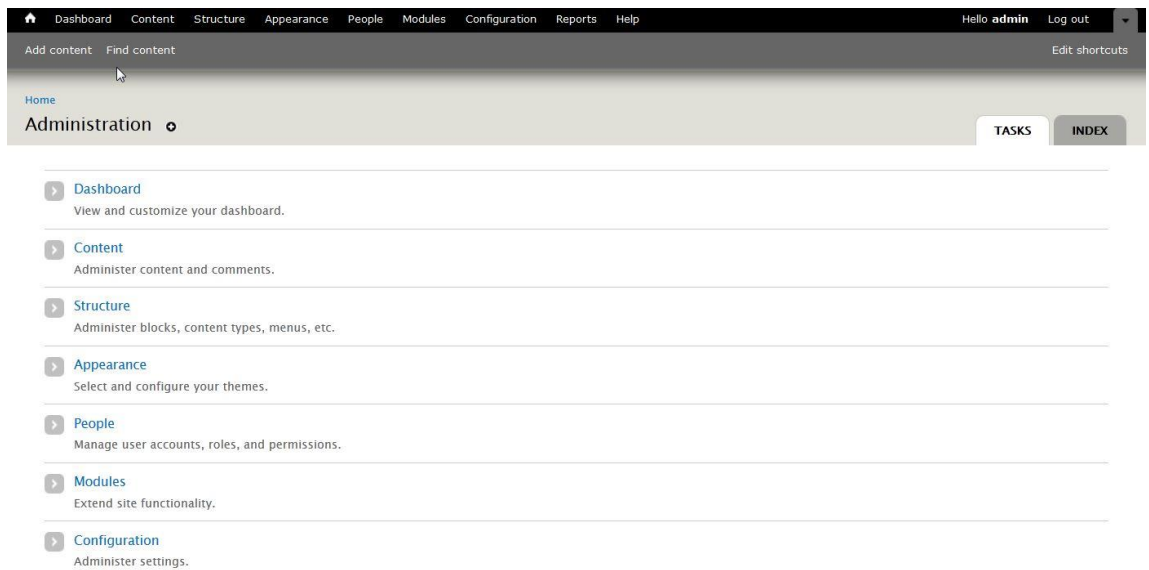
Figure 4 Shows an example of Drupal admin panel

3.3.3 WordPress

WordPress is initially a blogging platform and one of the most popular content management system. WordPress main advantage is that it has a large number of plug-ins also called add-ons which improve the functionality of user interface. Nothing is needed to be installed on the computer before the platform works. Just internet connection is needed to update the website and no coding is needed too (Savan Et. Al, 2011).

3.4 XAMPP

XAMPP as abbreviated stands for cross-platform, apache, MySQL, PHP and Perl. XAMPP is a free and open source cross-platform. XAMPP server is an apache distribution and simple which makes it easier for developers to create local web server for testing purpose. XAMPP can be installed on mac, windows and Linux because it's a cross-platform. Web developers uses XAMPP application because it's beginner friendly. It is free to download and comes in two packages lite and full.

Each letter of XAMPP stands for;

➢ **Apache;** is the actual web server application which process and delivers web content to a computer.

➢ **MySQL;** is also an open source and the most popular database management system in the world. It is the database of the web server which stores data collected.

➢ **PHP;** as abbreviated stands for hypertext pre-processor is a server-side scripting language which deals with all exactable and executable files and also controls some of the most popular websites in the world like Facebook and WordPress. it is easy to learn and works perfectly with MySQL.

➢ **Perl;** is a dynamic programming language it can be used extensively in system admin etc. Perl is not so popular for web developers. (Er. Saurabh Walia, Er. Satinderjit Kaur Gill, 2014).
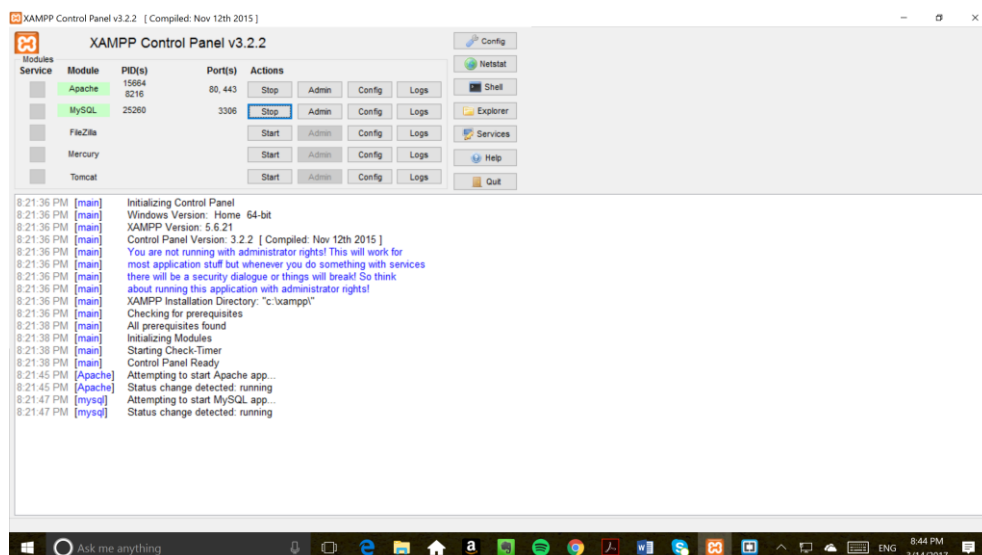

Figure 5 Shows XAMPP Control panel

3.5   Design and implementation of E-shop

➢ **HTML;** HTML which stands for Hypertext mark-up language is used in creating web page. html5 and html are the same but html5 is the new version of html (Jennifer Niederst Robbins, 2012).

➢ **CSS;** Cascading style sheet is known for describing how the content will be displayed on the world-wide web. Content like fonts, colours, backgrounds colour, line spacing, page layout are controlled by CSS. The CSS is used in html mark-up language to add colour and beautify the web page. The new version of CSS is called CSS3 (Jennifer Niederst Robbins, 2012).

➢ **PHP;** Which stands for Hypertext pre-processor is a server-scripting language. It allows user to embed html scripts into the web page of HTML and this makes it easier for user to control everything that appears in the browser more flexible compared to using just html. (Jennifer Niederst Robbins, 2012).

➢ PHP; Is usually interpreted by the web server before everything is sent to the browser. PHP usually works with MySQL in the sense that PHP sends data to MySQL and MySQL process the data then sends to the web page. The PHP files extension as. php (Kevin Yank, 2003)

➢ **MySQL**; MySQL which stands for MY Structured Query Language is the database which contains all information of products, customers, and all activities of the e-shop and it is used for creating database in the back-end. The database can be used to modify, delete, update and retrieve the history of the past transactions or orders on the e-shop (Zikra et. al., 2016). It is one of the most popular open source database server. MySQL is good for both small and large applications. MySQL is also a relational database system which means that it can store bits of information

in different tables and link those tables together. MySQL is free to download and easy to use (Saurabh and Satinderjit, 2014).

3.5.1 Design of the e-shop

➢ **Collection of the necessary requirements;** Before starting or implementing any project user must gather and document the required tools or latest technologies that is, the settings of the user's web page layout such as the kind of background colour, the position of the top menu, navigation bar, side bar and the footer in other to attract potential customers. (Sunandha Kanne, 2016).

➢ **Analysis;** The analysis of the e-shop will be carried out in the form of prototypes using editing tools like Photoshop based on the information provided by the client. The prototypes will be designed using any UX tool such as Adobe Experience Design. (Sunandha Kanne, 2016).

➢ **Architecture;** After the analysis is completed, the next step is to show how to put it into drawing which is the architecture structure using the features user got from the analysis by the help of Microsoft Visio, it helps the client to understand the process and how data is stored in the database. (Sunandha Kanne, 2016).

➢ **Development and unit testing;** Unit testing is used to test the code that is written to fix bugs that pop up or any code smell detected. (Sunandha Kanne, 2016).

➢ **Mobile friendly:** A good website should be mobile responsive meaning it should be responsive on all devices and the user can access freely without difficulty. (Sunandha Kanne, 2016).

- ➢ **Website performance;** The website performance plays an important role in attracting potential customers because a good website tends to make the customers stay long on the web page. It is important for developers to put into consideration when building the website that using awesome font styles, icons and other tools on a web page will check the errors and optimize the speed of the web page and also help in improving the quality of the web page. (Sunandha Kanne, 2016).

- ➢ **Collection of data;** Data collection is the most important part in every project. Data collection is the process of collecting the necessary data that will be stored in the database. MySQL is one of the most secured database for storing the entire data which has been written by the admin. The data stored can be retrieved by some user interface. and this user interface can call a particular data uninterrupted and in the most secure way. (Sunandha Kanne, 2016).

4   Practical Part

This chapter is the summary of all the processes that was carried out to develop the e-shop using WordPress as the content management system tool, important parts of an e-shop, user experience and entity relation diagram which shows the relationship between the customer and the admin database. Also, different ways of online transaction payment, how to secure the e-shop from hackers, the steps taken to install WordPress, Woo commerce plugin, web server and some website features.

4.1 E-shop development processes

This is the processes involved in the successful development of the e-shop web application based on WordPress content management system. This simply means the steps involved in the e-shop development process. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

The following below are some steps involved in the process of developing e-shop;

4.1.1 Users Experience

This platform is the graphics user interface which allows the potential customers to be able to browse through every section of the author's e-shop such as the product catalogue, account registration, adding items to shopping cart/basket, checking out and the payment processing. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).
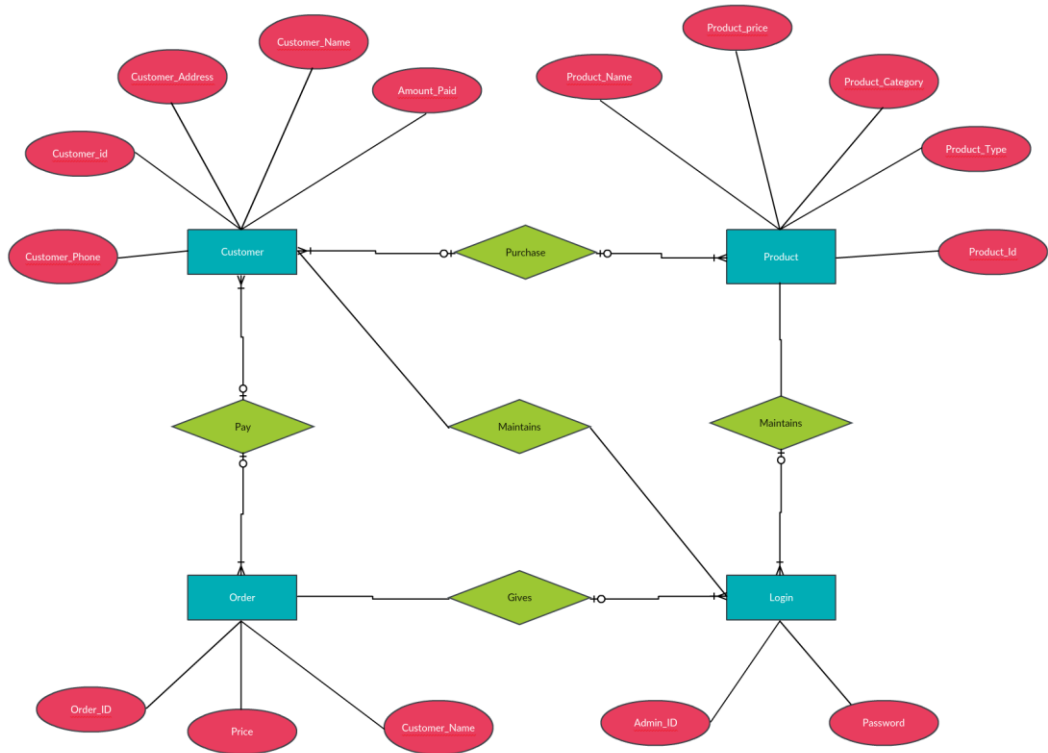
4.1.2 Entity Relationship Diagram

Figure 6 ER Diagram for Author's E-shop

4.1.3 Search Engine Optimization (SEO)

When potential customers search for the kind of products available on Author's e-shop, the ability of the major search engines such as Google, Yahoo, Bing etc. to suggest Author's e-shop website on the first page of their search result is regarded as the search engine optimization process of the Author's e-shop. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.1.4 Order

The user select and check out the product they wish to buy. It automatically sends notification or alert to the customer about their order status and any changes made. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.1.5   Shopping cart

This process is where the customer is in the transaction gateway and the order is in their account. It tells what the user has selected and ready to purchase. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).
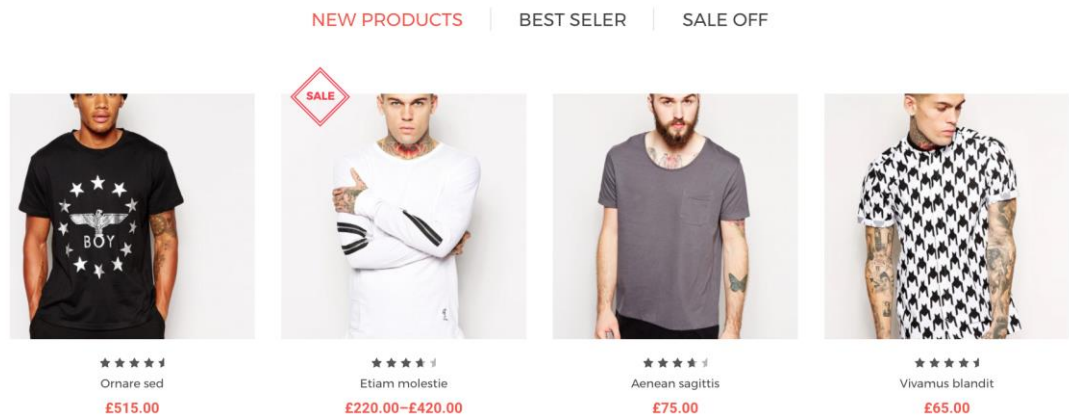

Figure 7 Product Catalogue

4.1.6   Online Transaction

In this process, the delivery address if filled and the customer choose mode of payment. This process is very important because the website must be secured to avoid hackers tampering with the customer's payment information. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.1.7   E-mail

An email notification is sent to customer about their activities on Author's e-shop website such as the confirmation of their registration to Author's e-shop website and the information about their order status. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.1.8 Order completion

In this process, the order is packed and completed. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.1.9 Shipment

The order is shipped to the delivery address provided by customer. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.1.10 Delivery

The order is successfully delivered and received by the customer. (Ms. Shuchi Shukla and Ms. Prerna Singh, 2015).

4.2 Analysis of E-shop Requirements

4.2.1 Shopping cart

The shopping cart is the most important application on the author's e-shop website that handles the product catalogue, checkout system and the shopping list. Before a customer can access any e-shop website, the shopping cart must be developed because the shopping cart handles the responsibility of controlling the user's choice of product and the checkout system. (Marcus Fontoura, et. al. 2014).

4.2.2 Financial Processing Network

Today's century, Electronic commerce has introduced so many new business opportunities worldwide and as part of the opportunities, Electronic-payment systems was created. Electronic payment is becoming the best medium for companies to serve their customers

fast and the most secured way. The process of e-payment involves the financial transaction between the buyer and the seller which includes payment information which can be credit or debit and transfer of cash or an invoice. In a conventional process of payment there are two processes involved which are the buyer to seller cash transfer, deposit or payment and also buyer to seller payment by information, when the buyer pays by cash, the buyer will withdraw, deposit or transfer from his/her account. But in the case of buyer to seller payment process by information, the payment between buyers and sellers is settled by the financial processing network. (Ms.Vaishnavi.J.Deshmukh, et. al., 2013).

These financial processing network can be divided into three categories;

- Payment through an Intermediary i.e., Payment clearing services

- Payment based on EFT i.e. Notational Fund Transfer

- Payment based on electronic currency

4.2.2.1 Payment through an Intermediary that is Payment clearing services

To replace e-commerce with face to face purchase, we have to include certain level of security that will make the buyers and sellers trust e-commerce system with their information. Payment clearing services are introduced to serve as the intermediary financial processing network between the buyer and the seller for extra verification of the buyers and sellers identity in other to assure secure transaction between the buyer and seller. (Ms.Vaishnavi.J.Deshmukh, et. al., 2013).

4.2.2.2 Payment based on EFT i.e. Notational Fund Transfer

This type of payment does not depend on the payment through an intermediary instead sensitive information such as credit card and bank account information are sent over secured private networks between banks or other companies involved, for this kind of payment process to work an online payment service must add the

ability to be able to process information from orders, receipts and accounts in digital form. (Ms.Vaishnavi.J.Deshmukh, et. al., 2013).

4.2.2.3 Payment based on electronic currency

This does not involve sending payment information but instead products of digital values which can be regarded as electronic currency are introduced, this works just like the paper money in terms of the anonymity and convenience. In this case the intermediary act as an on-line bank that converts the outside money into inside money which can be distributed within on-line markets. (Ms.Vaishnavi.J.Deshmukh, et. al., 2013).

4.2.3 Secure Server

Secure server simply means that the web server is guaranteed of secured online transaction and user purchase of goods via internet in secured form. The introduction of E-payment systems has brought higher credibility which reduces the risk of fraudsters stealing customers credit card information via online transaction. (Houssam El Ismaili, et. al., 2015).

The following are some security requirement of electronic payment;

4.2.3.1 Private information

All information during the transaction process must be kept very private and confidential. Encryption is important in the transmission between customer and web server via on line. (Houssam El Ismaili, et. al., 2015).

4.2.3.2 Data integrity

Electronic commerce should ensure the maintenance of data and provide medium to identify data integration. (Houssam El Ismaili, et. al., 2015).

4.2.3.3 SSL (Secure Sockets Layer)

This is usually used to encrypt web browser's messages from the web servers. It is also used to protect client important information such as credit cards information. (Houssam El Ismaili, et. al., 2015).

4.2.3.4 SET (Secure Electronic Transaction)

This protocol has more authentication and more protection of sensitive information compared to SSL. It ensures confidentiality and payment integrity of cardholders. In order to manage the non-repudiation VISA introduced 3D-secure and this protocol has additional feature like customer redirected to new window when entering secret data of his credit card like password or date of birth. (Houssam El Ismaili, et. al., 2015).

4.2.3.5 Secure server protocol design;

The main purpose of this protocol is to design a more secured way to protect on line payment transaction against fraudsters. Some e-payment security like Integrity, confidentiality and authentication. (Houssam El Ismaili, et. al., 2015).
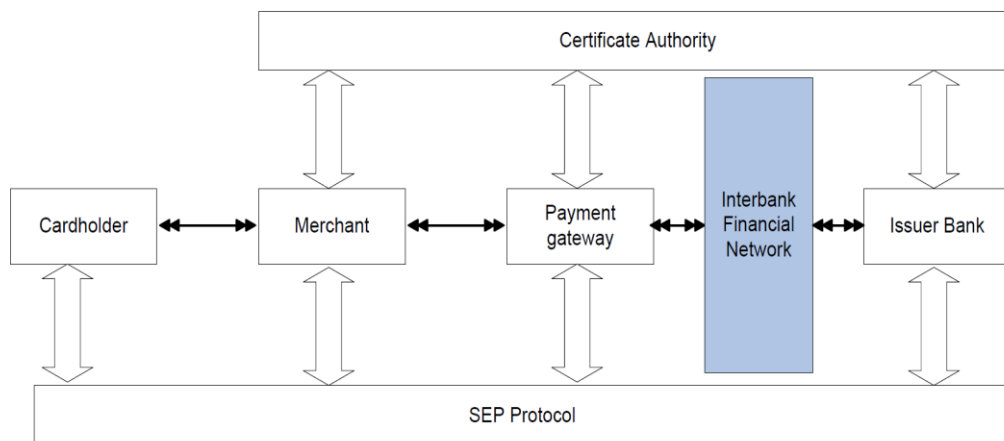
Figure 8 Entities in SEP protocols

4.3 Methods of Development

4.3.1 Basic Setup and Installation

Ash beauty e-shop was built on WordPress content management system which is an open source framework using XAMPP as author's localhost server.

The author downloaded WordPress zipped file from the WordPress website, it was then uploaded to author's XAMPP server by extracting the zip file into the htdocs folder of author's XAMPP server. Using the right localhost url to access author's WordPress folder from author's browser the author could configure the website using the WordPress configuration wizard by selection the language, setting up MySQL such as creating new username, password and table prefix.
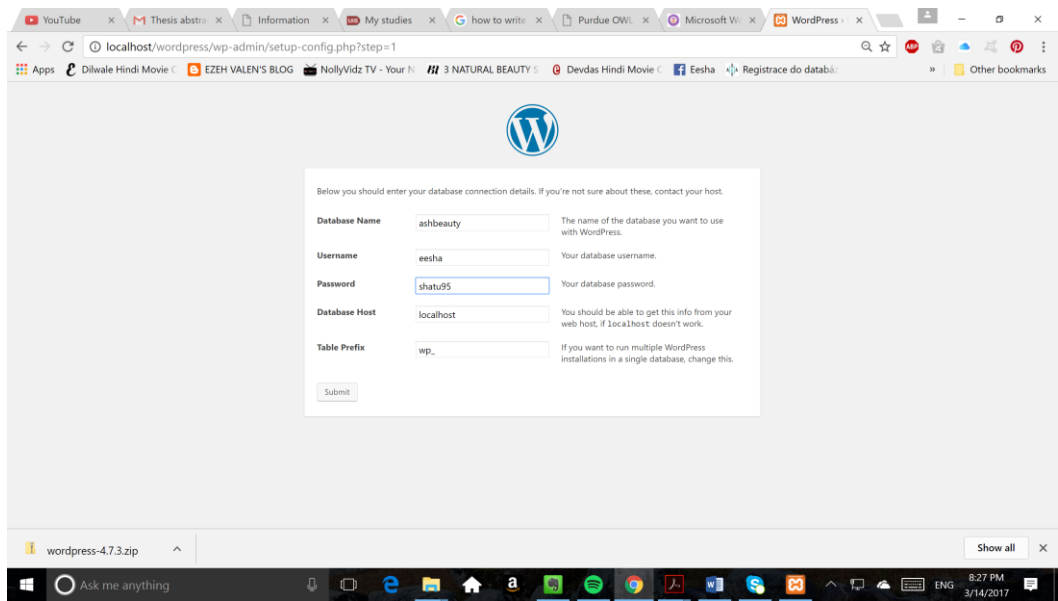
Figure 9 WordPress Configuration Wizard

After successful configuration of website using the WordPress configuration wizard, the author navigated to the WordPress admin folder using the right url that points to the folder on author's browser. The author was requested to insert username and password in other to be able to have access to author's WordPress admin dashboard. From the appearance and theme section, Author selected an already made simple store template to activate and customize using author's basic knowledge of PHP and CSS.
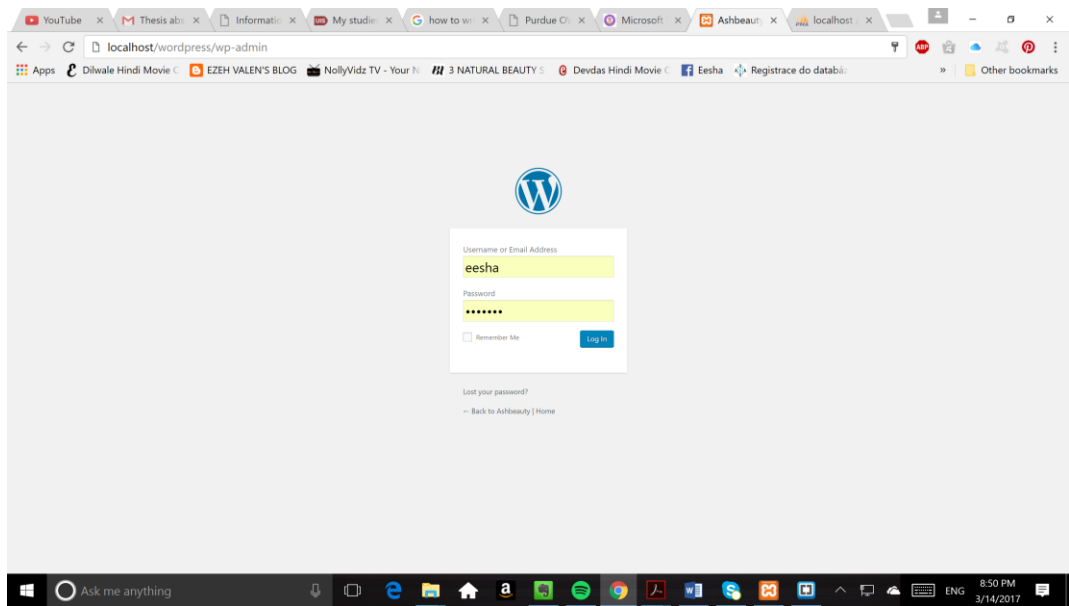
Figure 10 WordPress admin login page

4.3.2 Website Features

➢ **User**

As the overall administrator of the website author can give any other user different kind of roles privilege such as subscriber, editor and even administrator access, this can be done through the user settings.

➢ **Plugins**

This is useful in the case of adding any kind of feature that is not available by default on WordPress, WordPress plugins are built on PHP and it requires a good knowledge of PHP to be able to create or modify WordPress plugins. The major plugins used for the development of author's e-shop website are;

- **Fashion Event Creator and Eesha Fashion Event Poster:** Recalling to the part of the objectives of this thesis which is the development of WordPress plugins to display news about fashion event shows across Europe on Author's e-shop website. This can help to fetch more traffic to author's website as people who are fashion followers will get latest news about fashion shows across Europe.

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Figure 11 Fashion show events display plugins

Figure 12 Fashion shows information display page

Akismet Anti-Spam: This plugin is used to check every comments and contact form submission on author's website against the Askimet Global database of spam in other to ensure that author's website does not publish any kind of malicious information.

- **Woo commerce:** Woo commerce is an open, free source plugin and the woo commerce is free to download so no transaction fee charged. Woo commerce is trusted by many companies. Woo commerce works with some browsers like Mozilla Firefox, Safari, Chrome but not supported by Internet explorer. Some features of woo commerce are;
  - It is built for WordPress.
  - It is a mobile friendly design.
  - It helps in organizing your product.
  - It offers an in-built shipping calculator.
  - It has very good Search Engine Optimization (SEO).
  - It helps in keeping track of orders, profits and traffic (Mr. Duncan Jones, 2016).

This manages the complete e-commerce part of Author's website that is, the shopping cart which comprises of the product catalogue, customers, orders and delivery information.

- **Search Engine Optimization:** This plugin allows the setting up of search engines console i.e. Google, Yahoo, Bing etc. for potential customers to be able to find Author's e-shop website faster and easily.

➢ **Settings**

This section of the WordPress content management system is used to configure the style, writing, reading, discussion, media, permalink and the plugin settings of author's e-shop website, this provides a total configuration of the website based on the kind of settings the author want.

➢ **Categories**

This section of the e-shop allows efficient management of author's content based on the product and post categories, it add, edit, delete and arrange product, and post categories.

➢ **Posts**

This section adds, edit, delete and publish products, events and blog posts on author's e-shop website.

➢ **Media**

This manages the media library and add, insert and edit media to the e-shop website.

➢ **Pages**

This is the section that add, publish, delete and edit every page of author's e-shop website.

➢ **Tags**

This section adds, edit and delete every products, events and blog posts tags on author's e-shop website.

➢ **Links**

This section adds, edit and delete every links on author's e-shop website.

➢ **Comments**

This section of author's WordPress admin panel will enable adding, addicting and moderating comments to be published to the e-shop website

➢ **Appearance**

This section of author's e-shop website manages and customize themes, manages widget and also setup the background of the e-shop website.

➢ **Advanced**

The advanced section of the e-shop website takes care of the backup and restore, version update, optimization and also password reset.
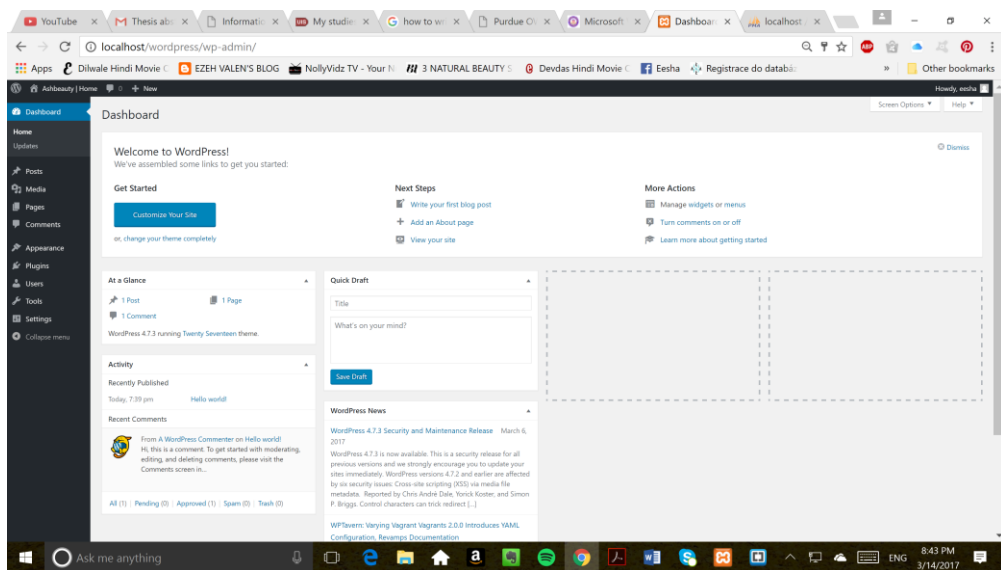

Figure 13 WordPress admin dashboard

5   Results and Discussion

5.1 SWOT Analysis

The Swot analysis was introduced in 1960 and it is still useful for companies. The SWOT analysis is used for planning and organizing information of companies. Companies performance comes internally and externally so the SWOT analysis is used as problem solver, to know the weakness, strength, opportunities and threats. (Seyed Mohammad Hassan, et. al., 2014)

5.1.1 Strength

> ➢ The author's previous experience in fashion line will aid availabity of unique and superior product on the e-shop website (Shiwei Lin, et. Al. 2014).

> ➢ The e-shop will be hosted on a secured dedicated server which will give the e-shop lass or no downtime and customers can make 24/7 in 365 days shopping online (Shiwei Lin, et. Al. 2014).

> ➢ Available of the e-shop customer care agents 24/7 in case of any emergency attendance to customer's orders.

> ➢ The potential customers can identify the product faster on-line and time compare the products.

> ➢ The e-shop will also be mobile responsive i.e. it can be accessible anywhere in the world and on any device provided there is an Internet connection. (Seyed Mohammad Hassan, et. al., 2014)

5.1.2 Weakness

- One of the major problem is customers sometimes are afraid of on line purchase because of lack of touch they are not sure of the quality or material.

- They cannot try the product to know if it fits them or not.

- There are some products with unknown brands which decrease the level of acceptance of the products by potential customers (Shiwei Lin, et. Al. 2014).

- Delay delivery of products or received damaged products.

- On the manufacturer's side, shipping goods has a lot of requirements like custom clearance, tax fare and making sure that the customer receives their orders.

- Transporting of products can be hard at times because some goods are heavy, huge and fragile. (Seyed Mohammad Hassan, et. al., 2014)

5.1.3 Opportunities

- Investors are willing to invest in the e-shop (Shiwei Lin, et. Al. 2014).

- Good quality of information to engage potential customer's trust (Shiwei Lin, et. Al. 2014).

- On line businesses makes possible for businesses or companies to cooperate and develop the supply chain. (Seyed Mohammad Hassan, et. al., 2014)

5.1.4 Threats

- Nowadays, big companies make it difficult for the small companies to growing in business because there are lot of competition and sometimes, companies reduce price of product causing problem for the on-line shops.

- Identification of theft is another threat because protection of personal data is at risk and credit card information. Anyone can start a business or company but not everyone will have many customers. Losing customers online is the worst lose (Seyed Mohammad Hassan, et. al., 2014).

> ➢ Faces the local product competition on the marketing aspect (Shiwei Lin, et. Al. 2014).

5.2 Evaluation and Comparison

As the world is going hands-on, mobile responsive e-commerce website is very important as almost 51% of the total time spent per adult user daily online are on mobile according to the figure below;
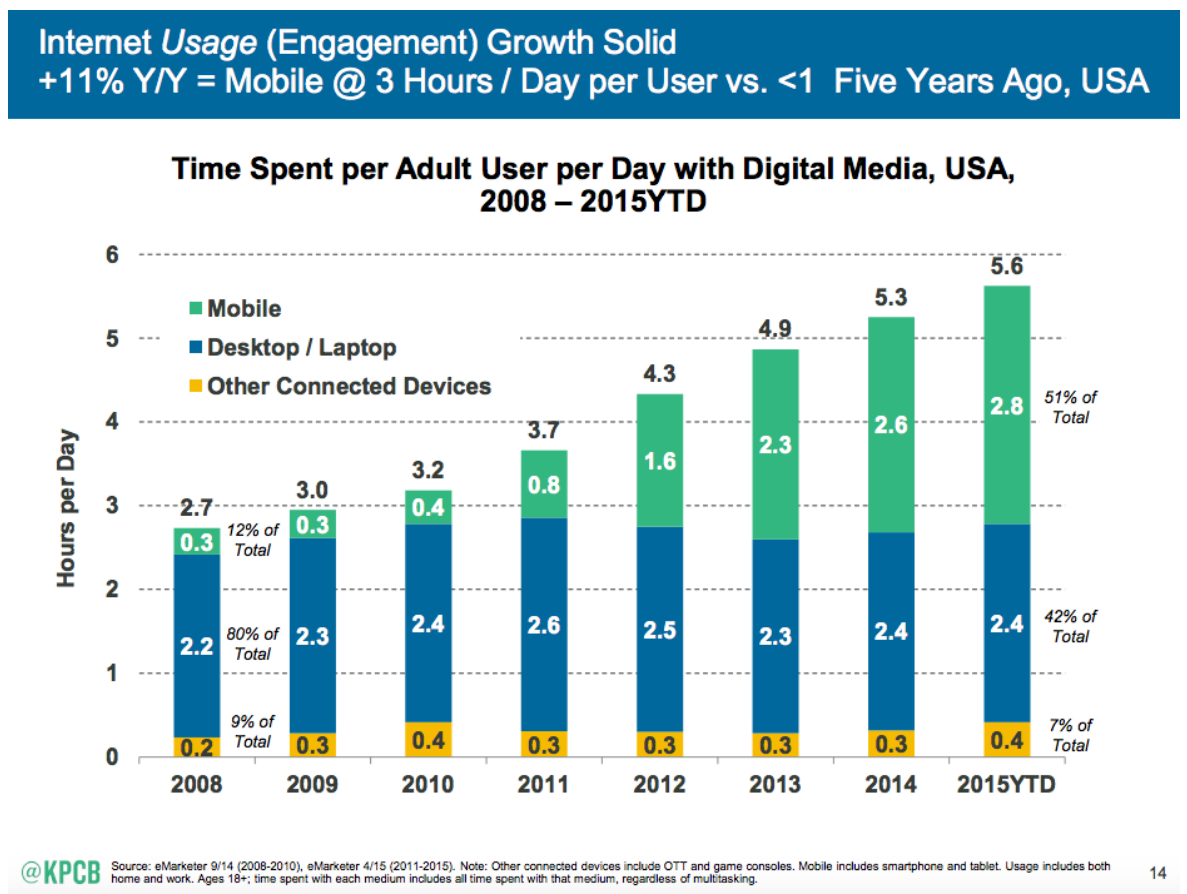

Figure 14 Time spent online per adult user per day

The figures below compare author's responsive e-shop with another non-responsive e-commerce website;
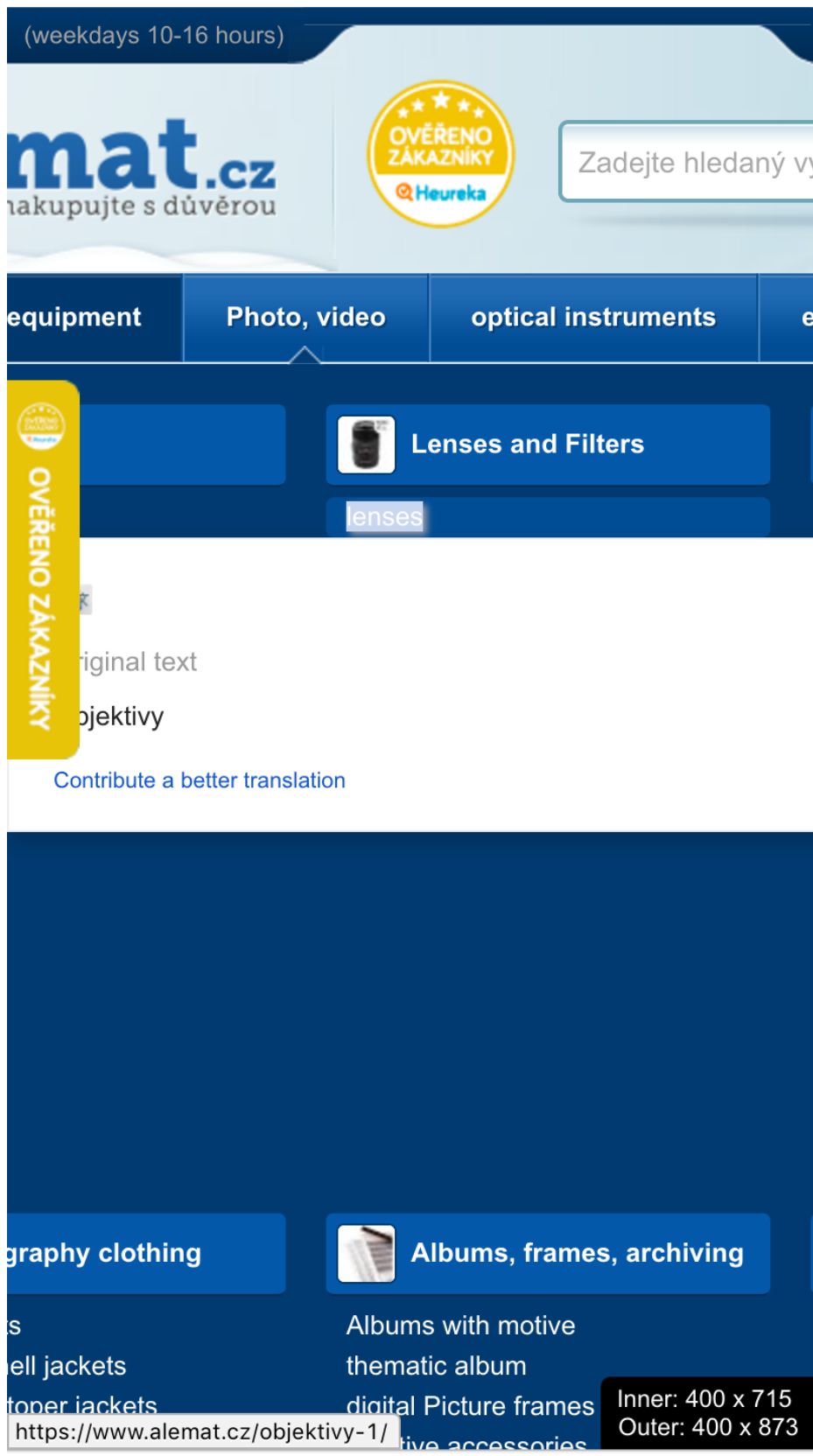
Figure 15 Illustrates a mobile display of a non-responsive ecommerce website
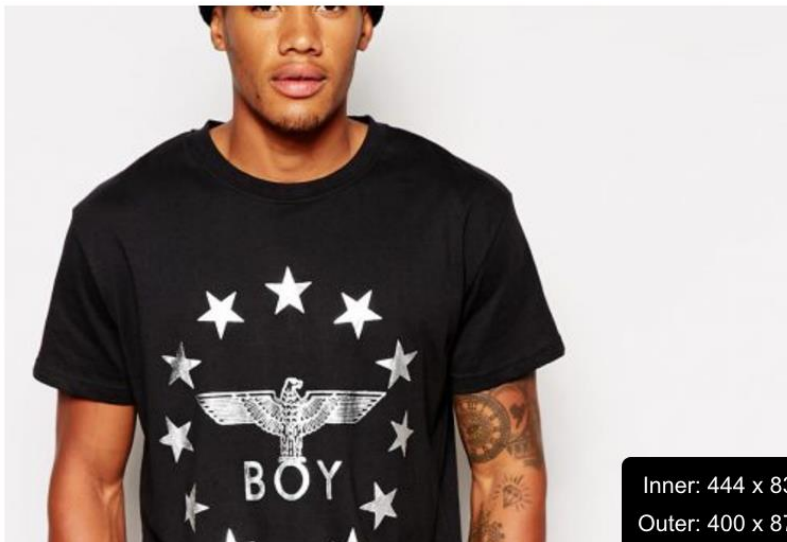
Ash Beauty

Figure 16 Shows the responsiveness of author's e-shop

6   Conclusion

The e-shop was built successfully on the Open source WordPress framework which is regarded as the most popular content management system using XAMPP as the localhost server as WordPress development environments requires access to PHP and MySQL. Also, a good research and planning was made for the development of the e-shop.

Using PHP which is a server-side programming language the author was able to develop Plug-Ins that display information about Fashion Shows across Europe. This is a strategy to increase the traffic of author's e-commerce website as some people may be interested in following up some events about fashion in Europe and this can turn them to the author's potential customers. The Fashion Show Events display feature on author's e-commerce website was achieved by developing a WordPress Plugin with PHP.

The evaluation of the e-shop shows that it is mobile responsive and this is a great opportunity to get more traffic to the e-shop as about 51% of adult internet users are on mobile.

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7 Appendix

List of Supplements…