

E –Commerce

Build a prototype E-Commerce Website

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### **A brief introduction to the organisation and the purpose of developing an e commerce solution**

Emrys Plum decided to move on from his previous role as plumbing engineer for a local housing association , to advance in his career prospects he founded a small plumbing company which is called plumrite. The small business he started up started of a family business including his son and his daughter ,furthermore to that the company has grown and plumrite managed to recruit 6 full time plumbers and one office administrator. The company grown since **it** started up , the admin for the company has not been able to keep up the needs of the company , the admin work has increased a lot but the demands are more expected. The invoicing stock control is

completed manually which takes up more time. Emrys would like a feasibility study to be taken into account for the new computer system to be completed, advantages and disadvantages -2 years time frame. Using e-commerce technology to support the growing business as well to provide a business and domestic service. As well wider sale opportunities they could gain more profit and make their business more known by marketing. The purpose to create the e-commerce solution is to help Emrys Plum to thrive and to become more successful and that get can get more publicity by people hearing about his business, which means more money coming in and when they wish to expand a larger staff team of plumbing engineers and staff will be in place across the different regions.

**Define the e-commerce infrastructure to support the development of Emrys plumrite business, explanation for developing a dynamic website.**

The e-commerce infrastructure for Emrys plum is using a cloud based builder which allows you to add more features in the website, such as booking appointments and services online and sending invoices to the customers.

Wix was chosen to be used as the cloud based builder for Emrys Plum plumbing business.

Various options were also considered such as square space, Weebly and WordPress, the platform in which the website has been designed has been used before and the results have shown

to be effective. A cloud based builder such as w I x has very good usability features. Other options did not have very good usability features , below is a table with features regarding to the options considered.

In further support to Emrys plums plumbing business an e commerce website was requested , the option that was chosen to create the website was w I x which is a cloud based web builder which has various features and it payment options to purchases products however services cannot be given a direct price , for customers to find out the quotes for the service they should call the number on the website to get a quote for the service they require. Other options to create a website for Emrys plums plumbing business were researched and evaluated .

### Consideration table

| Option                        | Weebly             | Squarespace        | Wordpress       | Wix              | Creating website from scratch                       |
|-------------------------------|--------------------|--------------------|-----------------|------------------|-----------------------------------------------------|
| Usability                     | Not as easy to use | Not as easy to use | Not easy to use | Very easy to use | Easy to use providing all links work                |
| Features to meet requirements | Yes                | No                 | No              | Yes              | Yes because its a bespoke website made from scratch |

|                          |     |     |    |     |                                   |
|--------------------------|-----|-----|----|-----|-----------------------------------|
| <b>E payment options</b> | Yes | Yes | No | Yes | Yes , integrated into the website |
|--------------------------|-----|-----|----|-----|-----------------------------------|

## **Infrastructure for the plumrites website**

The infrastructure for the plumrite website , meets the requirements required for the website , such as an online booking , service bookings and sending invoices to customers , products to purchase and online chat with one of the Plumrite customer advisors.

W I x has an integrated invoice service with their online booking system , another option could be using a specialised software that sends the invoice via email , hiring an accountant who deals specifically with all the transactions in and out of the company and sending invoices to customers. An administrator will be needed in the company , 3 PCs or laptops with internet will be needed in the company to improve the smooth running of the business. An online booking system will be implemented so customers can book their appointments and the plumrite team can authorise it. Research more into infrastructure and reference

The infrastructure used in ecommerce is based from a PC as e commerce has happens over the internet. The

infrastructure is made up of software and hardware. The hardware used in the infrastructure of e commerce is :

### ***Hardware used in e commerce infrastructure***

**Server :** The server processes the requirements for the infrastructure

**Proxy servers :** The proxy server serves as an intermediary between the world and the infrastructure of the e commerce

**Load balancers :** Load balancers spilt the work load , so that it is spread out evenly in the e commerce infrastructure

**Firewalls :** A firewall is a device that restricts what a user can do with the infrastructure of the e commerce

**Encryption devices :** Encryption devices allow information to be translated into a non readable format for humans and protect from hackers etc.

**Interactive voice response units :** A computer generated voice , like voicemail or a company support Centre.

### ***Software used in the infrastructure of e commerce***

**Content management system :** This software controls the users access to content stored with the e commerce infrastructure.

**Web analytics :** A software tool that provides statics on how many users access their website.

**Text analytics :** Text capabilities like voice recognition or speech to voice conversion etc.

**Application programming interface:** provides access points that software developer's can use to incorporate the capabilities of the e commerce infrastructure. [1]

### **Feasibility study**

The details of technologies used to rapidly build the e-commerce application.

I used an online logo creator which is called logo joy to make a suitable logo for the e commerce application for plumrite plumbing service.

Included an online diary calendar to make it easier for clients to book services, also to make sure that appointments do not clash.

### **Marketing Metrics**

There are marketing metrics for e commerce vary , in this section some of the marketing metrics within in e commerce will be identified.

Return on marketing investment

Incremental lead

Cost per lead

SEO traffic

Google analytics landing page

List performance [2]

## **Using appropriate methods ,techniques and technologies for rapid web application development.**

B2B element aimed at business customers and product installation details for a representative business. As Emrys plum's plumrite business is a B2B business , organisations such as, estate agents, student accommodation, and housing association will use their services , however with the student accommodation they will need a direct quotation as they will be ordering more then one appliance to be fitted such as shower heads or sinks , as compared to a housing association they will have a number of different clients.

There are different types e commerce website , there are transactional ,static content sites , online market place and online auction site. [3]

Rapid application development , there is a current demand for rapid application development for various platforms such as the web ,cloud and mobile phones. The purpose for the change and demand is it to innovate new types of business processes and supporting new products and services.

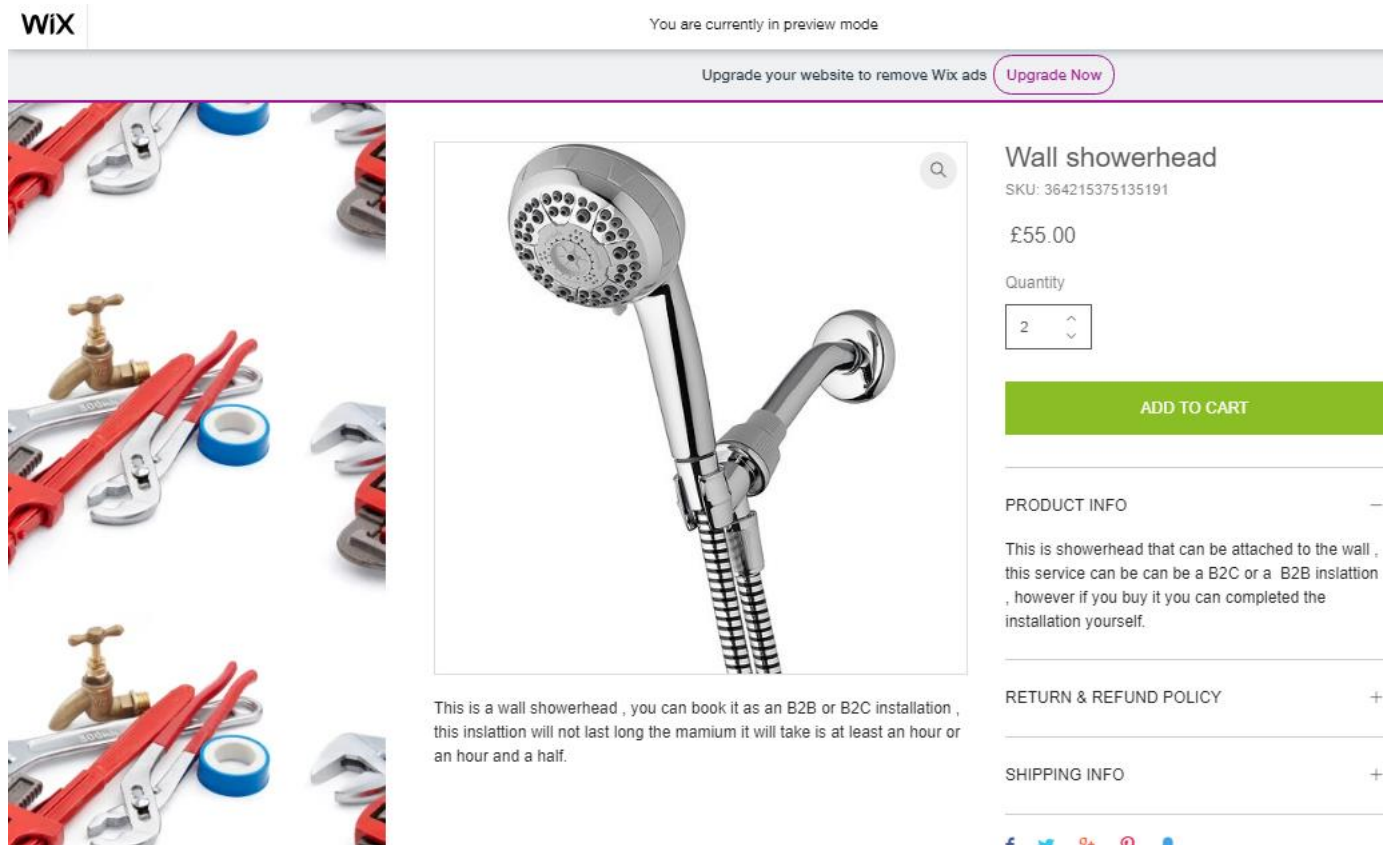
Enhancing the systems and the new functionality has to be available across all platforms ,so that all users can benefit.

Rapid application development will help promote more business by using various IT resources. IT departments need to produces apps faster , these apps should be easy to maintain and adapt for different users with different needs , the easier they are easy to use they will become popular amongst users. [4]

### **Product detail paragraph and image.**

Below is a screenshot of a shower head , this image is one of the products that we sell on our website , our business is a B2B organisation we sell these products in bulk for various organizations like student accommodation and housing associations , we are not directly a B2C organisation however we do have B2C services such as bathroom installations and other services.

### **Product detail**



This screenshot is from the plumrite plumbing business which has been created.

## **Case study on Emrys Plum Plumrite business**

### **Challenge**

*What challenges are being faced*

In the scenario various points were identified , the plumrite business started as a family business which consisted of Emrys Plum , his daughter and his son , since the business started up the have employed 6 plumbers and one office administrator who deals with alone paperwork for the business. Invoicing the current stock levels take a lot of time , for

this they would need to hire an accountant who can keep up to date with the invoices or a software that they can use to generate the invoices.

### **Solution**

*What could be the solution*

The solution is to hire more plumbing g engineers , hire an accountant or a software that deals with invoices and a software for stock control.

Have an online dairy for customers online so appointments do not clash , online service booking with a time and date and will send a confirmation email to the client.

### **Result**

*what will the result be*

The business will run smoothly , they will be able to recruit more plumbing engineers and they can expand their services and have different offices in different regions , Emry Plum is the Director of the company so he will have to visit each store to see how its processing and also employ 3 regional mangers depending on big they wish to expand.

### **Persona**

Meet 28 year old Thomas Wilkins from Birmingham. Thomas is an accountant ,Thomas has a wife called Elizabeth and a 3 month old baby called Flora. Thomas Wilkins is a regular customer to Plumrite , he has used our services for more than 2 years now , we appreciate his customwith us.

**Details of technologies used to build the e commerce application**

Online business has become more popular . Business start ups require a lot of planning and organisation , a target audience needs to be identified so that they can get the right customers who will use their services , in the case of the Emrys Plum business the business is aimed at B2B customers such as the housing association and student accommodation properties. The process of an e commerce development application.

*An e commerce application will need :*

**Web server :** The web server is used to host the e commerce site ,on files such as HTML , JavaScript,and media files.

**Database system :**The database system is a very important part of the website , this system stores information about the products and services that are offered on the e commerce site.

**Software server :** when a user visits any website the web server knows the client is requesting some specific information.

**Networking :** The transfer control protocol and the internet protocol clearly defines how the computer connects with each other over the web.

**Browsing computability :** A software application that is used to locate and receive and display content revied via the web server.

**Web tools :** A web authoring tool is used to create the front end of an e commerce website , it ranges from a basic HTML text editor.

**Ports :** This allows just one device to have a connection with the other using an individual IP address.

**Domain name :** A domain name links to a company that has been registered on the world wide web so that it can be found when people search for it in the search engines. [5]

### **Identify and evaluate the varying methods required for an e Commerce monetary transaction on the web and related information such as case study**

In e commerce there are different payment methods , below is a list of various ways payments can be conducted on e commerce.

#### **Credit -Debit cards**

. Credit and debits payments are the most used method of payment as it doesn't take long to complete purchases over the web. This payment method is used all over the world.

#### **Bank Transfers**

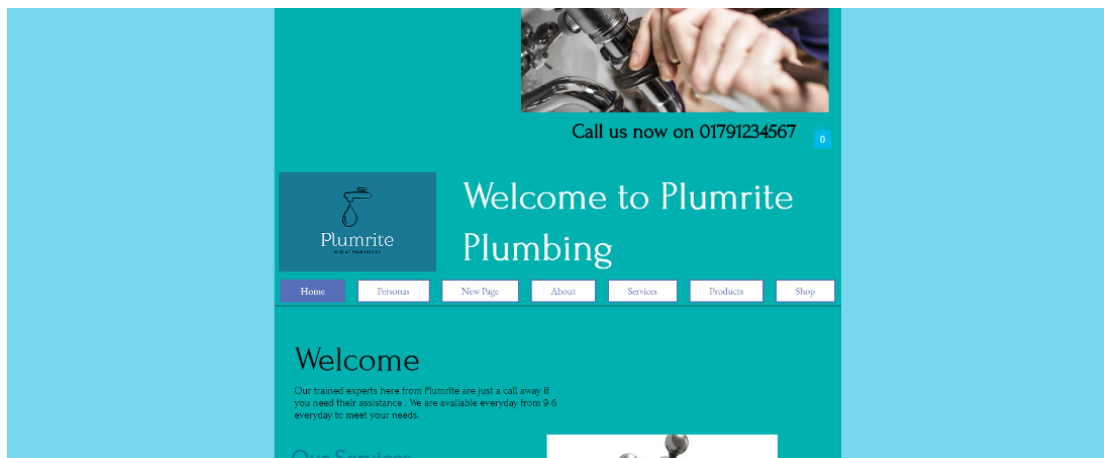
Bank transfers are also another payment methods, this methods instructs customers to make bank transfers directly to the organisations account using an IBAN number.

#### **E wallets**

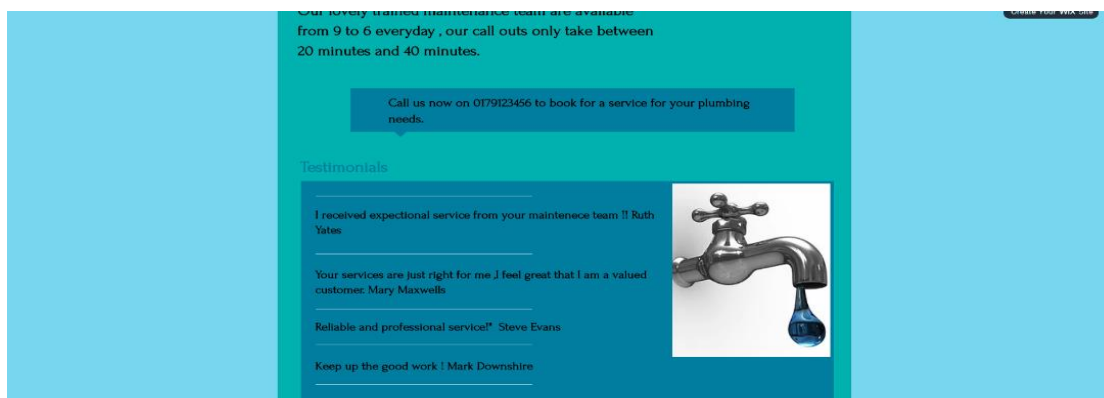
An example of using e wallets payments is the example of Paypal. This payment method requires customers and merchants to sign up and create an account then deposit money to linked bank accounts. [6]

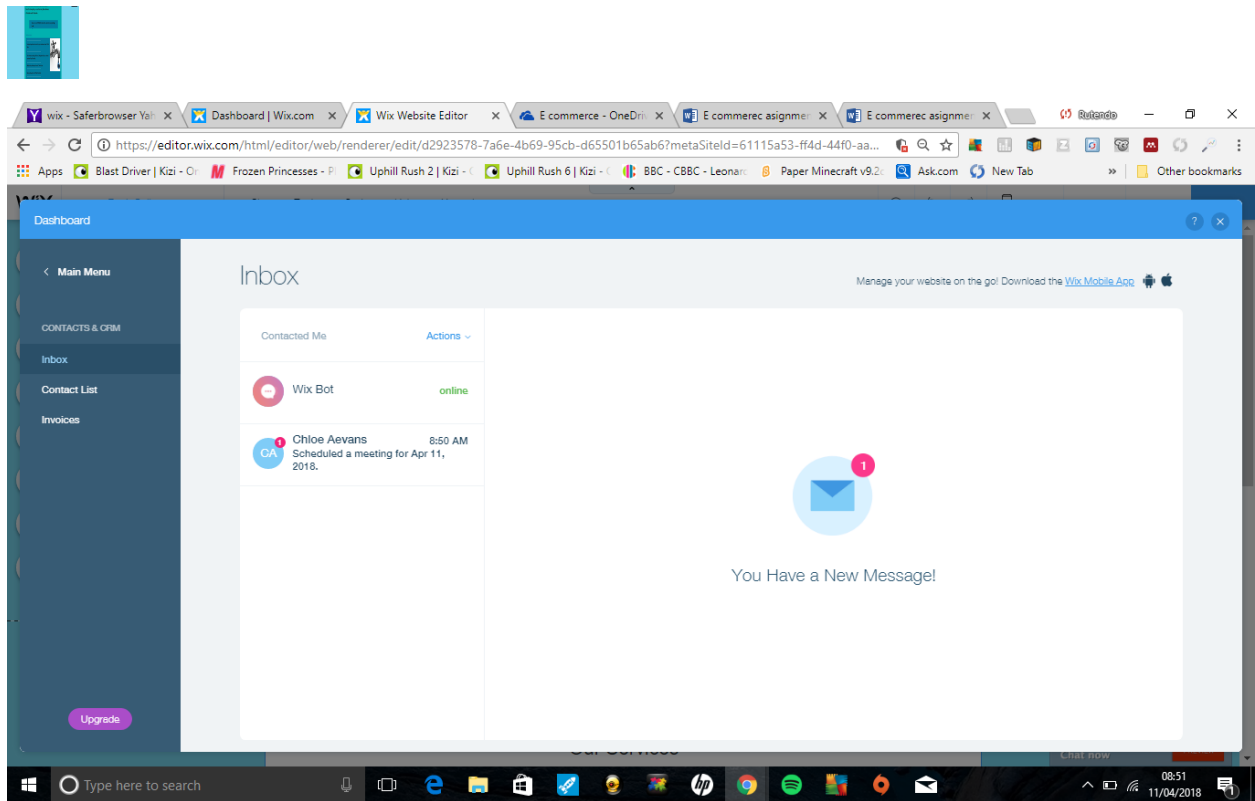
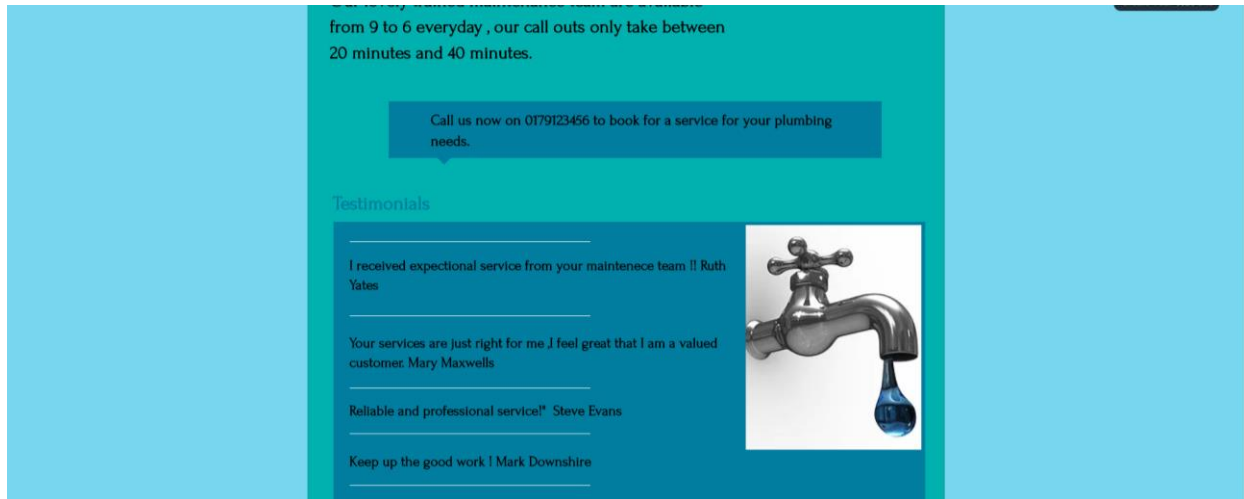
## **Include explanation ,screenshots and site map of the E commerce resource .**

This is a screenshot of the first page of Emrys plumbing website , the website is very consistent as the colours on each page are the same to maintain a professional facing website for Emrys Plum . This screenshot shows the other pages on the website which are very my displayed.

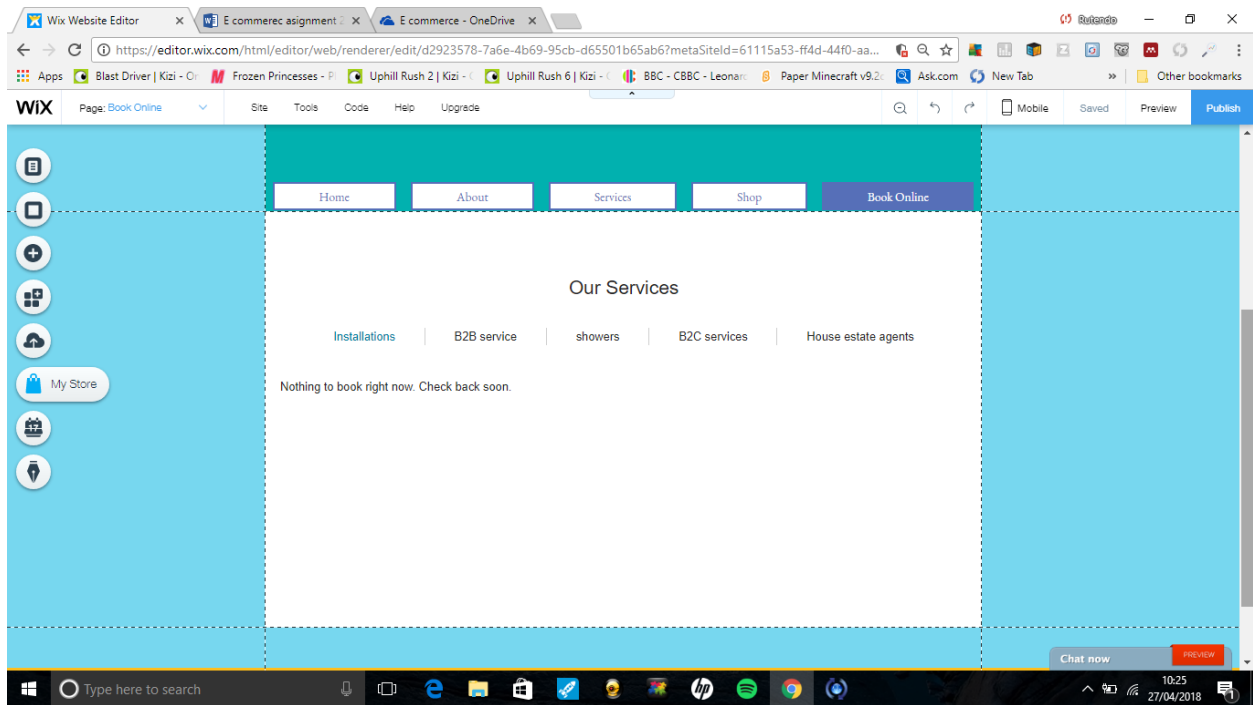


This screenshot has some testimonials from customers that used plumrites services , the testimonials are very good to promote business as they giving out good comments.

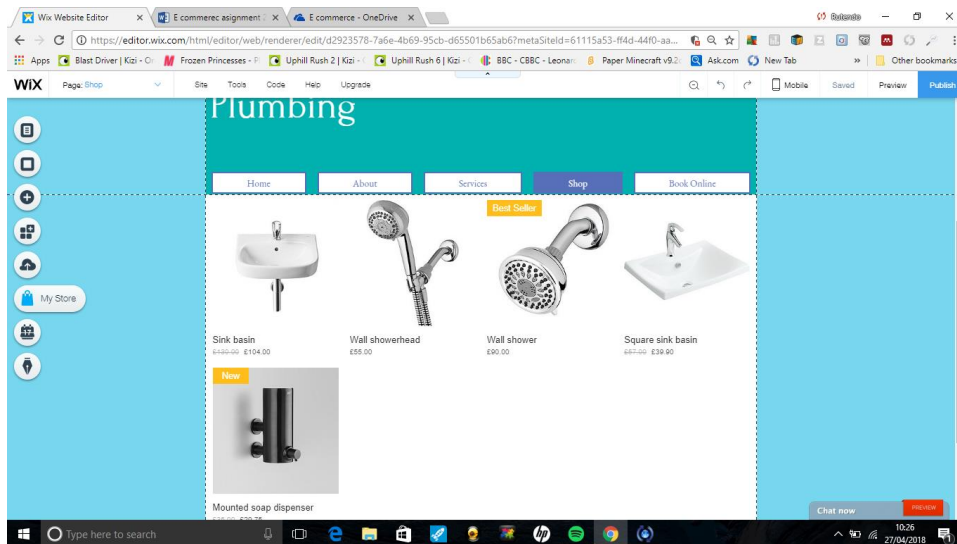




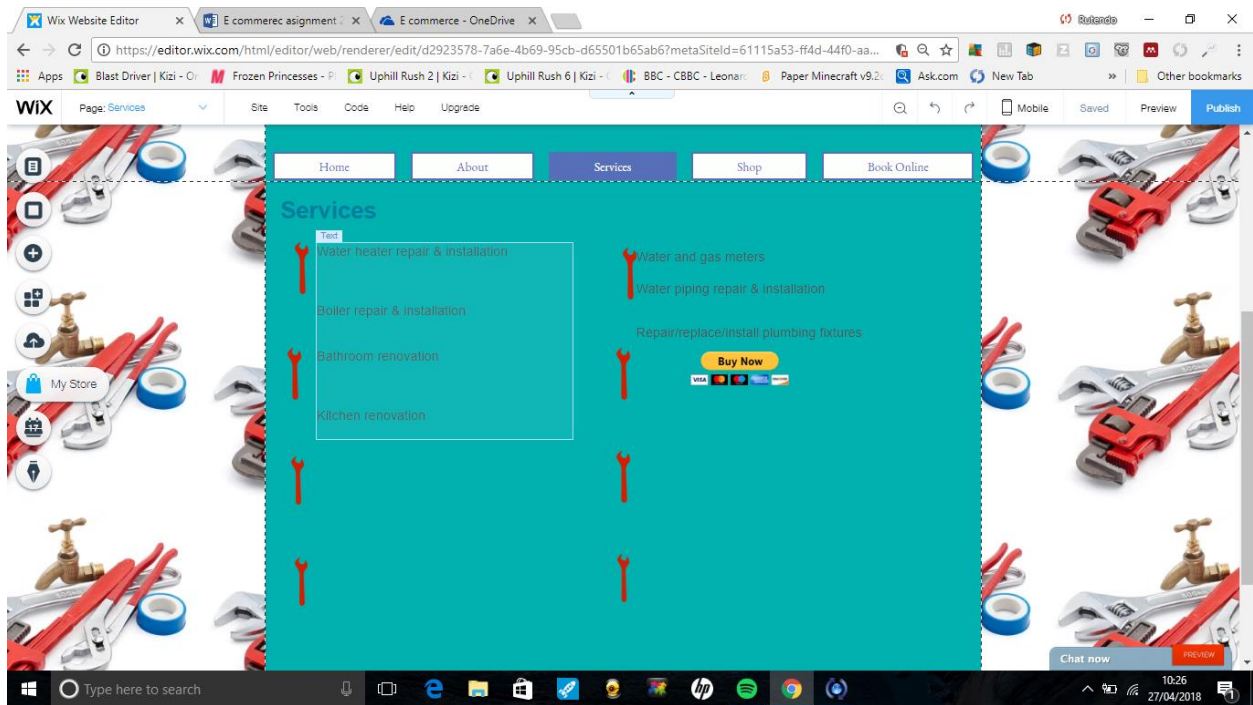
A screenshot of the services we offer at Plumrite plumbing



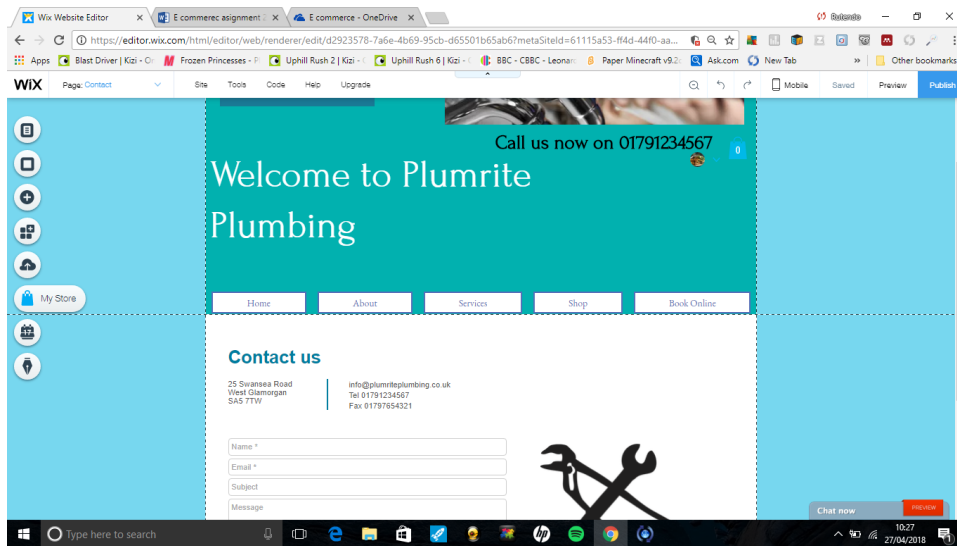
Online shop with various B2C and B2B products



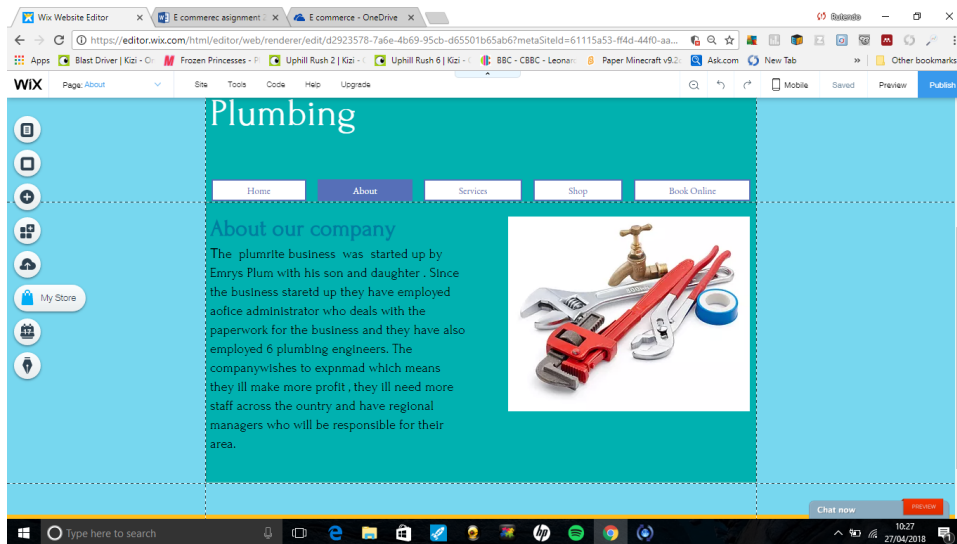
Our other services



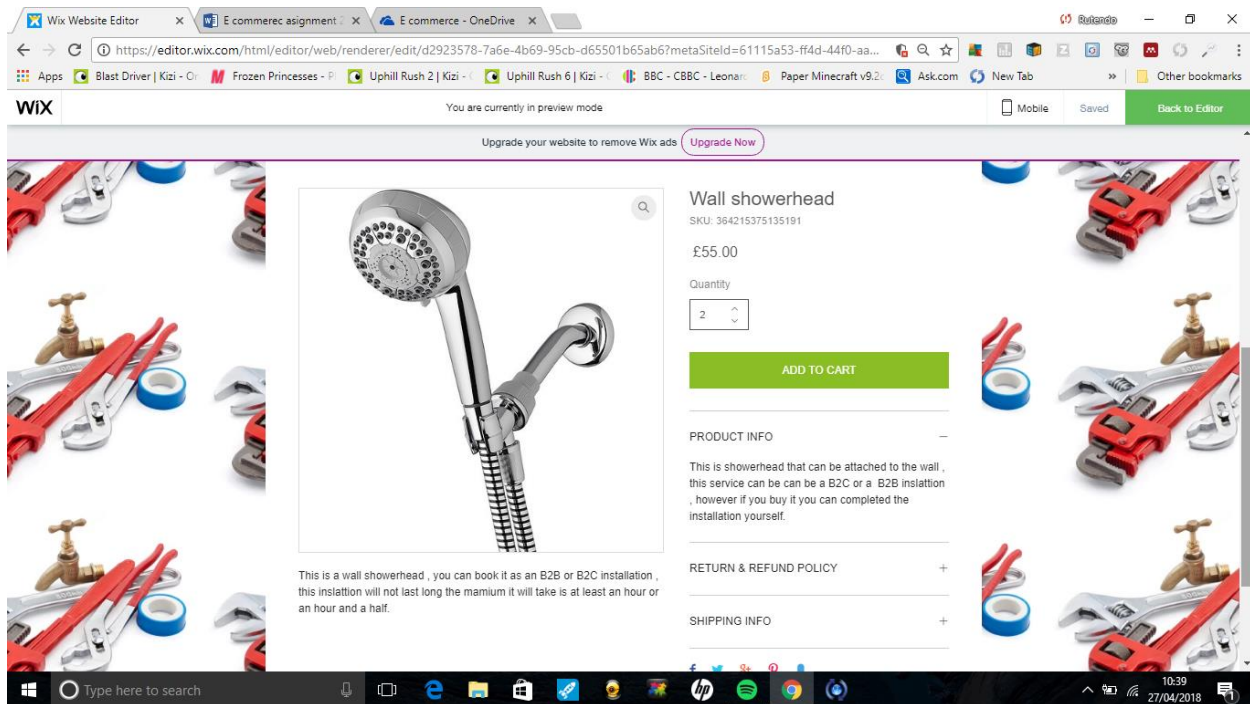
The contact us page , with contact details.



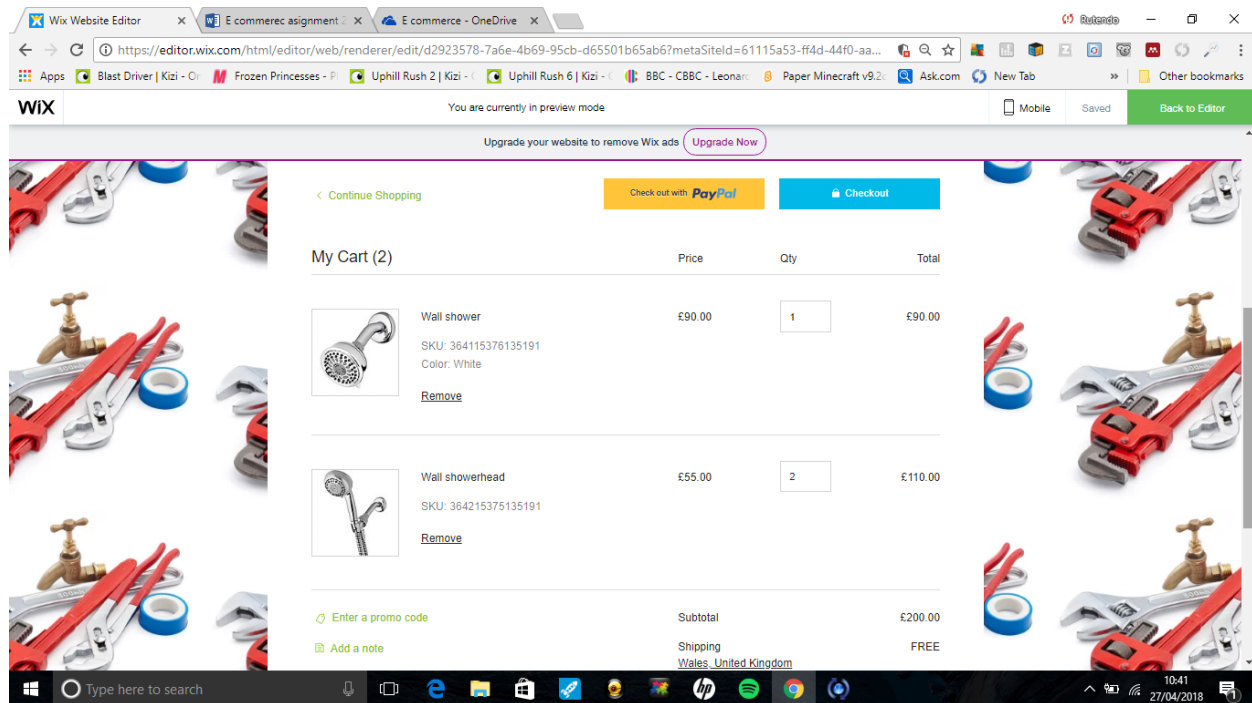
About the company page



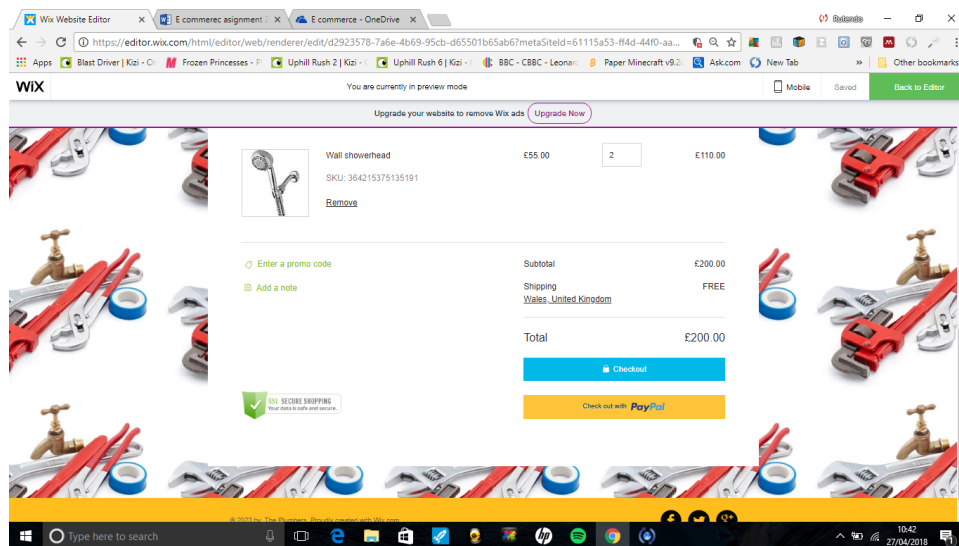
## Screenshot of one our products



## Shopping itenary



## Payment checkout



## References

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