

David Price P131188 E-commerce report

by David Price

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E-commerce

E-commerce report

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Introduction

This report including the process behind creating and implementing a working e-commerce website for a company called Plumrite, this company is a family run business with the owner Emrys Plum and his kids, son and daughter starting off as a small plumbing company but have grown substantially over the years with six additional full-time plumbers and a part-time office administrator. Due to the growth of this company, they can no longer manage the admin side of the company sufficiently which requires a solution, the solution is to build an e-commerce website so that it is manageable and eases the work-load which will in return make the company more successful and efficiently run.

Plumrite would need a scalable website which would work alongside the growth of this company and the work-load taken on, not only would the website need to support with the growth, there is also options on teaching and employing new staff to maintain the administrator side of the company with his daughter, who has an HND in computing. This report will look at all options and decide which are best for Plumrite to move forward and become more sufficient in their work.

E-commerce Infrastructure

The infrastructure used to make this e-commerce website for Plumrite was WordPress, there are many different types of programs/software to choose from when making an e-commerce site. The option to go with WordPress was ideal as it is an open-source system software which uses PHP and MySQL, it has a highly accessible and user-friendly approach to building a website. To use WordPress, it must connect to a host web server, WAMPServer was installed to allow WordPress to be used to make the website.

The option to choose WordPress over any other similar application is due to:

- Ease of use
- The back-end of WordPress is highly optimised for search engines
- Manage and maintain from multiple computers

When creating an infrastructure for a website there must be reasonable decision making, whether to outsource a host server or buy one etc, there are many options available that all come with benefits and drawbacks. In this instance, a WAMPServer was used with WordPress, by using this infrastructure this allows Plumrite to use a free local web server on that computer to create and update the website with buying a domain name and hosting it. This cuts costs and makes the building process more flexible and hassle-free, it allows previews of created websites offline and get a look off how they may react on a web browser in real-time.

The benefits of using WAMPServer:

- Capable of turning a PC into a functioning fully compatible web server that works alongside HTML, PHP, MySQL, PHPMyAdmin
- Easily configured with the tools provided
- Ideal for making sites that may never go live

The drawbacks of using WAMPServer:

- Potentially unstable

- LAMP servers are more recommended
- Not as efficient as other server providers

The option for choosing WordPress in this infrastructure was mainly due to flexibility, as it is primarily an open-source application this allows anyone in the community to access the code and make plugins/themes etc for this application. This gives users a handful of tools and addons which allows the process of making websites more easy and accessible, also more customization is available when an application like this is heavily sourced by the community and third parties, “every aspect of web site regarding the creation, organization and search engine optimization can be now handled with the use of WordPress plug-ins.”[1]

The benefits of using WordPress:

- Easy to use
- Plugins play a big part of the creation process
- High community involvement
- Templates
- Management of the back-end and menus are more user-friendly

The drawbacks of using WordPress:

- Developer might need PHP experience to change website mannerisms
- Dependant too highly on plugins from all different third parties
- Security, PHP and SQL queries can be vulnerable
- Open-source, no regulating body to maintain what’s being added to the application
- Due to the number of plugins and addons, may slow down site

Technology used to build e-commerce website

As WordPress is a quick and easy drag and drop webpage editor, the building process is ideal for a company looking to install third party applications to get the best out a website which you can’t do on many other editors. “Plugin-based applications offer a variety of benefits such as allowing third-party developers to extend an application and supporting easy addition and configuration of new features for different needs”[2]. On the WordPress dashboard, plugins were installed to make the website more capable of being an e-commerce website, the following plugins used are as followed:

- WooCommerce
- Elementor

Installing plugins are importance as they allow ease of use and make the website run more efficiently overall, “WordPress offers an application programming interface (API) for developers to perform common tasks in their plugins”[3].

Firstly, WooCommerce plugin allows easy implementation of an e-commerce infrastructure, it is ideal for creating an easy and trackable e-commerce store which also has a built-in payment engine which other third-party plugins can work alongside with. It gives the user the ability to filter products to their preference. Lastly, Elementor is a plugin that is used for the appearance of the website. It’s a front-end web designing builder which allows easy drag and drop primarily for WordPress, it’s ideal to create a B2C style web site which works alongside a B2B marketing approach. Ideal for both parties which this company is trying to aim at.

E-commerce monetary methods

Technology is growing at an exponential rate, with this comes new ways of approaching day to day life. “Technological change has been attributed with the rise in intra-country income inequality, data on Internet penetration—particularly fixed and mobile broadband—is still nascent.”[4] For a long time, most e-commerce websites have different methods of paying for a product/service this is usually a debit or credit card. Online payment has changed over the years with new third parties getting involved in e-commerce, which is an interface between banks and present payments. “Compared with the traditional payment, online payment systems are more convenient, fast, efficient and economical.”[5].

The new methods of payments are becoming the more preferred choice for customers nowadays, the reasoning behind this is that “The new methods of payment through the Internet allow convenient, safe and rapid money transfer among the business partners.”[6]. As customers, we prefer quick and convenient ways of purchasing products, hassle-free is ideal for both parties. With these new innovative payment methods being released there must be a “way to verify that data is not changed during the transactions. Confidentiality must be preserved, so information concerning the trans action are need to know basis”[7]. this is called Data integrity.

There are many new alternative payment methods on the market, as they vary in what they do. There will be three different payment methods which range from the most standardised payment method to the more niche. They are as followed:

- PayPal
- Bitcoin
- Google Wallet/Samsung Pay

Firstly, PayPal is one of the most common payment methods worldwide. It has been around for a long time, nearly 20 years yet it is still one of the most used payment methods on the market. This is down to how easy and user-friendly it is, this payment method came to prominence by being acquired by eBay which is one of the biggest market retailers in the world. Most customers will already have a PayPal account so quicker transaction will be made by implementing PayPal into an e-commerce website. PayPal acts as an intermediary for most businesses but this can lead to some legality issues such as “cases of fraud, money laundering or the use of the system to pay for illegal or restricted goods and/or services”. [8]

Secondly, Bitcoin is the more niche and newer form of payment. This method came to prominence by being a decentralised currency which cannot be regulated, in a world where everything is trackable and traced, Bitcoin seemed ideal for people who wanted a more safe and conventional way of paying. “Bitcoin is actually the first virtual currency that has gained the trust of its users and in that way managed not only to survive, but to secure a significant presence in the place of online market transactions”[9].

Lastly, one of the newer payment methods are digital wallets (Amazon pay, Apple Pay etc), these wallets allow customers to purchase products by using their phones when at a checkout. “A digital wallet is a software component that allows a user to make an electronic payment in cash and hides the low-level details of executing the payment protocol that is used to make the payment”[10]. This is usually targeted towards in-person sales, this is still an e-commerce payment method as there is some inkling of online service being used. An example, would be

payment in person for a service provided, the customer can then pay through their phone using these digital wallets.



Figure 1 - Online payment methods in Europe 2017[11]

As E-commerce grows and becomes more innovative, the more likelihood of new payment applications will be made. With all these new payment methods, there will always be an underlying problem which is security risks and fraud, until these issues are put to rest and for the companies to gain public trust. There will always be some backlash to these new methods, by achieving this will in return allow E-commerce to grow exponentially.

Marketing metrics to evaluate site performance

Analysing and recording metrics to evaluate a website is a strong indicator of what your customer and potential future customers are interested in. This allows the company to pinpoint the ideal product and experience the customer is after, this is achieved through the e-commerce site. Identifying the key metrics of a website by “collecting various Web analytics metrics, such as number of visits and visitors and visit duration, one can develop key performance indicators” [12].

The metrics that are most important are as followed:

- Bounce rate
 - Shows the number of visitors who look at the site, primarily at one page before they leave the site for another. Ideally, you want this number as low as possible because you want your customers to stay on the site.
- Exit rate

- Shows the number of visitors who look through the site but gets diverted by clicking and sends them to another site, this differs from bounce rate as this metric shows the customer looking at several of the sites pages.
- Time spent on page
 - This gives the company an overview of how long a customer might spend on their website
- Traffic sources
 - How a customer ended up on their site, such as through third party website or through search engines
- Unique sessions
 - The amount of page views, but unique sessions shows each time a customer viewed the page (a customer might view the site multiple times)

Using the WooCommerce plugin, it gives the company an overview on what orders have been made, what the most popular order and categories are, also shows the monthly revenue based on sales through the E-commerce site. Identifying metrics are important as they provide “capabilities for examining data about merchandising in online stores, and detailed insight into the effectiveness of different Web merchandising efforts by answering related business questions”[13]

Conclusion

After evaluating the possible options in making an e-commerce website for Plumrite, the techniques and programs used to make could have varied but the end-goal of making a functioning e-commerce site was achieved. The e-commerce site itself is management friendly along with being user-friendly, the customization can be altered to suit the ever-growing company that is Plumrite. The site itself has been optimised and customised to suit the target audience’s needs, the site looks professional and customer friendly, it has room to expand and be added to. Not only does it allow Emrys Plum to save money with training costs but it also covers for potential future endeavours and growth this company may face, with the possibilities of geographically expanding to other areas around the world. The site can suit the potential growth of Plumrite.

References

- [1] S. K. Patel, V. Rathod, and J. B. Prajapati, "Performance Analysis of Content Management Systems - Joomla, Drupal, and WordPress," *Int. J. Comput. Appl.*, vol. 21, no. 4, pp. 39–43, 2011.
- [2] H. V. Nguyen, C. Kästner, and T. N. Nguyen, "Exploring variability-aware execution for testing plugin-based web applications," *Proc. 36th Int. Conf. Softw. Eng. - ICSE 2014*, no. Figure 1, pp. 907–918, 2014.
- [3] B. Bondari and E. Griffiths, *Wordpress 3 Plugin Development Essentials*. 2011.
- [4] F. Pivec, *The global information technology report 2003–2004*, vol. 8, no. 4. 2003.
- [5] W. Yang, "Analysis on Online Payment Systems of E-Commerce."
- [6] M. L. L. Ā. P. Ā. D. U. Ş. I and P. D. Candidate, "Means of Payment in E-Commerce (Credit Cards and E-Money)," pp. 1484–1491.
- [7] A. Koponen, "E-COMMERCE , ELECTRONIC PAYMENTS."
- [8] A. González, "PayPal and eBay: The legal implications of the C2C electronic commerce model," *Inf. Online Environ. April*, pp. 1–11, 2003.
- [9] M. Redžović and J. Novaković, "The Impact of Virtual Money on E-Commerce," *Proc. Int. Sci. Conf. - Sint. 2016*, pp. 474–478, 2016.
- [10] M. Taghiloo, M. A. Agheli, and M. R. Rezaeinezhad, "Mobile Based Secure Digital Wallet for Peer to Peer Payment System," *October*, vol. 1, no. 4, pp. 1–11, 2010.
- [11] E. N. Europe, "Online payment methods in Europe." [Online]. Available: <https://ecommercenews.eu/online-payment-methods-europe/>.
- [12] D. Booth, "A Review of Methodologies for Analyzing Websites," *Handb. Res. Web Log Anal.*, pp. 143–164.
- [13] J. Lee, M. Podlaseck, E. Schonberg, R. Hoch, and S. Gomory, "Analysis and visualization of metrics for online merchandising," *Web Usage Anal. User Profiling*, pp. 126–141, 2000.

Bibliography

<https://www.referralcandy.com/blog/ecommerce-metrics/>

<https://www.bigcommerce.com/blog/ecommerce-metrics/>

<http://www.alancharlesworth.eu/pdf/marketers-guide-to-e-metrics.pdf>

<https://www.wolfgangdigital.com/uploads/general/eComKPI2016-Public2.pdf>

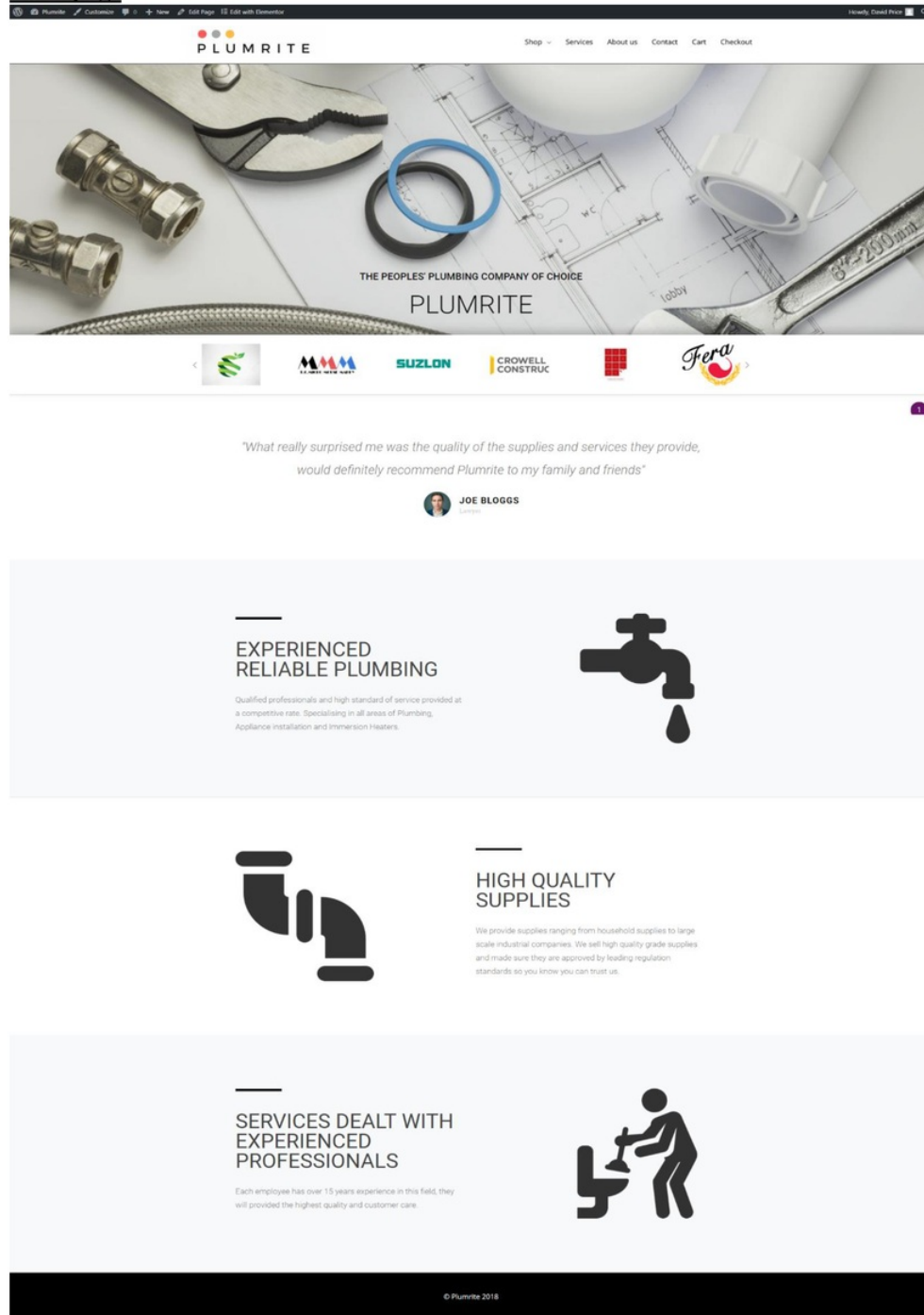
<http://www.dartmouth.edu/~cushman/courses/engs171/eCommerceConsequences.pdf>

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-016-0678-1>

<https://pdfs.semanticscholar.org/e15a/3ea147ab77c125f43af5de5cecc519ad97e8.pdf>

Appendix

Homepage



Storefront

Home / Shop

Shop



HOME
1 PRODUCT



BUSINESS
1 PRODUCT

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Home product

Home / Home

Home

Showing the single result

Sort by popularity



Sale

Home
COMBI BOILER 28KW
CHRONO2
RRP was £650.00

Add to cart

© Plumrite 2018

Home product details



Home / Home / COMBI BOILER 28KW

COMBI BOILER 28KW

£800.00 **£650.00**

Combi boiler with high-efficiency water heater and the most common boiler type in the UK. It has an easy installation with help from one of our professionals for an extra cost, accessible through a front door to all its components.

Suitable for homes that want to be more environmentally friendly, ideal for houses with one bathroom. British gas eligible.

Availability: 49 in stock

1 **Add to cart**

Category: Home

Description Additional information Reviews (0)

FEATURES

- Stainless Steel Heat Exchanger
- Top Flue Outlet
- SEDBUK Rating: A
- 7 Year Manufacturer's Guarantee
- Environmentally friendly

© Plumrite 2018

Business product

Home / Business

Business

Showing the single result

Sort by popularity



Business
Stainless Steel Piping
Available in:
£25.00 - £85.00

Select options

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Business product details



Home / Business / Stainless Steel piping

Stainless Steel Piping

★★★★★ (1 customer review)

£25.00 – £65.00

Material: Stainless Steel

This stainless steel pipe is suitable for water, marine, pharmaceutical, sewer, power generators, restaurants and brewery applications.

Imported from China.

Size

Close

£25.00

1 Add to cart

SKU: N/A
Category: Business

Description Additional information Reviews (1)

PRODUCT DESCRIPTION

KEY FEATURES/SPECIFICATIONS

See dimensions below for guidance on what size is needed.

Normal Pipe Size	OD in	mm
1/8	0.405	10.3
1/4	0.540	13.7
3/8	0.675	17.1
1/2	0.840	21.3
5/8	1.050	26.7
1	1.315	33.4
1 1/4	1.660	42.2
1 1/2	1.900	48.3
2	2.375	60.3

Services



WE ARE ON OUR WAY

We supply the highest quality services on the market. To learn more about what we provided then simply scroll down the page. If you are interested in employing us then you can contact us by clicking the button below.

CONTACT US

OUR SERVICES



REPAIRS

Our highly qualified professionals are able to repair and be out in the same day.



BATHROOM AND KITCHEN INSTALLATIONS

No matter how big the job is, our team are capable of installing any appliance or undertake any job.



INDUSTRIAL INSTALLATIONS

We work with big industrial companies and supply materials to them, we are highly appreciated and respected within the industrial industry.

OUR EXPERTISE



FAST DELIVERY

Depending on where you are ordering from, our deliveries should be with you within 3-5 working days.

QUALITY INSPECTION

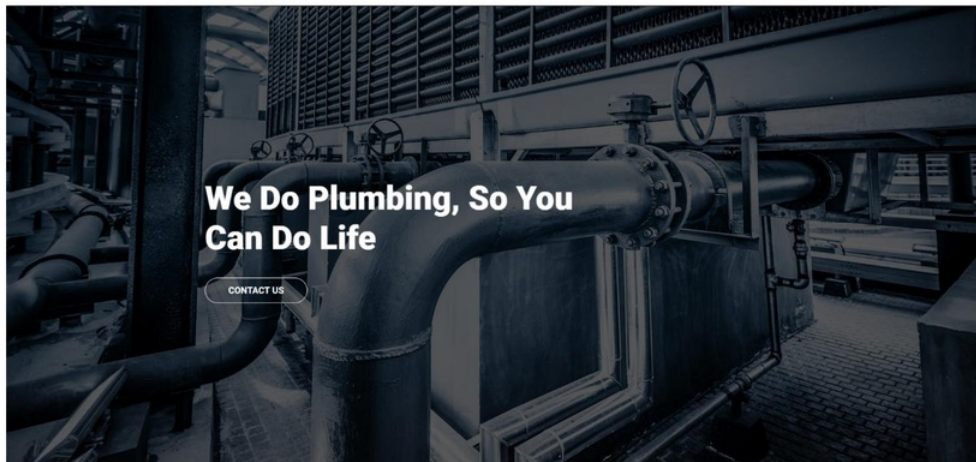
Our supplies are of the highest grade and we inspect each and every one of them before we install them into your home or business.



QUALIFIED PROFESSIONALS

Each member of our team have 15 years experience working in this industry, we are seasoned and can promise to fetch a good standard of work and professionalism.

About us



About The Company

We are a family-run business for over 30 years. We specialise in installing and repairing water supplies and appliances. We work with business and are Bosch approved.



Case Studies

"I have already recommended to family and friends. We would not use anyone else again now, they are wonderful."



Laura Whitaker
Waitress

"Very attentive, and excellent attention to detail. Will be using them again for more works to be carried out. Job well done!"



Rachelle Thomas
CEO

"I was very pleased with the level of professionalism and communication whilst coordinating the job between myself and the landlord of the property."



Mike Smith
Teacher

Contact

[Plumrite](#) [Customers](#) [Home](#) [Call Page](#) [Edit with Elementor](#) Home Cart Price

Shop Services About us Contact Cart Checkout

CONTACT US

Need an expert? you are more than welcomed to leave your contact info and we will be in touch shortly



VISIT US

Visit us in-store today at our Swansea branch.
2 Elizabeth St. Swansea, UK



CALL US

Call anytime and one of our professional customer service team members will help you along the way.
+44 765 034 117



CONTACT US

You can contact us by email following the email listed below and we'll get back to you in 1-2 working days.
Plumrite@company.com



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Cart



Cart

Shipping costs updated.

	Product	Price	Quantity	Total
	COMBI BOILER 2800W	£650.00	1	£650.00
Coupon code Apply coupon View cart				

Cart Totals	
Subtotal	£650.00
Shipping	Flat rate Calculate shipping
	United Kingdom (UK)
	Wales
	Swansea
	SA1 7YT
	Update totals
Total	£650.00
Proceed to checkout	

Checkout

Checkout

☐ Have a coupon? Click here to enter your code

Billing Details

First name *	Last name *
Company name	
Country *	
United Kingdom (UK)	
Street address *	
32	
Apartment, suite, unit etc. (optional)	
Town / City *	
Swansea	
County	
Wales	
Postcode *	
SA1 7YT	
Phone	
Email address *	

☐ Ship To A Different Address?

Order notes

Notes about your order, e.g. special notes for delivery.

Your Order

Product	Total
COMBI BOILER 280W x 1	£650.00
Subtotal	£650.00
Shipping	Flat rate
Total	£650.00

* Direct bank transfer

Make your payment directly into our bank account. Please use your Order ID as the payment reference. Your order will not be shipped until the funds have cleared in our account.

☐ PayPal     With us Pay2Net

Place order

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Order received

Checkout

Thank you. Your order has been received.

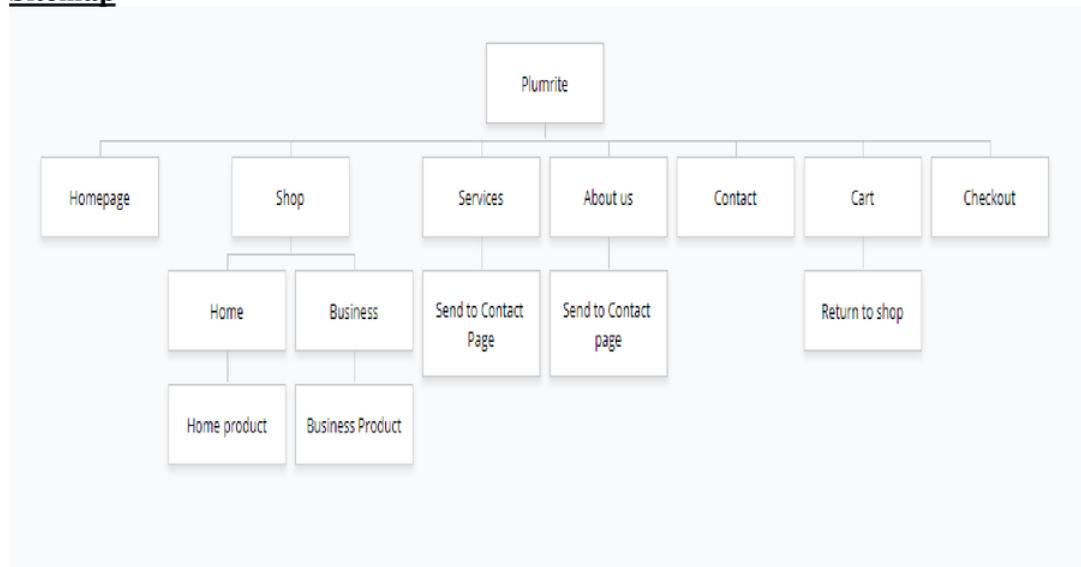
ORDER NUMBER	DATE	EMAIL	TOTAL	PAYMENT METHOD
277	April 25, 2018	rhrtty@netmail.com	£650.00	Direct bank transfer

Order Details	
Product	Total
COMBI BOILER 280W x 1	£650.00
Subtotal	£650.00
Shipping	Flat rate
Payment method	Direct bank transfer
Total:	£650.00

Billing Address	Shipping Address
rhrtty@netmail.com 32 Swansea Wales SA1 7YT rhrtty@netmail.com	rhrtty@netmail.com 32 Swansea Wales SA1 7YT

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Sitemap



David Price P131188 E-commerce report

GRADEMARK REPORT

FINAL GRADE

65/100

GENERAL COMMENTS

Instructor

Scenario

Brief explanation of the benefits for the organisation - also addressed in conclusion.

Infrastructure

Comparison of two development options - having to arrange hosting is another consideration. Brief explanation of development with good examples discussed.

Monetary Transactions

Good overview of available options. Which would you select?

Metrics

Good discussion of Web metrics. How do they relate to business aims?

Overall

A good assignment with some great discussion in places.

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