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WORDPRESS AS A CONTENT MANAGEMENT SYSTEM

Thesis

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ABSTRACT

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This thesis is about publishing content in a website built with WordPress. WordPress is one of the most popular CMS in the world. A content management system or CMS is a software which offers the facility to create, edit, organize and publish content on the web. It also allows users to have full control over files, documents, design and display of the content of the website. One of the main advantages of using WordPress is that users do not need to have any web programming skills. But IT professionals who have acquired various web programming skills can contribute to the development of WordPress.

The purpose of this thesis is to demonstrate thoroughly the process of building a fully functional website with WordPress, creating content for the website, publishing and managing those contents. In addition, it discusses about front-end page builder has revolutionized web design to display content in a very intuitive way.

Key words

Content creation**,** domain, hosting, monarch**,** page builder, printful product launch, theme customizer**,** wooCommerce, wordPress**.**

CONCEPT DEFINITIONS

HTML   Hypertext Markup Language

CSS   Cascading Style Sheet

XML   Extensible Markup Language

HTTP   Hypertext Transfer Protocol

HTTPS   Hypertext Transfer Protocol Secure

CMS   Content Management System

FTP   File Transfer Protocol

URL   Uniform Resource Locator

IP   Internet Protocol

LAN   Local Area Network

WWW   Word Wide Web

DNS   Domain Name System

PHP   Hypertext Preprocessor

SEO   Search Engine Optimization

SSL   Secure Sockets Layer

SSH   Secure Shell

OWP   Optimized WordPress

RSS   Rich Site Summary

POD   Print on Demand

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1 INTRODUCTION

Communication technology has played a vital role in the progression of modern civilization. Especially, web technology has established the mechanism of sharing resources through computer networking system. Web technologies include HTML, CSS, XML, JavaScript, asp.NET, and HTTP. Business applications, web servers, databases, programming languages are basic part of web technologies. Website can be created using these web technologies. A website is a collection of web resources such as web pages, and multimedia contents. Every website is identified by a Uniform Resource Locator (URL) which can be access via public Internet Protocol (IP) address or Local Area Network (LAN).

Web technology has also enabled avenue to build various kinds of web application to serve communicative purpose. WordPress is such an application which helps building website for sharing content, product, and service. A website represents a company in the World Wide Web (WWW) so that anyone connected with internet can know about the company globally. WordPress is the best content management system available in internet. This thesis is about how WordPress can be used as a content management system and it is implementing on a website located at www.wordinance.com.

This website is involved in two main activities such as content publishing and product launch. There are six main parts of the process of building this website which are authority acquisition, WordPress installation, design, build, content creation and product launch. Authority acquisition contains registering domain name and purchasing hosting plan. WordPress installation via cPanel is very convenient due to the availability of one-click installation feature provided by hosting plan. Divi theme and Divi page builder is used for designing the site and creating contents. WooCommerce is installed to integrate Printful in WordPress to build the e-commerce section of the website. At the end, the thesis displays how WordPress as content management system can be used to build a website for publishing contents and launching products.

2 REQUIREMENTS

WordPress is the best CMS for building a website. Ranging from open-source to paid, there are countless CMS developed till date. Every CMS has its pros and cons. Considering and comparing all the pros and cons of other CMS, anyone would choose WordPress to build website prior to other content management systems. But to run a fully functional website furthermore components are needed. First, the minimal WordPress server requirements are PHP 5.6 or above, MySQL 5.6 or above, mod rewrite Apache module, eval () PHP function, Multibyte string extension and HTTPS support. The allow_url_fopen option in server's PHP configuration must be enabled to use module manager library. Server's PHP setting must have high values set for post_max_size, upload_max_filesize and max_excution_time. For server speed and proper setup, these values are absolute requirements.

To check the current PHP version, a new file named php_info.php in our site's root folder via FTP can be created and uploaded. PHP version of any can be checked by entering the https://www.example.com/php_info.php. If the site is running on a PHP version older than 5.3, Toolset will certainly encounter various technical issues. To solve this problem, users should inform the hosting company to upgrade PHP version to 5.6 or later. PHP 7 is the fastest version, but many WordPress themes and plugins are not yet compatible with it. Consequently, PHP 5.6 is recommended by the experts since it is the most stable version without any compatibility issues with themes and plugins. Then, an exclusive top-level domain name must replace the numeric IP address so visitors can spontaneously remember the URL of the website. (wikiHow, 2019.)

2.1 Domain name

A domain name is a label of network domain formed by the rules and procedures of the DNS which stands for Domain Name System. A domain name represents an IP address. The generic top-level do-

mains are considered as best domains with popular extensions like com, info, net, org and the country-code top level domains. There are many companies who sell their services to register a domain name for users. Usually, users must renew the domain name yearly otherwise the domain name will be available for purchase again for another user. It is very inexpensive to buy a domain name unless it is a combination of prime words and generic top-level extensions. Figure 1 below shows the purchased domain for this thesis.
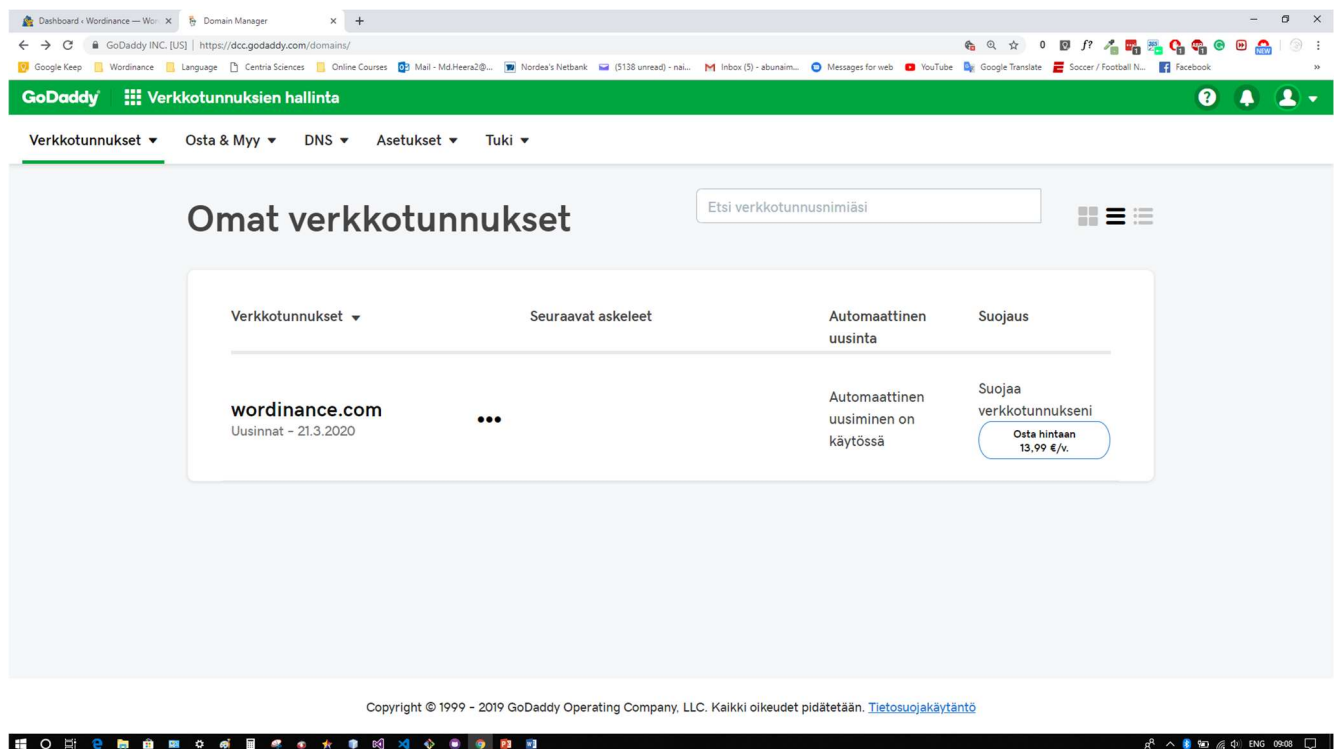

Figure 1. Purchasing domain from GoDaddy for this thesis

In technical contexts, most commonly domain names are written in lower-case though Labels in domain name system are case sensitive. Domain registrars use some important pieces of information connected with the domain such as administrative contact, technical contact, billing contact name severs for the users to maintain their domains. There are many reputed domain registrars such as Domain, Godaddy, Bluehost, Hostgator, Namecheap, Dreamhost, and BuyDomains. It is very important to choose a good domain name. To choose a good domain name, some criteria like memorable, brand-

able, descriptive, short, difficult to misspell, avoid hyphen and number can be followed. (Rowland, 2018)

2.2 Web hosting

Web hosting is a service through which computing resources and storage are provided to an individual or an organization. Web hosting is not IP-based service, but it is a web-based service which offers global accessibility to website or web application from the internet. Hosting service has played a very important role in the growth of internet in modern era. It provides a specialized back-end computing infrastructure.

Hosting has evolved into various formats with the evolution of technology. Hosting services do not only provide web hosting, but it also provides data/storage hosting, application or software hosting, game hosting and IT services hosting. Here we are going to discuss mainly about web hosting. Web hosting may vary in different types such as shared hosting, dedicated hosting and cloud-based hosting. Each of these types has its own features, advantages and disadvantages.

Basically, web hosting is measured in the amount of disk space users are allotted on the server and amount of data transfer speed, also known as bandwidth. These are the criteria of a good web hosting service. There are many qualities to consider before we choose our web hosting service such as un-metered bandwidth, one-click CMS install, free SSL Certificate, free Upgrade to positive SSL, free Dedicated IP, free SEO tools, free database, dedicated webmail account, FTP, high speed, server up-time, reliability, and backup policy security support. (Carney, 2018.)

2.3 Hosting service and plan

There are many web hosting services with good reputation. Some of most popular web hosting services are HostGator, Bluehost, Site Ground, iPage, Dreamhost, A2 Hosting, GoDaddy, and InMotion. For this project, I have selected Hatchling Plan of HostGator. It is a very cost-effective hosting plan. It has one-click installation ready for many popular applications on the web such as WordPress, Joomla, Drupal, Magento, Wiki, and phpBB. Most importantly, it provides the latest cPanel which is arguably the best control panel amongst all web hosting. Figure 2 shows the Hostgator webhosting dashboard.
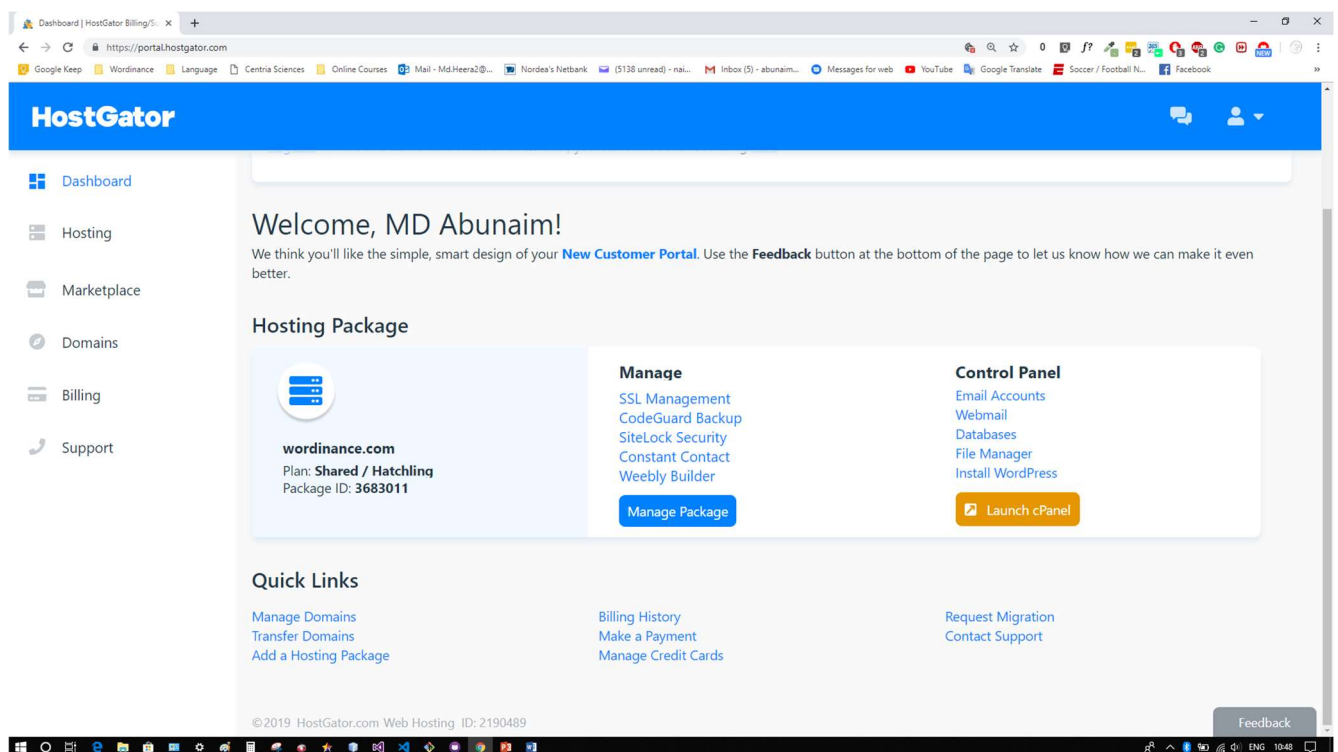
Figure 2. Hosting account dashboard

It is a very confusing and time-consuming task to choose a proper web hosting plan. There are plenty of free and cheap web hosting services. Free and cheap options are very tempting, but they can cause serious issues in terms of web publishing. Often, these free web hosting companies offer only 50MB of storage and no FTP access. Since they provide free service, they have no responsibility to ensure any

stability to their users. As a result, a website can disappear any time if it is hosted in free web hosting plan. If a website admin decides to sell his or her website, then it is almost impossible to find a buyer because the website is hosted in an unreliable service. (Low, 2019.)

2.4 cPanel

cPanel is a web hosting control panel based on Linux and written in a programming language called Perl. It provides graphical interface and automation tools for the users. Additionally, in the GUI of cPanel, it contains command line and API based access to allow developers to automate standard administration processes. Apache, PHP, MySQL, PostgreSQL, Perl, and BIND are available as application-based support. Similarly, Email-based supports are POP3, IMAP, and SMTP services. cPanel gives users control over many important elements of their web service. Some of them are File manager, Webmail accounts, FTP accounts, Subdomains, MySQL Databases, Cloud backup, SSL Certificate and Advance zone editor. Figure 3 and Figure 4 show two cPanel interfaces below.
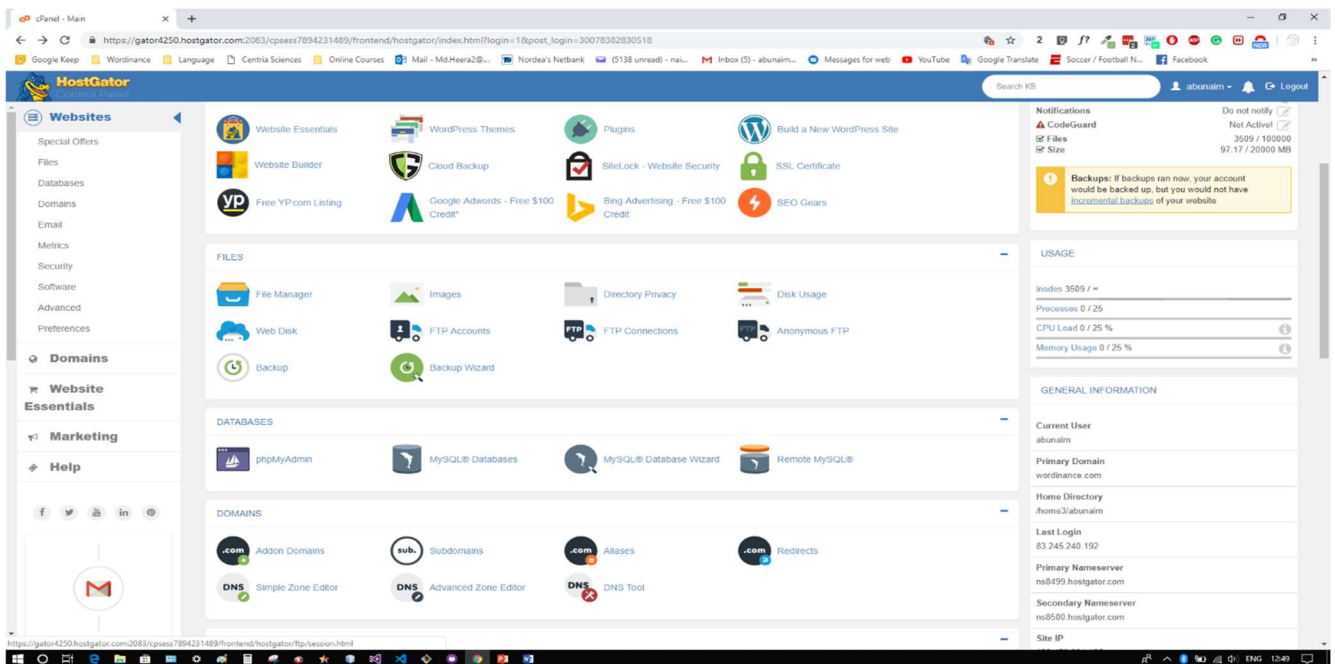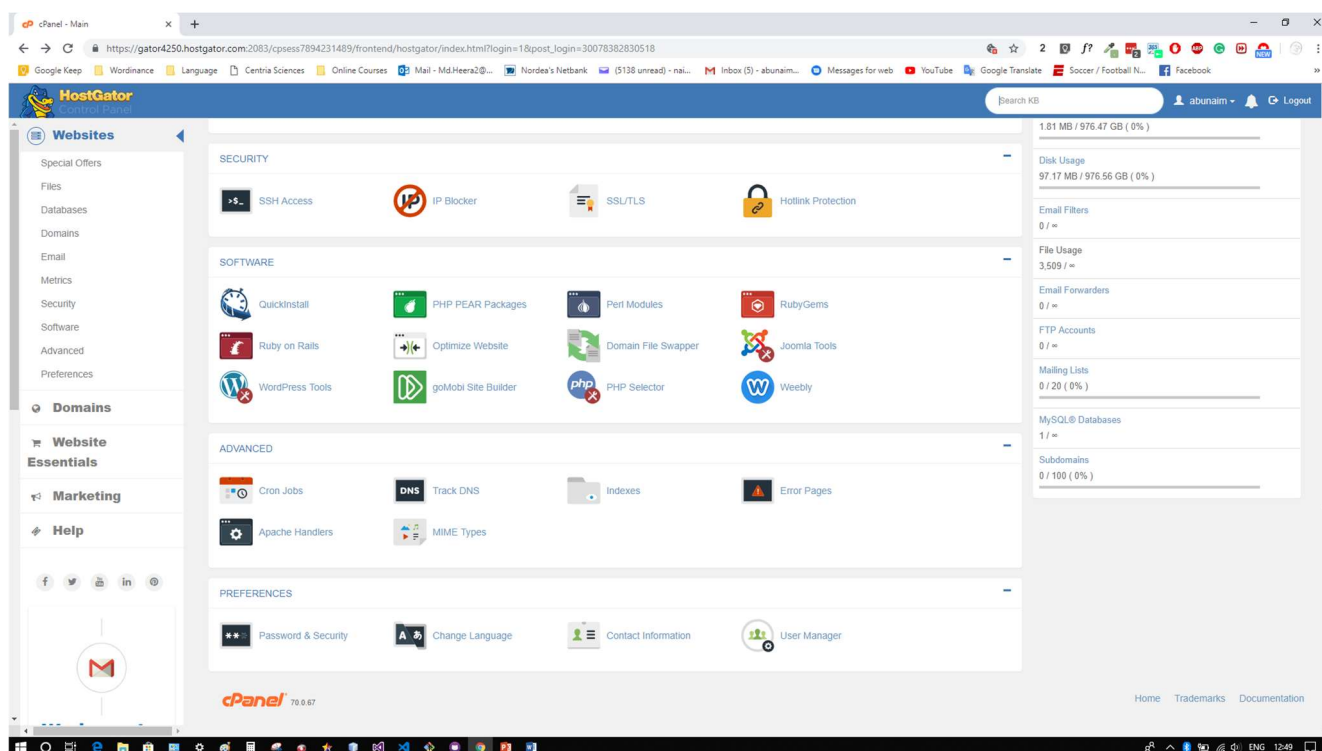

Figure 3. cPanel interface 1

Figure 4. cPanel interface 2

cPanel is the most popular control panel dashboard to manage backend of a website. It has a very user-friendly web-based interface. Without cPanel, an immense amount of technical knowledge to manage backend of the website is necessary. cPanel can be accessed via a direct link provided by hosting service. Also, cPanel username and password are received from hosting company to be used in cPanel login form. On the right-hand side of cPanel, basic information of our server can be found and in the central area there are many different links to manage various parts of our hosting account. One of the most used features of cPanel is Email Accounts. Using this option, it is possible to create custom email address including unique domain name. Once the email account is created, an advance webmail account wizard of our choice from cPanel allow communication with visitors. (Karol, 2019.)

3 INSTALLING WORDPRESS

It is very easy to install WordPress form the software section in cPanel. Nowadays web hosting companies provide quick one-click WordPress installation. Once the installation is completed, log in credentials must be used in the admin panel to access the WordPress dashboard. Optimized WordPress cannot be installed using this method. To install optimized WordPress, users must navigate to the billing portal of OWP site manager and install WordPress manually there. Figure 5 shows the WordPress admin panel login form below.
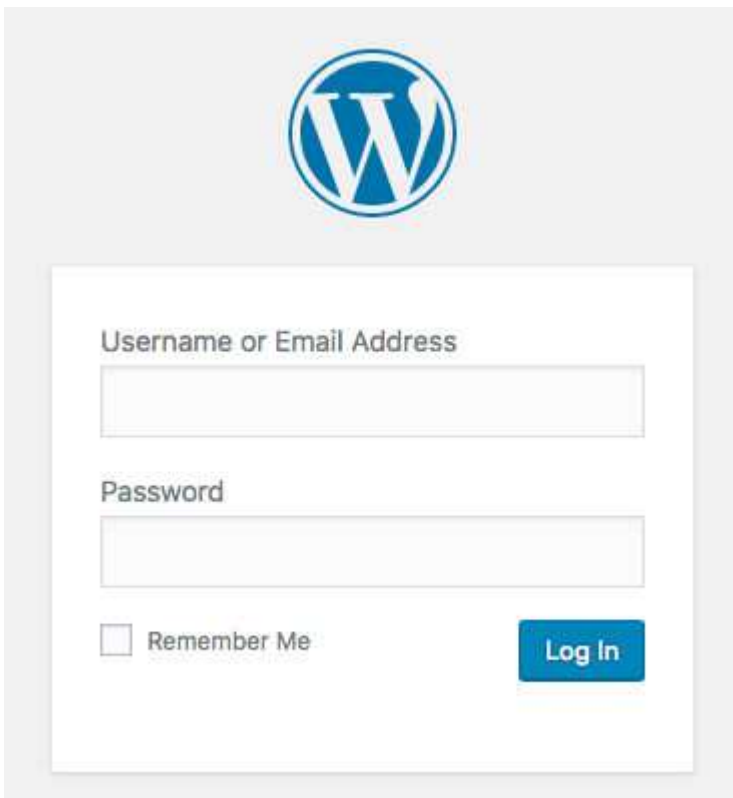
Figure 5. WordPress admin panel login

WordPress can be installed by quick-install option or manually. To install WordPress manually, WordPress package must be downloaded from WordPress.org. Then, users should unzip the downloaded folder on the local computer. Now, WordPress must be uploaded to the hosting account. Word-

Press can be uploaded to the hosting account via FTP, File Manager or SSH. After uploading the WordPress package successfully to the hosting account, it is time to create MySQL database and user. WordPress usually stores all its information in a database. There is a wizard called MySQL Database Wizard in cPanel. By clicking on this wizard icon MySQL database and users can created. It is important to click all Privileges checkbox to be able to modify the database later. Finally, users must configure the file named wp-config.php which is in File manager in the same folder where WordPress is installed. (HostGator, 2019.)

3.1 History of WordPress

Initially, WordPress was released by WordPress Foundation in May 27, 2003. It is a free open-source content management system based on PHP and MySQL. Two main building blocks of WordPress architecture are template systems and plugin. Earlier, it became very popular as blogging platform. The reliability of WordPress was also embraced by website, forum, online store and mailing list. communities onwards. Figure 6 indicates the market share of various popular content management systems in the industry.

Opensource CMS Market Share
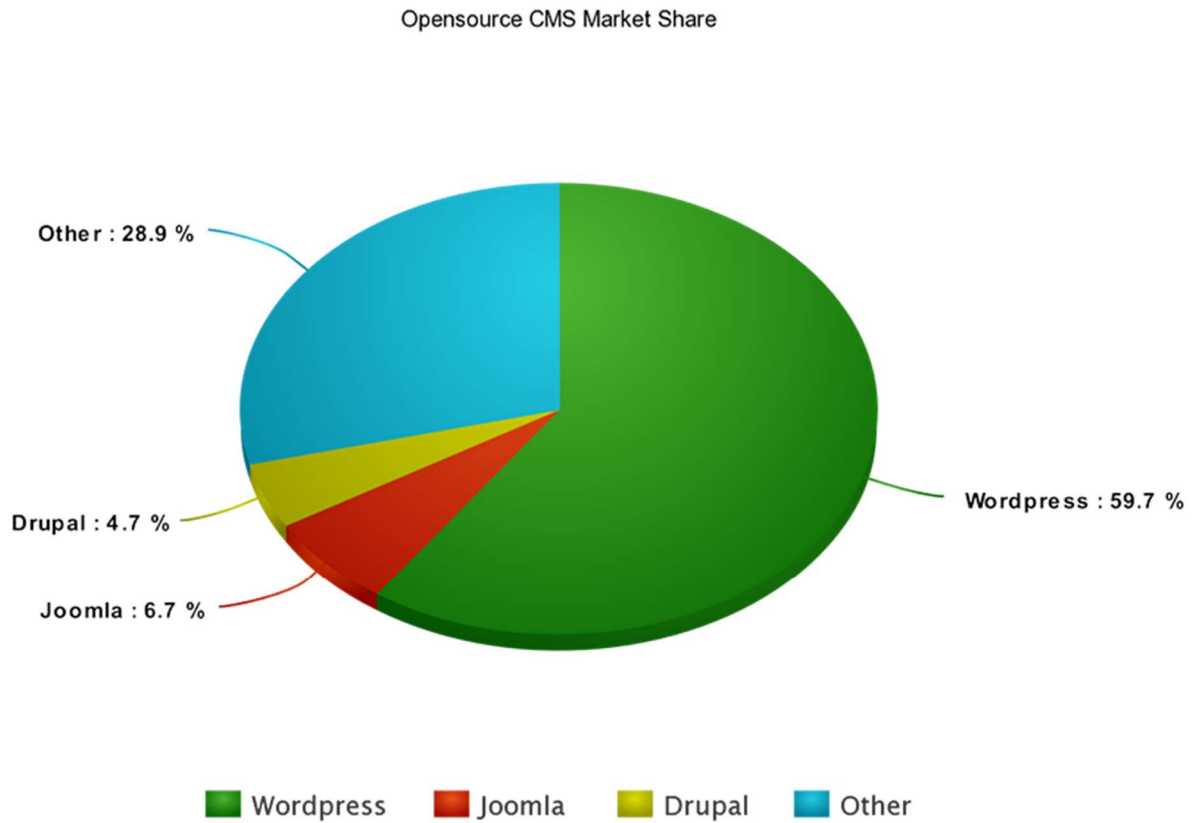
Figure 6. CMS market share 2019 (Open-source CMS, 2019.)

WordPress is now powering 26% of the web and 30% of the top 1,000 websites as of April 2018. More than 1.1 million new WordPress domains are registered every 6 months. Since, it is available in 62 languages, users post more than 41 million post in this platform every month. WordPress takes care of eighty to ninety percent crawling issues of Google. The most purchased theme of WordPress named Avada in Theme Forest costs 59 dollars each. Over 200,000 copies are sold which has generated approximately 12 million dollars so far. WordPress is the best website solution available in the industry.

3.2 WordPress overview

There are many layers and levels of interactivity all over WordPress. The actual website is the front-end that the visitors can only experience. The website admin has access to the WordPress dashboard where he can control and manipulate the backend and database. A user must be authorized by the main admin with a valid username and password to get access to the administrative layer. There are several roles such as Administrator, Editor, Author, Contributor, Subscriber, Customer and Shop Manager that can be assigned by the main admin to anyone. According to their role, users can have limited activity in the administrative panel. Administrator is at the top of the hierarchy who can access everything in the backend. Administrator can assign another user as Administrator, so there can be multiple administrators, who all can do everything in the backend. Administrator can create, edit, delete any content, manage plugins and themes, edit codes and delete other user accounts. An editor can only moderate comments and manage categories and links. An author can create, edit, delete and publish their own content only but they cannot change anything else. Contributor, subscriber and customer have very limited capabilities. Shop manager is another role added recently in WordPress user panel. Web admin can assign a user as shop manager to add, modify and delete product in a e-commerce WordPress back-end. Figure 7 exhibits the WordPress dashboard.
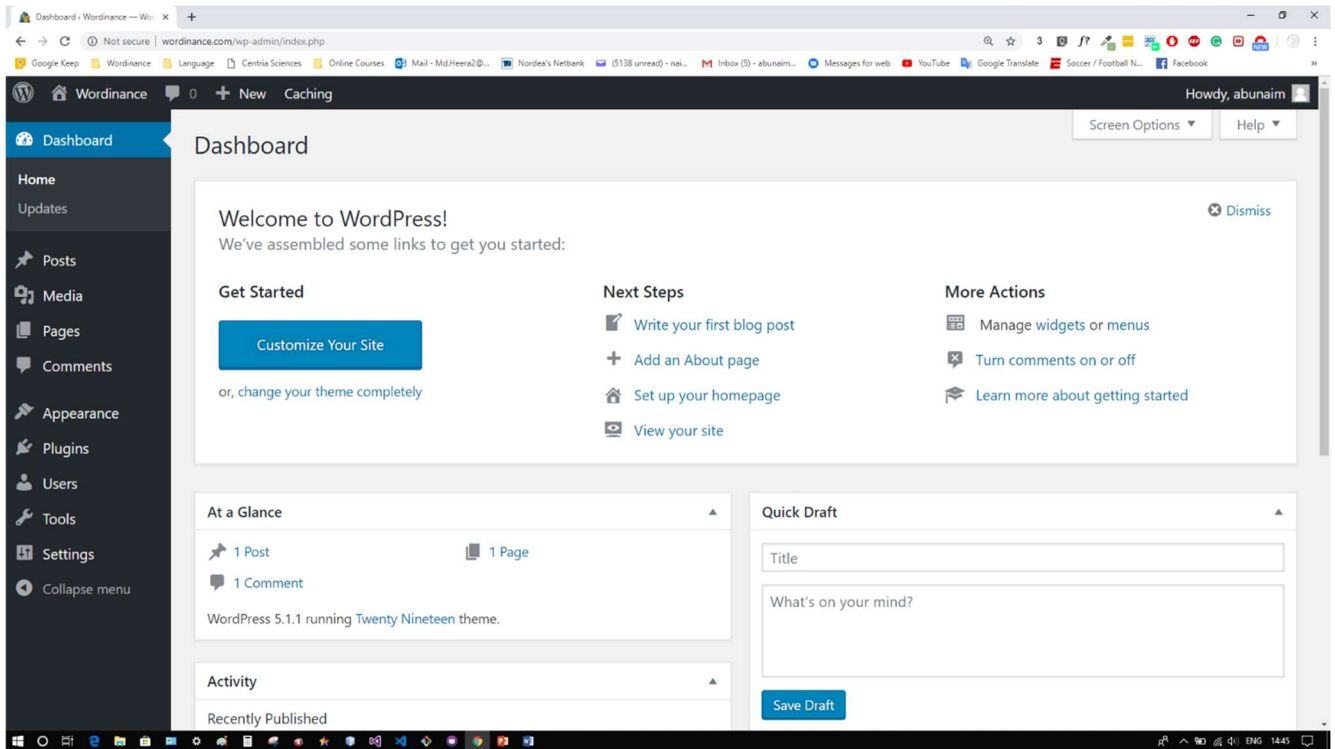
Figure 7. WordPress dashboard

WordPress dashboard is an interface where all necessary option are listed to add functionalities to a website. These are the main options available in WordPress such as Post, Media, Pages, Comments, Appearance, Plugins, Users, Tools, and Settings. Post, media, pages and comments are directly related with content creation. Users, tools and settings are used to define preferences of authority, data transfer and custom operations. However, appearance and plugins are the vital part of the structure of a website. Appearance is related with web design while plugins are utilized to add functionalities in the website. (B, 2019.)

3.3 Connecting domain with hosting server

To connect domain with the hosting server users must replace the name server addresses of the domain with the name server addresses of hosting servers. Hosting company sends the name server addresses of the hosting server via email when the purchase of hosting plan is completed. The name server ad-

dresses of the hosting server address also can be found in the cPanel. Changing name server addresses is available in the setting of the domain manager. Here users should replace the name server addresses and save changes to accomplish connection between domain and hosting server. If we try to connect the domain to the server, users must set up A records for the domain to connect it to the server. Now users can add new records in our advanced domain management system option. Figure 8 shows the nameserver address replacement below.

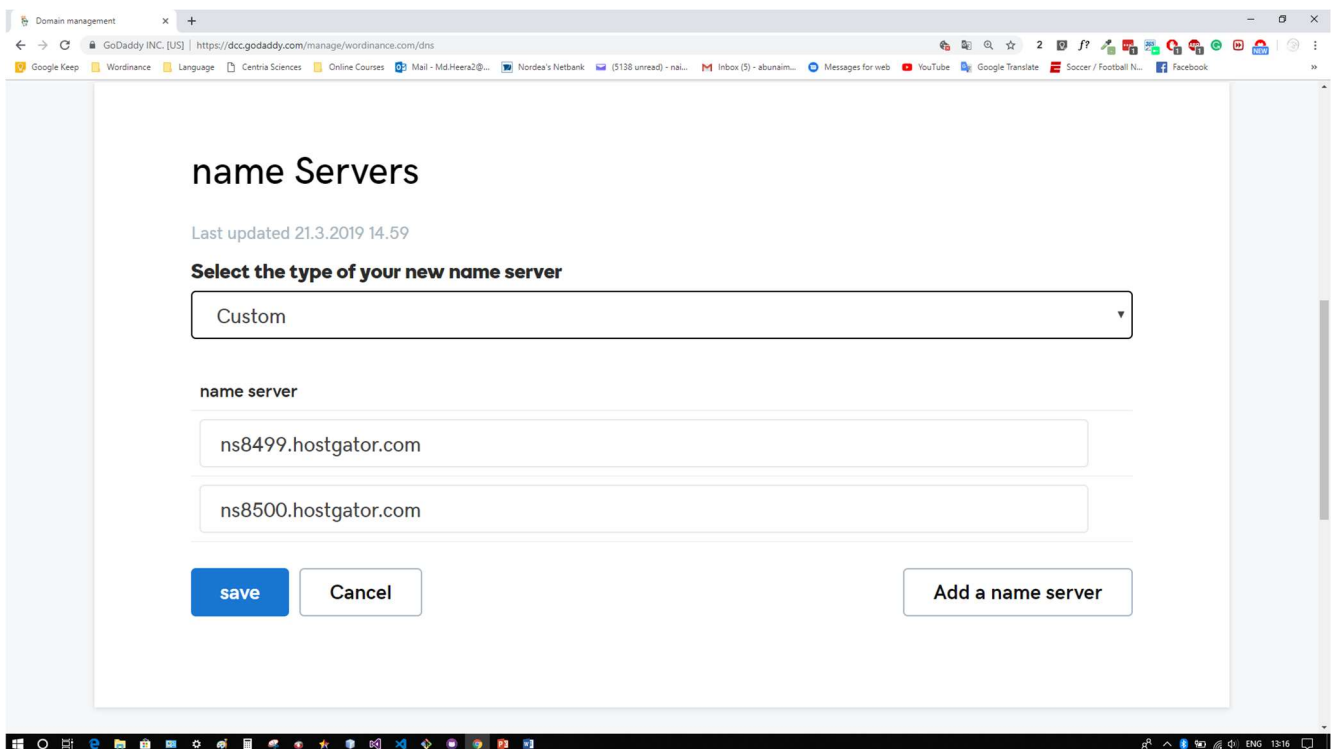Figure 8. Name servers addresses replacement

Multiple domains can be hosted in one hosting server, but users must replace name server addresses of each domain separately, otherwise users cannot access the website of that domain due to the connectivity issue between a domain and hosting server. After changing the nameserver address, it may take up to 24 hours for the website to work properly. (HostGator, 2019.)

4 APPEARENCE AND FUNCTIONALITY

Any website is built upon two main aspects such as visual and functionality. The visual part refers to the display of content. In a website, contents are usually published in a pre-designed template. These pre-designed templates are a known as Theme in WordPress community. Most of themes are highly customizable in WordPress. In WordPress dashboard, theme is found in the appearance tab. Theme dictates how a website will look like in the front-end. A few default WordPress themes come with a new installation. Currently, Twenty Nineteen is the default theme in WordPress installation. Default WordPress theme can be deleted if users do not want to use it after installing another theme from the directory of uploading any third-party theme. In appearance tab, there are also widgets, menus, background, edit CSS and theme editor options. Using all these options, it is very easy to design website with freedom and flexibilities. Widgets, menus and background help to determine the placement of various components of the website. WordPress allows to use custom CSS. Additionally, users can edit theme by creating a child theme as well. Editing theme requires a vast command on HTML, CSS, JavaScript and PHP.

WordPress ecosystem contains functionality paradigm which is also known as a plugin. Plugins are software applications that allow to add a range of features, especially related to the functionalities of the website. There are more than 49,000 plugins listed in WordPress plugin directory. Additionally, there are also thousands of third-party plugins as well. Many individual developers and companies sell WordPress plugins to facilitate functionalities which are not usually found in WordPress directory. As a result, WordPress has become a very powerful content management system and application framework. With this powerful CMS, users can build blog or personal website, portfolio, business website, eCommerce website, job board, business directory, non-profit fund rising hub, forum, online community website, membership website, podcast website and photography website. WordPress plugin API provides hooks and filters for the developers to modify and add new functionalities in existing plugins.

Each WordPress plugin installed in a site is registered in WordPress database. It is possible to activate or deactivate a plugin any time regarding the period of functional necessity of the website. Once a plugin is activated, WordPress connects to its database to load the core software. In WordPress plugin directory, plugins are divided into four categories such as featured, popular, recommended and favorites. Users can also search for plugin using filters like keyword, author and tag. Some of the popular tags are admins, analytics, eCommerce, gallery, login, social media, navigation, SEO, security a widget.

4.1 Theme selection

Appearance includes five functionalities in WordPress such as Theme, Customized, Widgets, Menus, Background and Theme Editor. WordPress theme can be installed from theme directory in Theme option of the dashboard or purchased more advanced premium quality theme from third party. Though there are thousands of free and high-quality themes in WordPress theme directory, similar to plugin search, WordPress theme can be found by three main categories such as subject, feature and layout. Each category has many subcategories. For example, theme subject includes blog, eCommerce, education, entertainment, food and drink, holiday, news, photography and portfolio. Features comprises accessibility, custom background, custom color, custom header, logo, editor style, image, image header, footer widget, full width template, post format and sticky post. And layout apprehends grid layout, one column, two columns, three columns, left sidebar and right sidebar. Therefore, it is very convenient to find the perfect theme for a website. Users should specify criteria from each category to filter out unnecessary qualities in a theme. (Staff, 2019.)

4.2 Divi theme

One of the best WordPress themes is Divi in the industry which is made by a company named Elegant Themes. There are many modern exclusive features offered by Divi theme such as Real Time Design,

Customize Everything, Organize with Ease, Responsive Editing, Global Elements, 46 Content Elements, Import & Export, Little to No Loading, Premade Layouts, In-line Editing, Draggable Widths, Customizable UI and Drag & Drop. Figure 9 presents Divi theme customization panel below.
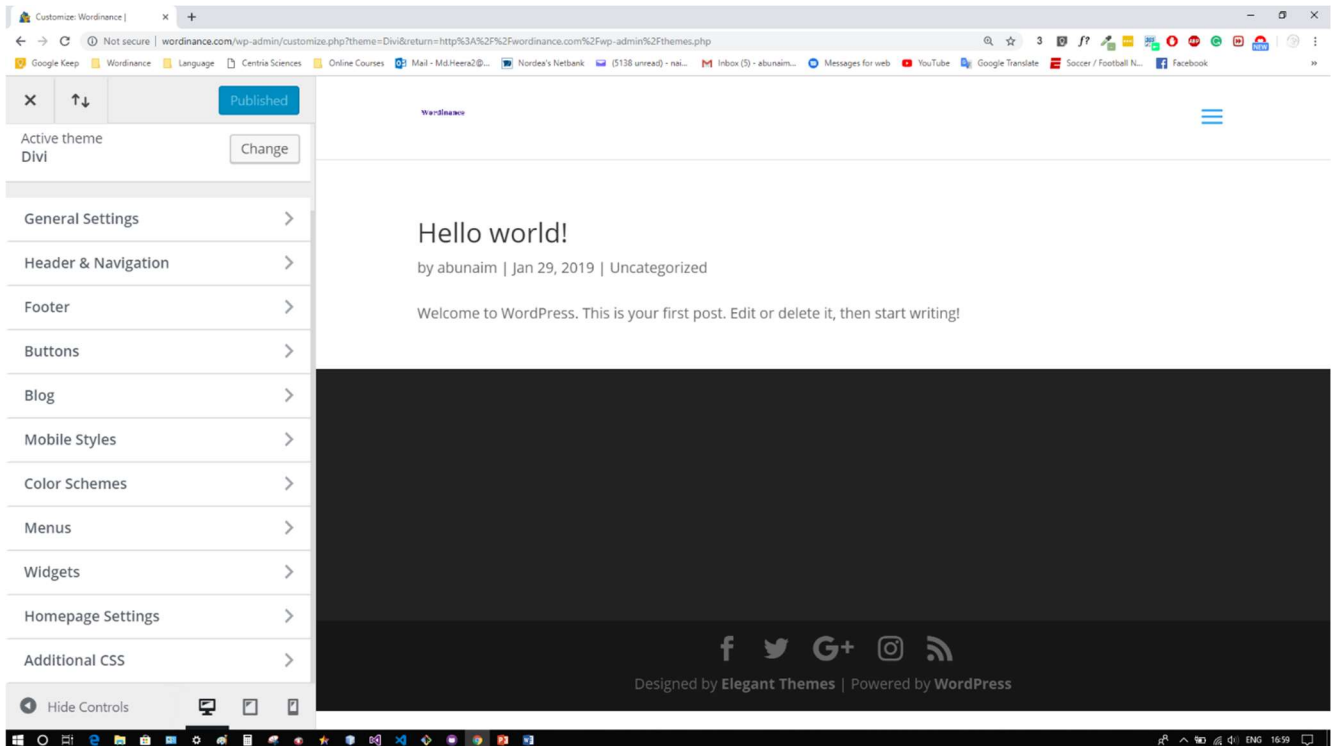

Figure 9. Divi theme customization panel

Divi comes with vast variety of customization control. It is very reliable theme to use for small business or large enterprise. A community of dedicated developers are constantly trying to improve the effectivity of the theme. It has in-bulk customization, tons of footer and header options and an intuitive theme option panel.

4.3 Divi design toolkit

Divi design toolkit comes with more than 20 layout packs and 900+ single layouts. User can create their own layouts and save it to use anywhere in the project. Users can also save any section with a name to reuse it again. From Divi community, layouts created by other users can be downloaded and, users can share their own layouts in the community. Divi allows to run smart split testing to retrieve powerful stats and insights. Front-end elements can be translated to 32 languages automatically. Figure 10 displays a demonstration of Divi's smart split testing.
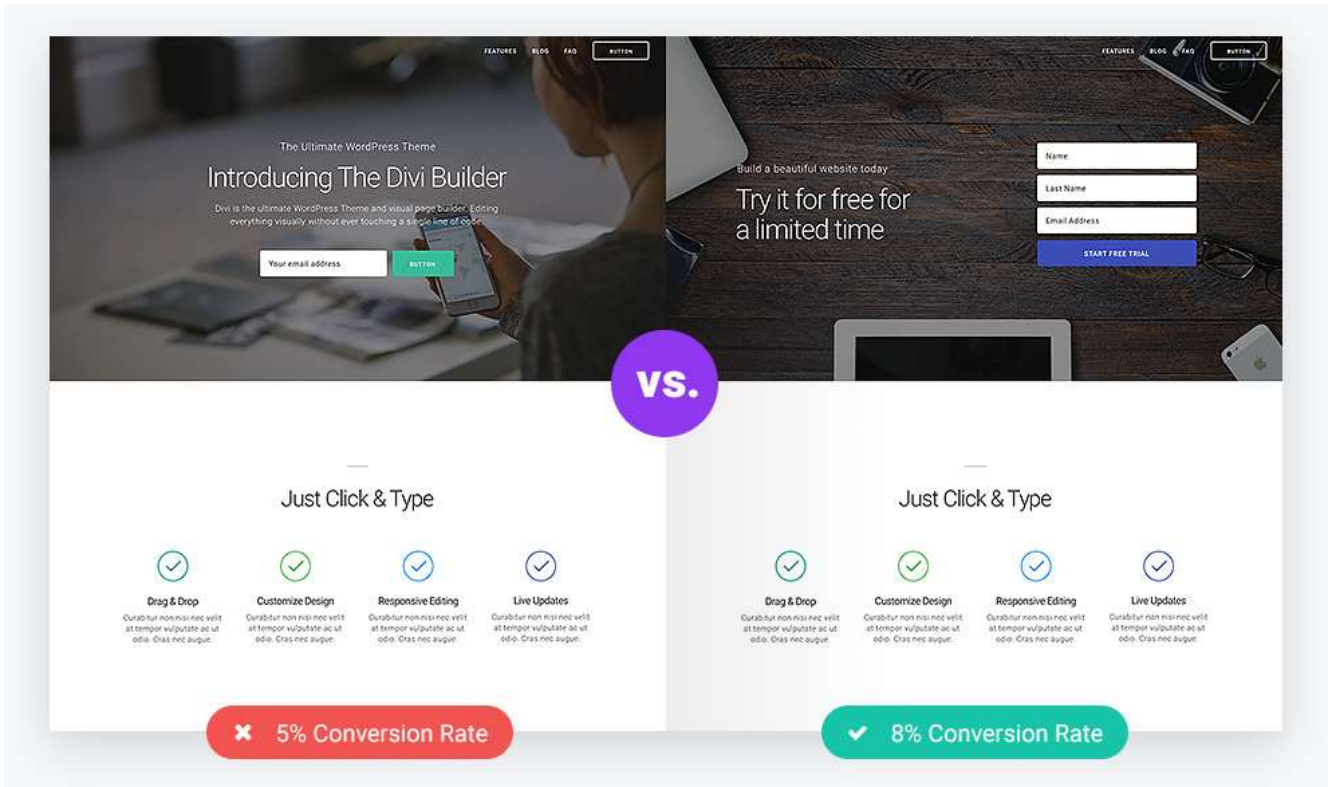

Figure 10. Smart split testing with Divi (Elegant themes, 2019.)

Divi design toolkit helps to build website which looks clean and abstract. It is trendy to publish content in a minimalistic flat design. At the same time, a website must be filled with bold and attractive color to bring back visitors. Flat web design is nowadays very popular because of its core value of usability. It enables prioritizing in terms of user experience by combining slick and modern design. The simplicity of hero section is the key to impress visitors in flat design framework. Users should emphasize the built-in box structure of Divi to create pleasant view of content.

4.4 Widgets

A widget in WordPress is small block that is responsible for a specific functionality. Widgets can be used in only widget-ready area in a website such as left sidebar, right sidebar and footer area. Widgets are normally dragged and dropped in a widget-ready area. The list of all available widgets is found in appearance and then in Widgets in WordPress Dashboard. Widgets area may vary from theme to theme. WordPress has some widgets by default such as categories, tag cloud, navigation menu, calendar, search and recent posts. Theme and plugins add their own widgets to give users more control over the functionalities of the website. Figure 11 shows the sample widgets with Divi theme below.
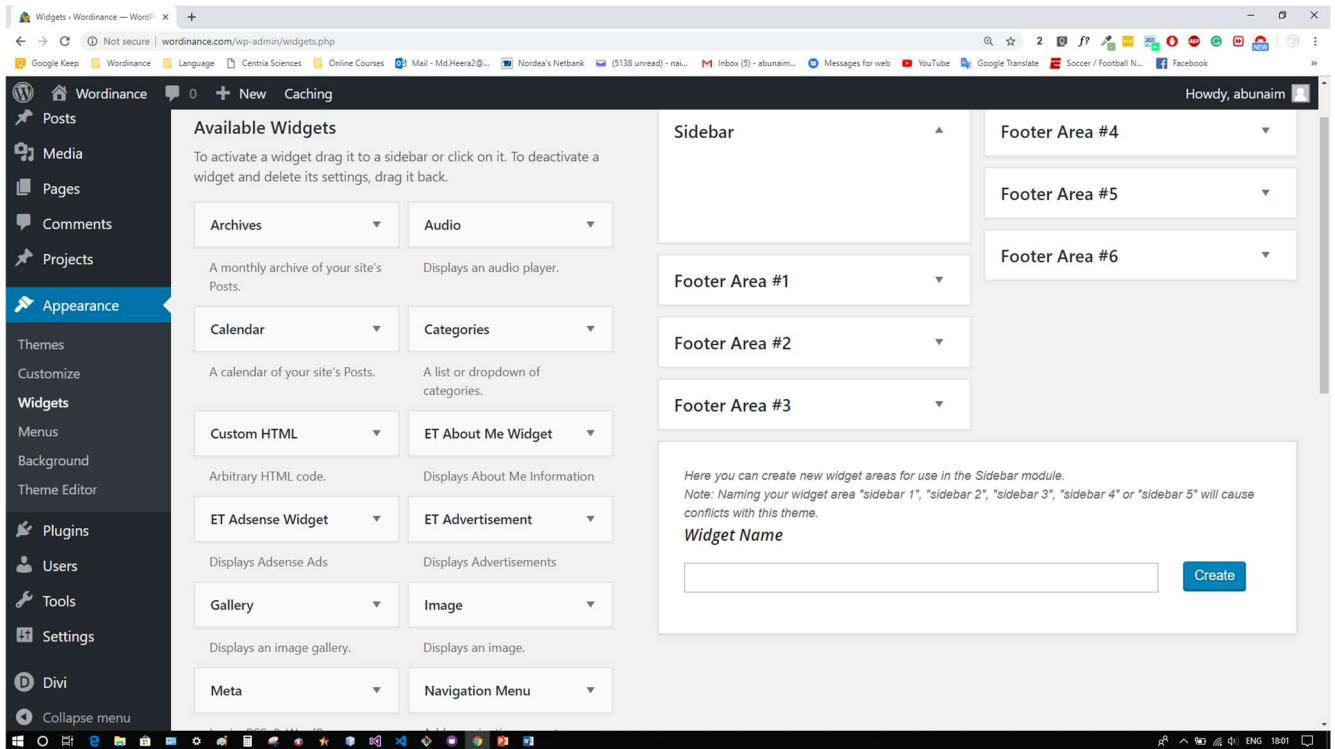
Figure 11. Sample widgets with Divi theme

WordPress has some default widgets integrated with its installation. After installing a theme and plugins, other widgets appear in widget panel. On the left side of the panel, there is a list of available widgets and on the right side, there is placeholders for widgets to be added. Usually widgets are placed in either left or right sidebar and in footer area. The latest version of WordPress allows to create custom widget. Some of the noticeable widgets of the website are Active Product Filter, Cart, Contact Info, Map, Custom HTML, AdSense widget, Gallery, One Signal, RSS and Upcoming post. (Thomas, 2018.)

5 PLUGINS

WordPress plugins are software applications which can be installed from WordPress plugin library or can be uploaded from third party source to enhance the functionalities of a WordPress website. Only self-hosted version of WordPress from WordPress.org allows to install free plugin from the library or premium plugin from third-party developers.

The main advantage of using a premium plugin is that it provides full-time customer support, solid security and compatibility of the plugin with the latest version of WordPress. Users always must keep WordPress and all installed plugins updated to ensure high-level security. Also, often one plugin may not be compatible with any other installed plugin. To solve this issue, it is recommended to use another plugin which serves the same purpose and check through its compatibility with other install plugins. If there is any unused similar plugin, it is better to deactivate the redundant plugin and then delete it permanently. Essential plugins for this project are briefly described below.

5.1 Page builder in WordPress

Page builder in WordPress is a plugin that enables users to edit pages via an enhanced drag and drop editor. Mainly, there are two kinds of page builders such as front-end page builder and back-end page builder. With back-end page builder users can edit pages within WordPress interface, so to preview any change, it is necessary to reload the page in browser. On the other hand, with front-end page builder pages can be edited when they are opened in the browser. It is very convenient and efficient way of building pages because it saves time for users who do not need to publish and reload the pages frequently to check through the changes. Most popular front-end page builder in WordPress are Beaver

Builder, Divi Builder, Elementor, Themify Builder, Thrive Architect, SiteOrigin and WPBaker. (Newcomer, 2019.)

5.2 Divi builder

Divi builder is one of the best and most popular page builders for WordPress. Divi is both a front-end and back-end page builder. Divi page builder is compatible with any theme to create beautiful and fluid layouts inside content areas of any size and shape. However, it is recommended by the experts to make the best combination of theme and page builder so that users can design and build our website efficiently and maintain a sustainably good performance of the service. Though, Divi page builder is compatible with any theme, for this project, the combination of Divi theme and Divi page builder is implemented. In WordPress community, this combination of Divi theme and Divi page builder is considered as a perfect cooperation between design and build tools. Figure 12 displays a few modules of Divi builder below.
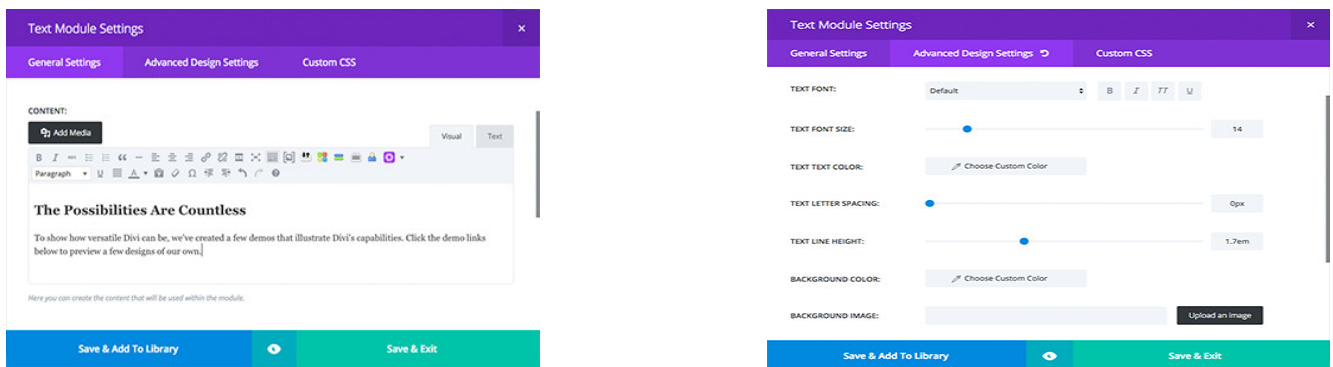
Figure 12. Simple configuration options and customization (Elegant themes, 2019.)

Some advantages of using Divi page builder are its advanced modules such as Endless Layout Possibilities, Compatible with any theme, 46 Content Modules available, Simple Configuration Options, Customize Absolutely Everything, Add Custom CSS, Create Advanced Columns Structures In Seconds, Duplicate Any Element With a Single Click, Disable an Item To Hide It On the Frontend, Lock

an Item To Disable Its Editing Functions, Copy & Paste Items Within Layouts Or Even Onto Other

Pages, Collapse Builder Chunks For a More Concise View of Your Content, Unlimited Undo's and

Redo's, Complete Layout Spacing Control, Save Any Layout, Section, Row, or Module, Access Your

Library Elements From Any Page, Saving Items With Selective-Sync, Export & Import Library Data

Into Any Site, Global Items and Selective-Sync etc.

5.3 WooCommerce

WooCommerce is open source e-commerce plugin for WordPress. WordPress theme developer Woo

Theme first developed WooCommerce for small to large-sized online merchants. WooCommerce runs

on over 30% e-commerce sites as of September 2015, 39 million of plugin copies are downloaded and

millions active installs are in use for various e-commerce project in WordPress platform. Additionally,

WooCommerce itself has produce 1,135 WooCommerce themes, 330 extensions and over 1,000

plugins for WordPress. When a user needs to add any extra functionality, he or she will easily find a

solution by using one of the existing WooCommerce add-ons. Figure 13 displays a simple workflow of

WooCommerce inaugurated with WordPress.

Figure 13. Workflow of WooCommerce (KOHLER, 2019.)

By default, it is a free plugin to install in WordPress but there is also a membership deal available offered by WooCommerce so that a user can have access to their all premium add-ons and new releases. Users can sell both product and service using WooCommerce. Some of the useful features of WooCommerce are A modular system, No limits, Sell anything, Worldwide community, Content at the core, Powered by Trust, Official documentation available, REST API implemented, Unrestricted customization, Optimizable for search engine, 24/7 phone, email and chat support. (Atlantis Theme, 2019.)

5.4 Monarch

Monarch is social media sharing plugin for WordPress made by the company called Elegant Theme. Use of social media to bring traffic to a website is very important. Monarch is used to generate a social media share button anywhere around the content or product. So, any visitor can share their experience of the content or product of the website in the social media. At the same time, a website also must have

their social media accounts to publish their content and product directly on social media to ensure professional presence of the brand. Since the main objective of web publishing is to promote content and product to target audience, users should utilize the ever-increasing exposure contained in social media platforms. Some of the best features of Monarch are such as Over 20 Social Networks to Choose From, Floating Sidebar, Above & or Below Content, On Images & Videos, Automatic Pop-Up, Place Follow Buttons in any Widget Area or Display With a Short code, Choose Button Shapes, Colors, & Hover Effects, Display Network Names & Social Counts, Pick Your Icon Orientation, Use Native Network Colors or Pick Your Own, Import and Export Monarch Data and Lightning Fast. (Elegant Themes, 2019.)

6 CONTENT AND PRODUCT

Content is the center piece of communication technology mechanism. Creating and publishing meaningful content requires pure craftmanship. Using a proper content template, clients can draw many regular visitor's attention. In general, visitors seek for content to feed their personal interests or needs. So, there must a clarity about content type of website as an information resource. If a website is inserted with random content types, it fails to establish an identity towards internet community. A well-planned, narrowed-down niche content website gains exposure in a short period of time. Another main principle to successful content publishing business is consistency. Web admin must focus on publishing quality content on a regular basis to live up to the expectation of its community. Publishing schedule is essentially a tool to deliver satisfactory information. Visitors anticipate a process of recurring chain of creative activity from content publisher.

A product is added to a website as a means of monetizing its content. Often, the main objective of content publishing business is to sell product or service to its visitors. Product might be a physical object or abstract in nature. According to experts, each product is a service and each service is also a product

from the viewpoint of an internet user. For example, there are many online bootcamps for web developers. To learn programming languages and frameworks for web development, anyone can subscribe to the bootcamp. This kind of training packages are not physical products. Any intellectual service or membership program can be considered as product in web publishing which is becoming popular across the globe every day.

6.1 Content creation

Content is very important part of life. Content entertains, feeds curiosity and guides to make right decision. In case of web publishing, the main purpose of content is to engage visitors with prospects to turn into potential buyers of products in the web store in future. In these age of social media, existing visitors of a website bring new visitors to a website which ultimately generates sells in the store. So, creating content of good quality is the key to a successful web publishing business. To attract visitors to a website, content might be created in written or visual format. There are many steps followed to publish content of any format such as brainstorming topic ideas, strategical procedure, select necessary tools, editing, analyze and finalization and publish content.

It is a common practice in web publishing business to promote products to customers through social media or advertisement network. But most of web publishers fail to establish a successful blueprint of their business model because they do not create enough good quality content. Content of a website generates interactive engagement to turn visitors into returning loyal buyers. So, the best means of building a successful web publishing business is to promote content rather than product. In this project, contents are created in image format to visualize quotes of famous persons. For example, Brainy Quote is the largest quote publishing website in the web but representation of quote in their website is mostly in text format and additionally in image format of outdated quality, yet they get over 50 million visi-

tors every month. Wordinance is also a quote publisher in the web but their goal is to become most popular quote website with a new approach of visualizing quote to the viewers globally.

6.2 Content promotion

Content promotion is very important strategical part of web publishing business. A promotion plan is guided by a range of available platforms to promote content of a website. Some of most trending platforms are as Search engine optimization, Social media, Email marketing, Paid promotion, Referrals and Syndication. Search engine optimization is best way to promote content in terms free traffic generation. Any website ranked in the first page of search engine results will receive many potential customers. Paid promotion, referrals and syndication also bring many traffics to a website, but this kind of traffic is not always buyer-traffic. Traffic coming from these sources is called passive traffic. But any visitor from search engine and email marketing is more likely to engage in content sharing and product purchase. The behavioral pattern from these two sources in a website is more active than passive traffic. In web business term, they are referred to organic traffic. If an internet user has found a website by searching keywords in a search engine or opening an email, it means that their interest in that matter is genuinely important to them. But a web publisher must ensure utilization of all available traffic sources to optimize the number of visitors to the website.

6.3 Products

A product is solution to a customer problem from the provider's perspective. A product commences with an idea to provide for customers requirement. A website facilitates engagement between providers and customers. And providers will seek financial benefits during those periods of engagement. Three kinds of products can be promoted from a website such as downloadable digital product, shippable product and services. In a web publishing business, the main goal tends to turn the visitors into customers for financial gain. So, by creating a product, users can offer probable solution to a customer

problem. It is very important to manifest the structure and practical elements of the product from problem solving perspective for the customers. Design and development of product initializes the implementation plan. After launching a product, an analytical report of maintenance, management, financial outcome, product review and feedback must be refined and updated to remain compelling for customers. And finally, based on this analytical report, users need to make a right decision about cancellation, continuity, modification and relaunch of ongoing products.

6.4 Print on demand

Print on demand also known as POD is new business model based on print technology. In this model, a print house will not print any products unless the customer has placed and completed the order. Digital technology allows digital printing possibilities to become a self-published author. POD is one of the few business models where users can launch a company with very low up-front investment. There are many companies globally who offer POD services. Some of the most popular services are Redbubble, Printify, Merch Amazon, Zazzle, Printful, Teespring and Spread shirt.

Many believe that POD and drop shipping business are very similar in nature. In fact, there are some significant differences between these two. For instance, in POD users have unique and custom-made design on products. On contrast, in drop shipping, users are promoting trendy products which are created by other companies and often online marketer are promoting the same product. As a result, drop shipping has become a saturated marketplace in a short period of time. Whereas, POD business needs many creative ideas with good sense of humor, adequate graphic design skill, awareness of all local and global events and timing on season thematic campaign launch. (Dube, 2019.)

6.5 Printful as POD provider

For this project, Printful as a POD provider is chosen. Though there are many other options but Printful comparably offers more benefits than other competitors. Specially, integration of Printful with WooCommerce in WordPress is very advance, efficient and seamless. Also, Printful has a profit calculator inside its product launching mechanism which makes the pricing of product very easy whether it is single product launch or a bulk product launch. The best feature of Printful is that items are totally branded with custom logo, sticker and brand name. When a customer receives a product, he or she considers the product of the online store where it was purchased from. It has been possible because Printful prepares their packages according to designer's parameters and without any level of their own. Printful has many printing houses all over the world. Printful chooses their segmentation and targeting to find the nearest printing location nearest to the order has come from. All order operations, selection of printing location and shipments are an automated process of expedition. Figure 14 shows the life cycle of Printful order.

Figure 14. A Printful order lifecycle (Printful, 2019.)

A designer can build a product portfolio with a wide range of variation of categories such as T-shirts, sweatshirts, hoodies, kids' apparel, phone cases, bags, laptop sleeves, mugs, home decor, stationary, canvases, posters, and other accessories. It is recommended by experts to focus on designing one or two categories in the beginning. It will be very difficult to design so many categories at the same time and compete with other designers in the marketplace, especially at the very early stage of POD business. Users can start to add more categories in the store if products of the existing categories in the store are gaining reputation and positive feedback. (Desyatnyuk, 2018.)

7 RESULTS

Wordinance (https://www.wordinance.com/)

In order to build a successful website to publish contents and launch products, www.wordinance.com has taken full advantages of WordPress as a CMS. This website has five main pages such as Home, Quotes, Store, About us and Contact. These pages are easily navigable from the main menu in the header section. Quotes page consists of all the content of the website. There are plenty of subpages of quote content added to the main quote page. In content management system, such main page refers to parent and subpages are called children in terms of linking pages. A page named Store displays all the products created by the administration of Wordinance.com. Figure 15 shows the homepage of www.wordinance.com.
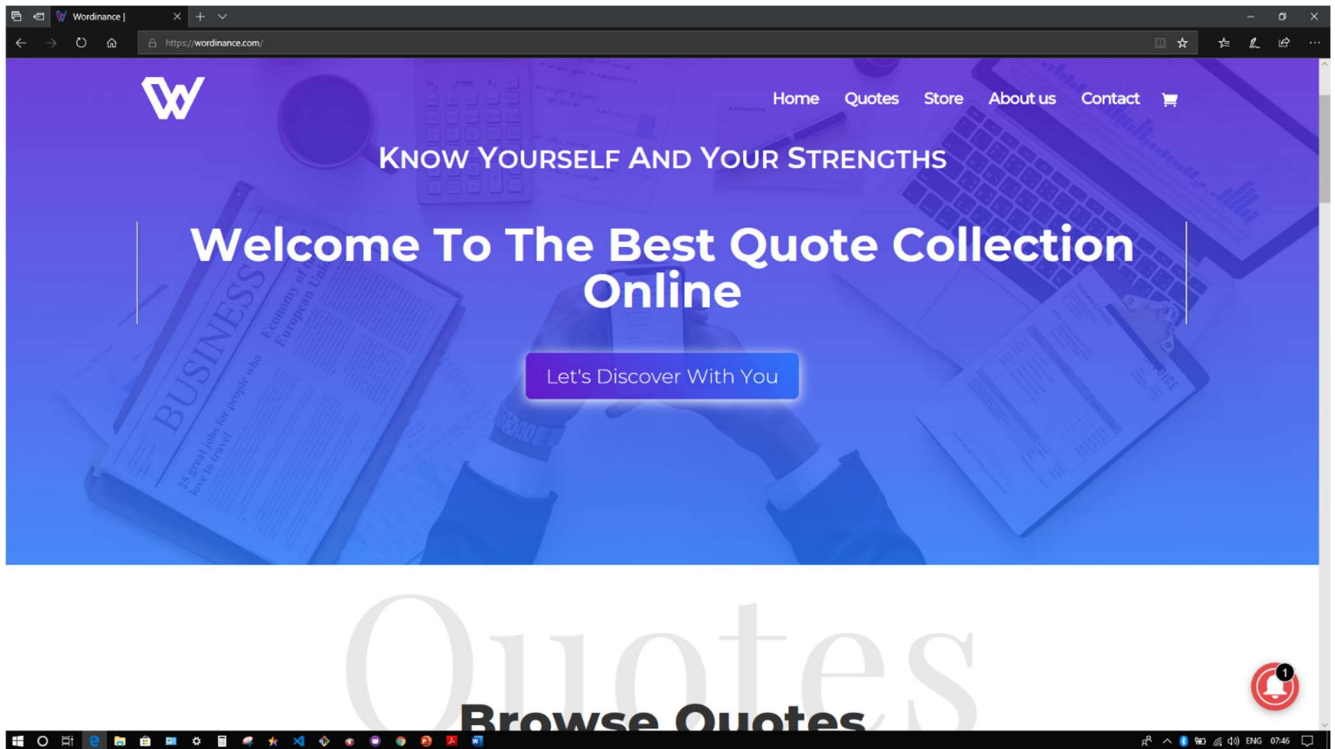
Figure 15. Homepage of www.wordinance.com

There are several buttons across the Home page linked to other pages so that visitors can navigate to other pages of the website from various section of the home page. In the footer section, three custom widgets are used to add location, social media links and subscription form. In email opt-in setting, Mailchimp is chosen as email marketing service though there are many email marketing services provided by email opt-in module of Divi page builder such as ActiveCampaign, Aweber, CampaignMonitor, ConstantContact, ConvertKit, Emma, Feedblitz, FeedBurner, GetResponse, HubSpot, iContact, Infusionsoft, Madmimi, MailChimp, MailerLite, MailPoet, OntraPort, SalesForce, and SendinBlue. In the homepage, there is also a section leveled as "Stay with us in all social arenas" which includes a bar counter to demonstrate updated number of authors, topics, quotes and products available in this website. In the contact page, the address of the head office, regional office and print house are pinned below the header followed by contact form. Visitor can submit any kind of query to the administrators of this website via this contact form. Figure 16 shows a sample content layout.
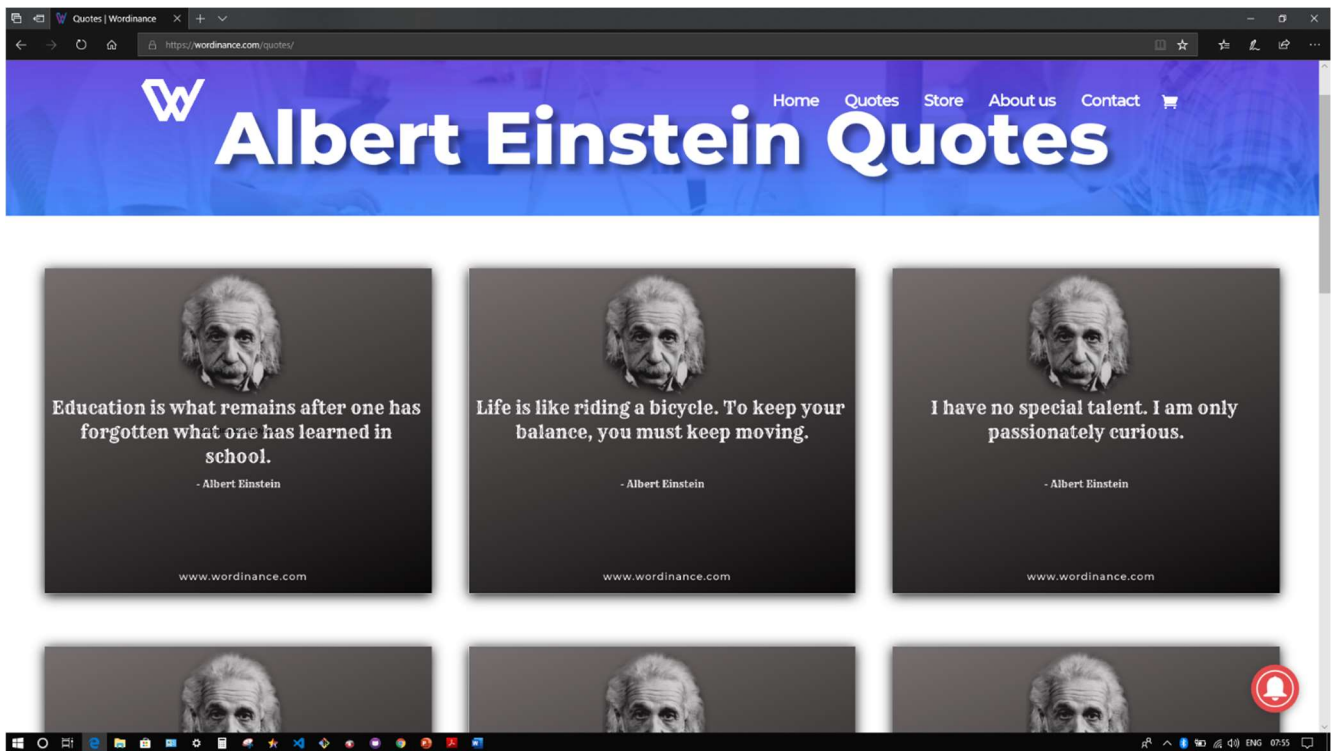
Figure 16. Content demo

There is an online store added via WooCommerce. The online store is a page named "Store" which can be navigated from the main menu in the header section. This store contains automatically created pages by WooCommerce such as Shop, Cart, Checkout and My Account. Unlimited number of products can be added to this online store. Each product has its own product description, image and category. High-quality images are used, and all images are in same size to maintain proper alignment and visual symmetry. Product price might be static, or it can range from one price to another price. Featured products, filtering options and extra information about products can be placed with custom widgets in the sidebar and footer area.

7.1 Notification

Nowadays, to increase user engagement, this website uses targeted push notifications. Every time a visitor loads this website, he or she will be asked to allow web notification for new content or product.

If they allow web notification from this website, they will receive a notification segment on the right top corner of their browser about new content of product release.

7.2 Backup and security

To backup this entire website, a plugin called All-In-One WP Migration is installed. This plugin can export the whole website including databases, media files, plugins and themes as a single zipped file. As a result, it is possible to restore this website in any other hosting account. There are many backup plugins in WordPress directory but All-In-One WP Migration is the best backup plugin because the whole website can be downloaded as a single zipped file in the local machine or All-In-One WP Migration can automate the backup after a certain interval to be stored in FTP, Drobox, Google Drive, Amazon S3, Back blaze B2, OneDrive and Azure Storage. By default, any WordPress website login page URL is www.example.com/wp-login. If "wp-login" is used after any URL admin has access to the admin login panel of the backend. To restrict this insecurity, a plugin named WPS Hide Login is install where users can change default "wp-login" to anything else. As a result, no one knows the URL of the admin panel of the backend of the website but admin.

7.3 Caching and loading

Caching is also very important to render the website fast in a browser. If many visitors come to this website, the pages could be loaded very slowly. In order to solve this problem, this website has a plugin installed in its backend called WP Fasted Cache. This cache system can generate minified HTML and CSS to reduce the size of pages, enable Gzip compression, leverage browser caching to decrease page load time for repeat visitors.

Since this website contains many image files, it might be challenging for the browser to load a page of this website if the users do not have high-speed internet connection. To solve this problem, a plugin called Smush Image Compression and Optimization can be installed. Smush can detect all image files stored in the media section of WordPress and then it can resize image files in bulk without reducing any quality of the image. It is also capable of converting image file from one format to another for efficiency as well.

7.4 Payment gateway

In this website, Klarna, Stripe, PayPal and Visa are activated as payment gateways. A customer can pay with their bank account directly as well as using online banking. Available payment methods in this website can accept major currencies from customers all around the world. One-click purchase is also enabled to provide fast and convenient method for returning customers. WooCommerce also allows to launch a coupon campaign to offer discounts and rewards.

8 CONCLUSION

Internet has become a distinguished platform for educational content and useful products. It has revolutionized the way visitors perceive to feed our cognitive needs and pursue essential commodities. The main objective of the thesis was to demonstrate the technicalities of creating a quote website and associating an online store of relevant products. Already millions of quotes have been published all over internet. Since most of them are in text format or unattractive graphical representation, it is imperative to publish a graphical expression of quotes. At the same time, an online store of various types of apparels are also integrated to generate monetary output. The E-commerce influence on world economy is increasing dramatically. Industry analysis trend clearly shows that people spend a large portion of their daily life on internet.

To take advantage of their online presence, users can provide them high quality contents and products. A good design helps visitors to access and navigate through content and product pages. This website is such an outcome of a well-coordinated plan. A customer communication service is ready to communicate by maintaining a professional attitude with buyers. Logistics and fulfillment plan must be implemented very strictly to create loyal customer base. One of the most important elements of a successful businesses is strategic marketing scheme. By instituting a proper marketing plan, users can develop an automated funnel of traffic source.

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