National College of Ireland BSc in Computing 2014/2015

Rolandas Vizbara X07109075 hektorasis@gmail.com

Sales Support Platform

Technical Report



Declaration Cover Sheet for Project Submission

SECTION 1 Student to complete

Name:		
	Rolandas Vizbara	
Student ID:		
	X07109075	
Supervisor:		
	Paul Hayes	

SECTION 2 Confirmation of Authorship

The acceptance of your work is subject to your signature on the following declaration:

I confirm that I have read the College statement on plagiarism (summarised overleaf and printed in full in the Student Handbook) and that the work I have submitted for assessment is entirely my own work.

Signature:_____

Date:____10/05/2017_____

NB. If it is suspected that your assignment contains the work of others falsely represented as your own, it will be referred to the College's Disciplinary Committee. Should the Committee be satisfied that plagiarism has occurred this is likely to lead to your failing the module and possibly to your being suspended or expelled from college.

Complete the sections above and attach it to the front of one of the copies of your assignment,

What constitutes plagiarism or cheating?

The following is extracted from the college's formal statement on plagiarism as quoted in the Student Handbooks. References to "assignments" should be taken to include any piece of work submitted for assessment.

Paraphrasing refers to taking the ideas, words or work of another, putting it into your own words and crediting the source. This is acceptable academic practice provided you ensure that credit is given to the author. Plagiarism refers to copying the ideas and work of another and misrepresenting it as your own. This is completely unacceptable and is prohibited in all academic institutions. It is a serious offence and may result in a fail grade and/or disciplinary action. All sources that you use in your writing must be acknowledged and included in the reference or bibliography section. If a particular piece of writing proves difficult to paraphrase, or you want to include it in its original form, it must be enclosed in quotation marks

and credit given to the author.

When referring to the work of another author within the text of your project you must give the author's surname and the date the work was published. Full details for each source must then be given in the bibliography at the end of the project

Penalties for Plagiarism

If it is suspected that your assignment contains the work of others falsely represented as your own, it will be referred to the college's Disciplinary Committee. Where the Disciplinary Committee makes a finding that there has been plagiarism, the Disciplinary Committee may recommend

• that a student's marks shall be reduced

- that the student be deemed not to have passed the assignment
- that other forms of assessment undertaken in that academic year by the same student be declared void
- that other examinations sat by the same student at the same sitting be declared void

Further penalties are also possible including

- suspending a student college for a specified time,
- expelling a student from college,
- prohibiting a student from sitting any examination or assessment.,
- the imposition of a fine and
- the requirement that a student to attend additional or other lectures or courses or undertake additional academic work.

Table of Contents

Ir	troduc	ction		7
	1.1	Bac	kground	7
	1.2	Aim	IS	7
	1.3	Тес	hnologies	7
2	Us	er Re	equirements Definition	8
3	Re	quire	ements Specification	9
	3.1	Fun	nctional requirements	9
	3.1	.1	Requirement 1 – User Registration	9
	3.1	.2	Requirement 2 – User Page	.10
	3.1	.3	Requirement 3 – User Login	.11
	3.1	.4	Requirement 4 – Connecting to DB	.12
	3.1	.5	Requirement 5 – Filtering Information	.14
	3.1	.6	Requirement 6 – Print PDF	.15
	3.1	.7	Requirement 7 - view_custaddlist updating Excel	.17
	3.1	.8	Requirement 8 – VBA script update Excel with GeoLocations	.19
	3.1	.9	Requirement 9 – Python script updates DB	.21
	3.1	.10	Requirement 10 - Customers tab with Google Maps API (Sales)	.22
	3.2	Nor	n-Functional Requirements	.24
	3.2	.1	Recover requirement	.24
	3.2	.2	Maintainability requirement	.24
	3.2	.3	Reusability requirement	.24
	3.3	Des	sign and Architecture	.25
	3.4	Gra	phical User Interface (GUI) Layout	.26
	3.5	Tes	ting	.28
	3.6	Use	er testing	.29
4	Co	nclu	sions	.32
5	Fu	rther	development or research	.33
6	Re	ferer	nces	.34
7	Apj	penc	Jix	.37

		ject Proposal	
7.2	Proj	ject Plan	.40
7.3	Mor	nthly Journals	.40
7.3	.1	September	.40
7.3	.2	October	.41
7.3	.3	November	.46
7.3	.4	December	.47
7.3	.5	January	.48
7.3	.6	February	.49
7.3	.7	March	.51

Introduction

1.1 Background

"Alert Packaging Ltd" (Alert) (company I work), I monitor a great deal of activities in order to make them more efficient and one of those activities is sales support. In 11 year that I work in Alert there were implemented countless changes and various improvements, some of them worked some of them not that much. One thing never changed, Sales personnel always needed to be in the building or on the phone with sales support in order to have information about their orders. Alert is a small company, about 50 people. There are 7 sales people and 1 person in sales support. Alert has 130 active customers, who are looking for same information as sales executives. Purpose of this project is to provide tools for Sales team so they could carry out the tasks that bring value to the company

1.2 Aims

Project scope is to develop Sales Support Platform (SSP), which will be web base and will provide access to Sales personnel and customers, who will be able access their relevant information. That information will be customized per User requirements and it will be live. Because it will be web base Customers and Sales team will be able access information from their mobile phones as well as their laptops, PC's or even tables.

1.3 Technologies

The core code of the project is PHP and HTML, it supports vast variety other technologies that will be use in this project. Bootstrap – enhance user friendly environment and usability. Ajax – better interactivity, easier and faster navigation and compatibility. MySQL – connecting to DB. JavaScript and Excel VBA script – create various functions like search, print PDF and so on. Google Maps API and Bing Maps API to obtain customers location, display the map and directions. Python – automation of processes. XML – data conversion for the next process.

2 User Requirements Definition

Sales personnel or customers in order to use the tool must have:

- ✓ Device (Desktop PC, Laptop, Tablet, Mobile Phone...)
- ✓ Browser that supports HTM5
 - Chrome (25)
 - Firefox (20)
 - Opera (12,15)
 - Safari (5, 6)
 - Internet Explorer (7-10)
- ✓ Internet access

3 Requirements Specification

3.1 Functional requirements

3.1.1 Requirement 1 – User Registration

3.1.1.1 Description & Priority

User registration will be completed by Admin using Register.php. User won't be able to register themselves, mainly because security reasons.

3.1.1.2 Use Case

Scope

User must be in the Data Base to be able to login.

Description

Admin will create User login using Register.php

Use Case Diagram



PHP - MySQL Statement; add user



Alert Packaging DB

3.1.2 Requirement 2 – User Page

3.1.2.1 Description & Priority

3.1.2.2 Use Case

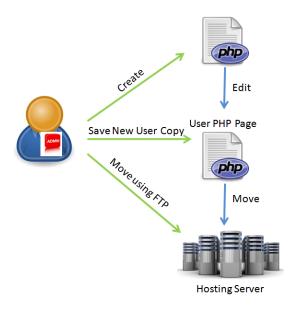
Scope

Admin will create individual page for every User

Description

In conjunction with user login details Admin must create individual pages which will be customized to every user requirements.

Use Case Diagram



Main flow

- 1. Admin Creates Default PHP page
- 2. Admin Receives request from User
- 3. Admin will edit Default PHP page to User requirements
- 4. Admin will move page to Host Server using FTP

3.1.3 Requirement 3 – User Login

3.1.3.1 Description & Priority

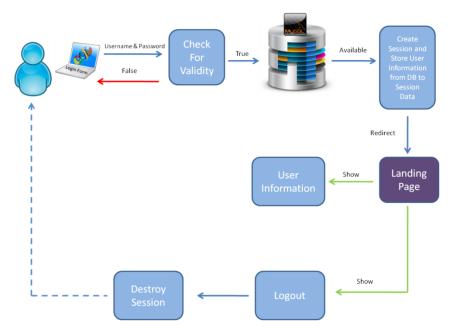
3.1.3.2 Use Case

Each User will be provided with login details.

Scope

Administrator will provide user login details to all users.

Use Case Diagram



Main flow

- 1. User enters login detail
- 2. PHP script will check for Validity
- 3. Valid login detail will be sent to DB
- 4. If login details available in DB, session will be created
- 5. User will be redirected to "Landing" page, where user information will be displayed

Alternate flow

User login detail not valid

- 1. User enters login details
- 2. Login details doesn't match
- 3. User will be informed of invalid details
- 4. User enters details again

3.1.4 Requirement 4 – Connecting to DB

3.1.4.1 Description & Priority

3.1.4.2 Use Case

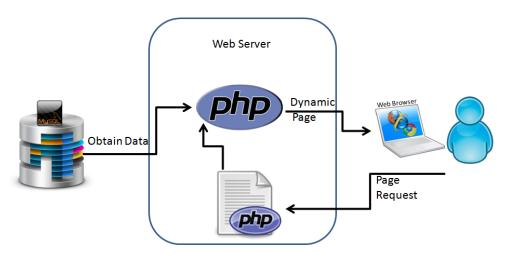
Scope

For User to see information PHP have to successfully to connect to DB

Description

After user logins, user will have various tabs for different type of information. Those tabs will be combination of PHP and MySQL queries. In order to see information; PHP has to successfully to connect to DB.

Use Case Diagram



Precondition

User must be logged in.

Main flow

Successful connection to DB

- 1. User logged in
- 2. User clicks on one of the available tabs
- 3. PHP query connects to DB
- 4. Information retrieved from DB is displayed to the user

Alternate flow

No Connection to DB

- 1. User logged in
- 2. User clicks on one of the available tabs
- 3. PHP query fails to connect to DB
- Error message displayed (No Connection to DB)
 User contacts Admin

3.1.5 Requirement 5 – Filtering Information

3.1.5.1 Description & Priority

3.1.5.2 Use Case

Scope

User will be able to filter displayed information

Description

Some customers have 20/30 orders on the system, filtering is a must option, especially for Sales user, because they might have 50 orders or more. MyFunction contains script that allows instant search.

Use Case Diagram

Search Fo	r Anything				
Aler Ref.	Customer Order No	Design Name	Order Quantity		Despatch Date
51534	POR01610	111640 70179 Tesco Everyday Sultanas 375g Pillow Pack	300	Kgs	17 -05- 2017
51535	POR01610	118970 70752 Dunnes Stores Wholefoods Quinoa 300g	200	Kgs	17 -05- 2017

Precondition

User logged in, connection to DB established

Main flow

User Filters Information

- 1. User clicks into "Search for Anything" field
- 2. User begins to type
- 3. Search eliminates rows from the table, according symbols entered
- 4. User deletes "Search For Anything" field to see all rows

3.1.6 Requirement 6 – Print PDF

3.1.6.1 Description & Priority

3.1.6.2 Use Case

Scope

User will be able to save displayed information in the tab to the PDF file

Description

Some users like to save information on their devices. At the end of every table user will be provided with the button that will present information in PDF format. TCPDF library includes all necessary scripts fro PDF cfreation.

Use Case Diagram

	Customer Order No		Order Quantity		Despatch Date
51534	POR01610	111640 70179 Tesco Everyday Sultanas 375g Pillow Pack	300	Kgs	17 -05- 2017
51535	POR01610	118970 70752 Dunnes Stores Wholefoods Quinoa 300g	200	Kgs	17 -05- 2017

Create PDF

Precondition

User must be logged in and information displayed

Main flow

Print Table

- 1. User has information displayed
- 2. User clicks on "Create PDF" button
- 3. PDF files is displayed on new page
- 4. User has an option to save PDF onto device

Alternate flow

User can't see "Create PDF" button

- 1. User can't see "Create PDF" button
- 2. User has to many records displayed
- 3. User scrolls down

- 4. User finds "Create PDF" button
- 5. User clicks on "Create PDF" button
- 6. PDF files is displayed on new page7. User has an option to save PDF onto device

3.1.7 Requirement 7 – view_custaddlist updating Excel

3.1.7.1 Description & Priority

3.1.7.2 Use Case

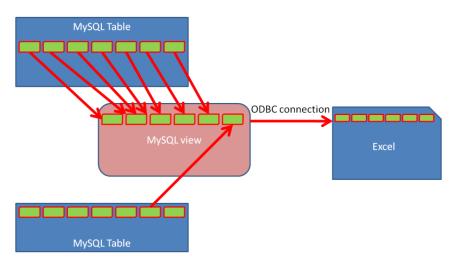
Scope

Admin updating Excel spread sheet with latest customer information

Description

MySQL view (view_custaddlist) is imbedded into MS Excel spreadsheet (Bing_GeoLocations_Customers.xls) and it refreshes itself on the opening of the Excel spreadsheet by using ODBC connection. The view_custaddlist combines information from two different tables and merges address columns into one column, which is required for the next process.

Use Case Diagram



Precondition

Internet connection, ODBC connection must be set.

Main flow

Successful ODBC connection

- 1. Admin opens Bing_GeoLocations_Customers.xls
- 2. The view_custaddlist updates Excel spreadsheet with latest customer information

Alternate flow

No Connection

- 1. Admin opens Bing_GeoLocations_Customers.xls
- 2. The view_custaddlist doesn't update Excel spreadsheet
- 3. Admin check ODBC connection
- 4. Admin close Excel spreadsheet and open again

3.1.8 Requirement 8 – VBA script update Excel with GeoLocations

3.1.8.1 Description & Priority

3.1.8.2 Use Case

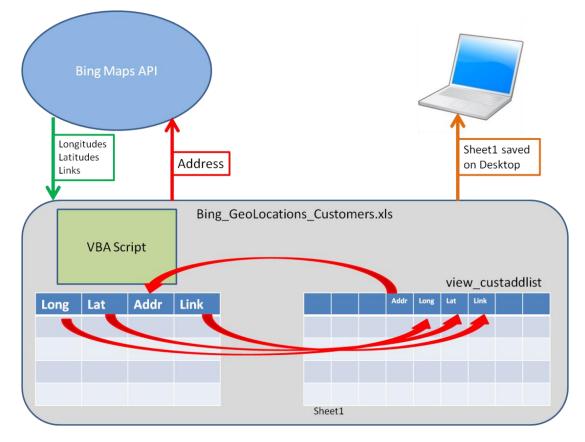
Scope

Admin updating Excel spreadsheet with GeoLocations

Description

Bing_GeoLocations_Customers.xls has VBA script which connects to Bing Maps API. The VBA script uploads customer addresses to Bing Maps API and then retrieves Longitudes, Latitude and the link to Google Maps. All that information is copied to Sheet1 where customer latest details located and is updated by view_custaddlist. The copy of Sheet1 copied onto desktop.





Precondition

Internet connection, successful ODBC connection, create Bing Maps API account.

Main flow

Retrieve GoeLocations

- 1. Admin opens Bing_GeoLocations_Customers.xls
- 2. Customer details automatically updated by view_custaddlist
- 3. Customer addresses automatically copied to VBA script column
- 4. Admin press the "Geocode all rows"
- 5. Script sends Addresses to Bin Maps API
- 6. Scripts retrieves Longitudes, Latitudes and Google Maps links
- Longitudes, Latitudes and Google Maps links automatically copied back to Sheet1
- 8. Admin saves Sheet1 copy to the Descktop.

3.1.9 Requirement 9 – Python script updates DB

3.1.9.1 Description & Priority

3.1.9.2 Use Case

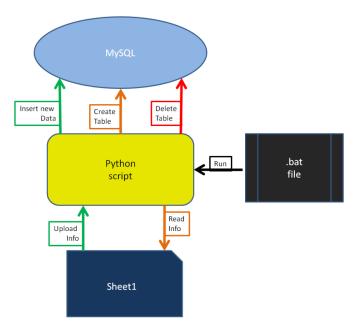
Scope

Admin to update DB customer address table using Python script.

Description

Admin will update DB table gm_cust_list with the latest customer address information. Windows batch file (gm_cust_list.bat) will automatically run gm_cust_list.py which drops existing gm_cust_list table, creates new gm_cust_list, reads the Excel spreadsheet (that was previously saved on Desktop) and then inserts new values to the table.

Use Case Diagram



Precondition

Internet Connection. Python.exe preinstalled.

Main flow

DB updating

1. Admin double clicks on gm_cust_list.bat

3.1.10 Requirement 10 – Customers tab with Google Maps API (Sales)

3.1.10.1 Description & Priority

3.1.10.2 Use Case

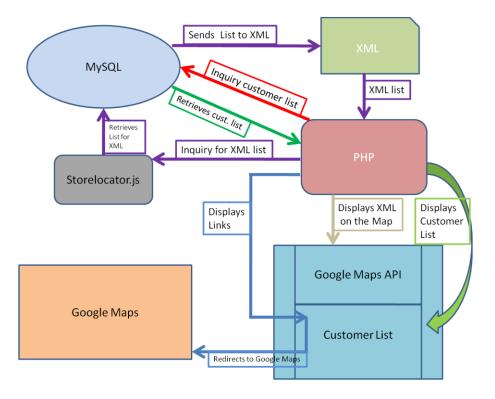
Scope

Users can see their customers on Google Maps API

Description

Selecting Customers tab user (this function only for Sales user) are able see all their customers on the Google Maps API which is completed by storelocator.js script. The script connects DB and retrieves customer list set for current user and stores the list in XML format. XML list is read by PHP and it is displayed on the Google Map API. Simultaneously MySQL query retrieves same customer list but with Google Map links, which is displayed "Directions" button, allowing get directions from as user to https://www.google.ie/maps

Use Case Diagram



Precondition

User must be logged in.

Main flow

Successful connection to DB

- 1. User clicks on Customer tab
- 2. Customers displayed on Google Maps API
- 3. Customer list with Direction button displayed bellow Google maps API
- 4. User clicks on Direction button
- 5. User redirected to Google Maps

Alternate flow

Customer not displayed

- Customer not displayed on the Google Map API and customer list
 User contacts Admin

3.2 Non-Functional Requirements

3.2.1 Recover requirement

Web page data will be backed up by hosting company; recovery will be completed by hosting company. DB data is backed up by Alert in the building and offsite; DB data recovery will be completed by Admin.

3.2.2 Maintainability requirement

Website will be maintained by hosting company. Content of the website and DB will be maintained by Admin.

3.2.3 Reusability requirement

Default web page will be reused to create new pages for new users; key elements will be edited to fit new users.

3.3 Design and Architecture

I chose this architecture, mainly because Alert already has the web site and there is no reason to place SSP anywhere else but on the same host. Alert has their own DB where they keep all customer data and that information will be passed by PHP and MySQL.



3.4 Graphical User Interface (GUI) Layout

SSP is web based, it will run on any device, like Laptop, PC, mobile phone, tablet. In terms of interaction, it can be completed with mouse, keyboard or through touch screen. Please see below few example of how the SSP will look.



✓ Customer Page

Gem-Pack-Foods

Search Fo	r Anything				
Aler Ref.	Customer Order No	Design Name	Order Quantity	Units	Despatch Date
51534	POR01610	111640 70179 Tesco Everyday Sultanas 375g Pillow Pack	300	Kgs	17 -05- 2017
51535	POR01610	118970 70752 Dunnes Stores Wholefoods Quinoa 300g	200	Kgs	17 -05- 2017

✓ Sales team Page 27Darren Horre

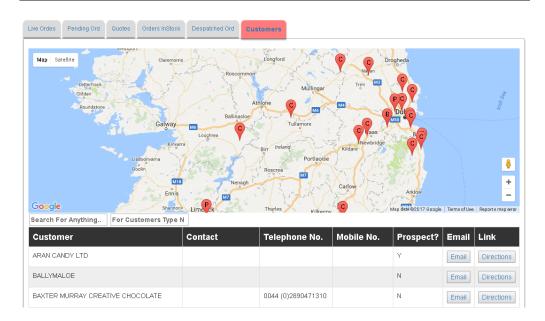
27Darren Home Alert.com Thanks To! Log

Live Ordes	Pending Ord	Quotes	Orders InStock	Despatched Ord	Customers	
Live Ordes	Pending Ord	Quotes	Orders instock	Despatched Ord	Customers	

earch Fo	r Anything.								
Job No	Order No	Customer	Design	Order Date	Order Quantity	Units	Job Status	Requested Date	Despatch Date
51523	12252	BEMIS HEALTHCARE PACKAGING IRELAND LTD	119308 Group RM-22345	20 -04- 2017	20,000	Mtrs	JOB SCHEDULED	05 -05- 2017	12-05-2017
50720		COFFEE HOUSE LANE OF WATERFORD	Kraft Paper Affect- 60kg & 1kg	23-01-2017	9,000	Mtrs	WI QUERY	15-05-2017	22-05-2017
51521	Trial	COGHLAN BAKERY	Trial -380mm Perforation plain OPP25	13 -04- 2017	500	Mtrs	JOB SCHEDULED	04 -05- 2017	01 -01- 1900
50487	EFPO16344	EPICOM IRELAND LIMITED	00000X Instant Milk Powder 900g pouch	09 -12- 2016	50,000	Imps	OVERLOAD	31 -05- 2017	
51625	Trial	KEOGHS	Trial 410mm OBM/OMS	25 -04- 2017	600	Mtrs	JOB SCHEDULED	05-05-2017	01 -01- 1900
51653	533679	KESTREL FOODS LTD	F-359 330 clear laminate 60mu	03 -05- 2017	500	Kgs		25-05-2017	
50009		KESTREL FOODS LTD	MA for Kestrel - 960mm 30/30	17 -10- 2016	1,000	Kgs	MAT. ALLOCATION	01 -01- 1900	
51405	Material Allocation	KESTREL FOODS LTD	F-478 Blue 420mm Film - Material Allocation	05 -04- 2017	500	Kgs	MATERIALS ORDERED	19 -05- 2017	
51363	533367	KESTREL FOODS LTD	110422 F394 RV Trail/108684 F395 Choc R/109087 F398 SweetC.M	30 -03- 2017	750	Kgs	JOB SCHEDULED	01 -06- 2017	01 -06- 2017
51436	533462	KESTREL FOODS LTD	117480 - F-550 Film Costa Coffee Raisin & Nut Mix	05 -04- 2017	350	Kgs	JOB SCHEDULED	15-05-2017	19-05-2017
49327	235408	LILY O BRIENS	PWRP160 330mm wide Cream wrap with gold torc	28 -07- 2016	25,000	Imps	BALANCE	31 -05- 2017	19 -09- 2016
51164		LILY O BRIENS	MA for 400,000 Lids of Ethiad Style Pot	10-03-2017	50,000	Lids	MAT. ALLOCATION	31 -05- 2017	27 -03- 2017

✓ Google Maps API

27Darren Home Alert.com Thanks Tol Log Out



3.5 Testing

Testing was completed in three areas:

- 1. Security
- 2. Functionality
- 3. Information accuracy

Security:

Three key elements where tested in security: SQL injection – various codes from different sources were used trying to break through login security, all of them were unsuccessful because register.php, login.php and sales.php are using PDO (PHP Data Object) which prevents SQL injections, no further action requires.

Xenu was used to search the <u>www.alertpackaging.com</u> in order to discover possible links that can lead to register.php, login.php and sales.php, Xenu search as all the other search engines fails to find login and register pages, which makes them more secure because in order to break in the pages need to found and those pages are nowhere on any maps, no further action requires.

Changing directories was an issue, because as soon as user is logged in he could change directories and see other users pages, problem was solved by using .htaccess and security was achieved by preventing user jump directories, no further action requires.

Functionality:

PDF – Creating PDF was tested on every user and every tab, no issues were discovered, no further action requires.

Search – search functionality was tested on every user and every tab, some issues were found; the function had different names, which prevented search from working, no further action requires.

Google Maps API – Google Maps API was tested on every user, main two issues were discovered; not all customers were displayed and wrong customer location on the map. It was discovered that customers where not displayed because they had no address. The customers with wrong locations were discovered that they

entered onto the system incorrectly. Further action required: update all customer addresses in unify format.

Information accuracy

All user and all the tabs were tested for information accuracy, no issues where discovered, no further action requires.

3.6 User testing

Sales personnel were provided with login details and were asked to use the SSP. A week later they were asked to provide the feedback on impact to the business.

Feedback 1:

Hi Roly,

Thanks for this it is a great tool for my sales tool box.

The ability to check job status for my customers in real time whilst on the road is fantastic.

Also to note - I pitched the customer portal to a large new prospect as part of my presentation to them, they seen real value in the system and will look to have multiple users one in purchasing and one in production planning when we progress to do business with them. So not just of value in keeping existing customers.

Many Thanks,

Paul Kelly

Sales Manager

Feedback 2:

Rolandas,

I have presented and demonstrated to a number of customers, Lubepack, Nemco & Romix. I have stated that it will be live at the start of June and they would receive unique access for their business. I plan on introducing to further customers at

meetings in the coming weeks with a stepped go live for all my UK and international customers.

All customers were very impressed and see it as a valuable tool / service. They are already aware that we run a fully integrated system from quote to invoice with integration to production processes and full batch traceability. This is an intrinsic part of our BRC Issue 5 AA accredited system.

We have also demoved to a couple of prospective clients with positive reaction. Our competitors are not offering the same integration. This will be to our advantage in a very competitive market.

Kind regards

Tony Barry

Export Sales Manager

Feedback 3:

Hi Rolandas,

Just a note to congratulate you on your recent IT upgrading.

The impact is such that we will each save hours per week as well as making the sales team a more polished and professional unit.

The result of being in live contact with the office while you are sitting with your customer and have full details of estimating, stock levels, live production updates should not be understated.

Keep up the good work,

Gordon Horsfield

Director

Feedback 4:

Hi Roly,

Thank you for the introduction to the Sales/ Customer Log in system.

It is a very impressive tool and will greatly benefit me in Customer Services as it will allow our own Sales Team to get information directly to their devices, without having to direct their questions to me, and this should eliminate some of the many queries I have to address every day!

Also because it will give customers access to "real time" information on their orders, this will save me having to do maintain spread sheets which constantly need updating.

Kind regards Sandra Colgan Customer Service Manager

4 Conclusions

At the end I have to say I enjoy the challenge, mainly because I learned so much in the process. Solving problems is what I like to do and even I have no programming background I managed to find solution, not all of them were direct solution some of them had to find work around and that's where I had the most fun. The project is finished for the college but as this project will be used every day by Alert packaging customers and employees it will keep evolving and changing, there still many functions that needs to be added, because of time constrains it was impossible to add them now. SSP was evaluated by Sales team very positively which means I will get support from management to continue with advancement of the project. Overall I value this experience which I believe will be used to further my career.

5 Further development or research

Over the time I see system evolving in a way that it will be added more functions like;

- Save information in Excel, pictures and so on
- More tabs will be added for more reports
- Artwork approval
- Customer complaints
- Online support
- RSS feed from Twitter and LinkedIn

6 References

Ajaxblender.com. (2017). *How to Create Custom AJAX Tabs using jQuery. Download Source Code.* — *ajaxBlender.com*. [online] Available at: <u>http://www.ajaxblender.com/howto-create-custom-jquery-tabs.html</u> [Accessed 5 May 2017].

Embed.plnkr.co. (2017). *Angular UI AJAX Tabs - Plunker*. [online] Available at: <u>http://embed.plnkr.co/5Ng9PHkrluKUSzQhor34/</u> [Accessed 5 May 2017].

Getbootstrap.com. (2017). *Starter Template for Bootstrap*. [online] Available at: <u>http://getbootstrap.com/examples/starter-template/</u> [Accessed 5 May 2017].

Google Developers. (2017). Adding a Google Map with a Marker to Your Website | Google Maps JavaScript API | Google Developers. [online] Available at: <u>https://developers.google.com/maps/documentation/javascript/adding-a-</u> google-map [Accessed 5 May 2017].

Google Developers. (2017). Using MySQL and PHP with Google Maps | Google Maps JavaScript API | Google Developers. [online] Available at: https://developers.google.com/maps/documentation/javascript/mysql-tomaps#domfunctions [Accessed 5 May 2017].

YouTube. (2017). *Using PHP/MySQL with Google Maps*. [online] Available at: <u>https://www.youtube.com/watch?v=CwysClvZ854</u> [Accessed 5 May 2017].

GitHub. (2017). *maxrice/excel-geocoding-tool*. [online] Available at: <u>https://github.com/maxrice/excel-geocoding-tool</u> [Accessed 5 May 2017].

Milstead, M. (2017). *How to Build a Functional Login Form with PHP* + *Twitter Bootstrap*. [online] Untame. Available at: <u>http://untame.net/2013/06/how-to-build-a-functional-login-form-with-php-twitter-bootstrap/ [Accessed 5 May 2017].</u>

Bootsnipp.com. (2017). *HTML Snippets for Twitter Boostrap framework : Bootsnipp.com*. [online] Available at: <u>http://bootsnipp.com/snippets/56A0W</u> [Accessed 5 May 2017]. Tutorialzine. (2017). *Making A Cool Login System With PHP, MySQL & jQuery | Tutorialzine*. [online] Available at: <u>http://tutorialzine.com/2009/10/cool-login-</u> <u>system-php-jquery/</u> [Accessed 5 May 2017].

YouTube. (2017). *How to Generate Dynamic PDF File using TCPDF in PHP*. [online] Available at: <u>https://www.youtube.com/watch?v=m50DZklwd-s</u> [Accessed 5 May 2017].

Webslesson.info. (2017). *How to Generate Dynamic PDF File using TCPDF in PHP*. [online] Available at: <u>http://www.webslesson.info/2016/10/how-to-generate-dynamic-pdf-file-using-tcpdf-in-php.html</u> [Accessed 5 May 2017].

W3schools.com. (2017). CSS3 Borders - Rounded Corners. [online] Available at: <u>https://www.w3schools.com/css/css3_borders.asp</u> [Accessed 5 May 2017].

CSS-Tricks. (2017). *Responsive Data Tables | CSS-Tricks*. [online] Available at: <u>https://css-tricks.com/responsive-data-tables/</u> [Accessed 5 May 2017].

W3schools.com. (2017). *Tryit Editor v3.4*. [online] Available at: <u>https://www.w3schools.com/howto/tryit.asp?filename=tryhow js filter table</u> [Accessed 5 May 2017].

columns, F. (2017). *Filtering table multiple columns*. [online] Stackoverflow.com. Available at: <u>http://stackoverflow.com/questions/43622127/filtering-table-multiple-</u> <u>columns</u> [Accessed 5 May 2017].

PHP?, H. (2017). *How can I prevent SQL injection in PHP*?. [online] Stackoverflow.com. Available at: <u>http://stackoverflow.com/questions/60174/how-can-i-prevent-sql-injection-in-php</u> [Accessed 5 May 2017].

YouTube. (2017). SQL Injection Demo. [online] Available at: https://www.youtube.com/watch?v=J6v_W-LFK1c [Accessed 5 May 2017].

YouTube. (2017). *Step-byStep SQL Injection Attack (HQ)*. [online] Available at: <u>https://www.youtube.com/watch?v=7H358PrFagc</u> [Accessed 5 May 2017].

Home.snafu.de. (2017). *Find broken links on your site with Xenu's Link Sleuth (TM)*. [online] Available at: <u>http://home.snafu.de/tilman/xenulink.html</u> [Accessed 5 May 2017].

.htaccess, C. (2017). Changing the root folder via .htaccess. [online]Stackoverflow.com.Availablehttp://stackoverflow.com/questions/5792153/changing-the-root-folder-via-htaccess[Accessed 5 May 2017].

7 Appendix

7.1 Project Proposal

Objectives

Problems:

- Customers are looking for information that Alert Packaging (Company I work for) keeps in Database and that information is live.
- Sales Executives when they are on the road, they are looking for information which is maintained live on Alerts Packaging Database.

Solution:

- Create an access for Customers so they could view their relevant order information at anytime and it would be live.
- Create an access for Sales Executives so they could view their relevant information live

Reasons:

• Sales Support is spending a lot of time giving the information to Customers and Sales Executives that maintained live on Alert Packaging Database. It is been said by Sales Executives repeatedly; the reason they can't be on the road more selling because the only way to access the information is to be in the building.

Background

- Alert Packaging can't compete with countries like China on big order and as a result Alert Packaging is in the niche now where they do small order and quick order turnaround time, because of that reason in the last three years amount of orders for processing almost doubled (it went from 650 a year to 1230 orders a year). Alert Packaging last three years started to hire more people in the offices then in production area just to facilitate the processing of the orders.
- Purpose of this project is; to create website login, using appropriate tools, which would enable live information access to be user friendly to Sales team and the Customers who are not IT oriented type of people, so they could carry out the tasks which would bring a value to the company.

Technical Approach

- ✓ Connect to DB
- ✓ Login and security of login
- ✓ Registration
- ✓ Bootstrap
- ✓ Bootstrap table display info from DB
- 🗸 Ajax
- ✓ Filter info in tables and sort tables

- ✓ MySQL join different tables
- ✓ Input info into DB
- ✓ Display files in table
- ✓ Display multiple tables as pages in same page
- \checkmark Sales to have option to see their customers on the map

These are the things and tools that I need to learn how to do it and how to use it, because I am planning to have them working for my project

Project Plan

	0	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Dct '16		v '16	Dec '16		Jan '17	Feb '17	Mar '17	Apr '17		May '17
								03 10 17	24 31	07 14 21	28 05 12	19 26	02 09 16 23	30 06 13 20	27 06 13 20 2	27 03 10	17 24 0	01 08 15 22
1		Project Proposal	10 days	Mon 10/10/16	Fri 21/10/16													
2		Connect To Db	2 days	Mon 24/10/16	Tue 25/10/16				հ 👘									
3		Learn Bootstrap	2 days	Wed 26/10/16	Thu 27/10/16	2			ň.									
4		Learn Ajax	2 days	Fri 28/10/16	Sat 29/10/16	3			Ť.									
5		Requirements Spec	14 days	Wed 26/10/16	Fri 11/11/16				Ċ									
6		MySQL join different tables	2 days	Sat 29/10/16	Mon 31/10/16				0									
7		Login and security of login	2 days	Mon 31/10/16	Tue 01/11/16				<u>i</u>									
8		Filter info in tables and sor	2 days	Wed 02/11/16	Thu 03/11/16				0									
9		Project Prototype	14 days?	Tue 15/11/16	Fri 02/12/16						_							
10		Mid Point Presentation	15 days	Tue 29/11/16	Fri 16/12/16													
11		Showcase Materials	15 days	Tue 28/03/17	Mon 17/04/17											<u> </u>		
12		Display files in table	4 days	VVed 19/04/17	Sat 22/04/17												• <u> </u>	
13		Display multiple tables as p	5 days	Tue 25/04/17	Sat 29/04/17	12											_	
14		Sales to have option to see	4 days	Sun 30/04/17	Wed 03/05/17	13											č	í l
15		Final Project Hard Copies E	14 days	Fri 05/05/17	Wed 24/05/17													
16		Software & Doc Upload	14 days	Fri 05/05/17	Wed 24/05/17													
17		Project Presentations	14 days	Fri 05/05/17	Wed 24/05/17													

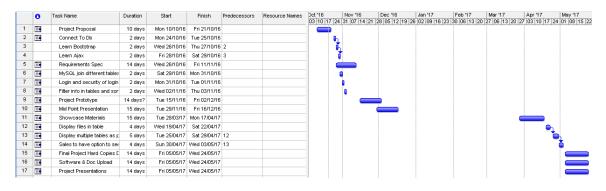
Technical Details

Project will be written in PHP and MySQL. I am planning to use Bootstrap and Ajax, Bootstrap I will use for project to be more easy on the eyes and Ajax for more functionality

Evaluation

I will evaluate project in different stage as I go along. My project will be on live server and as I create new things they will be tested live. The final evaluation will be done representative of Alert Packaging sales team member and approved by MD Justin Burke that is expectable to our customers.

7.2 Project Plan



7.3 Monthly Journals

7.3.1 September

Reflective Journal

Student name: Rolandas Vizbara – x07109075

Programme: Business Information Systems

Month: September

Dear dairy... finally started on my proposal, have an idea and have put roughly on the paper, just need to put in proper layout and next week present to the Dragons Den. Started to look at different options for coding: PHP, Bootstrap, Ajax... not sure what I will be using, but need to find something that will be easy to use for the end user.

My Achievements

This month, I was able to come up with project idea and put it on the paper

My contributions to the projects included research for the coding options.

My Reflection

There is no reflection because I just started the project.

Intended Changes

I presented my idea yesterday, and it was accepted but revisions, whatever that means. Other people where there for 20 minutes and I did in like 4 minutes, because they were in a hurry to finished, so really didn't understood what they wanted me to do. I still going to proceed with my original idea, because I believe that will be challenging enough for a Business student; have a basic knowledge on coding and for this project need to learn a lot new stuff and make it work, but will try to add some fancy features, so that user could filter information or feed back to the database.

Supervisor Meetings

Date of Meeting:

Items discussed:

Action Items:

(don't have supervisor yet)

7.3.2 October

Reflective Journal

Student name: Rolandas Vizbara - x07109075

Programme: Business Information Systems

Month: October

First week of October; found some nifty looking code, it's called Bootstrap. Went to the <u>http://www.w3schools.com/bootstrap</u> and reading everything from the beginning and learning new code, looks like nice clean programming language and hopefully will be able to make my web page look nice and easy to use, not just from desktop computer but from tablets and phones too.

Just created the file with things to learn, so far I have:

Connect to DB

Login and security of login

Registration

Bootstrap table display info from DB

Filter info in tables and sort tables

SQL join different tables

Input info into DB

Display files in table

Display multiple tables as pages in same page

Sales to have option to see their customers on the map

Customers to see:

- Pending orders
- Live orders
- Finished orders
- Orders to be paid

Sales to see:

- All pending order (by customer)
- All live orders
- All finished orders

- Orders hasn't been paid
- Map with customer locations

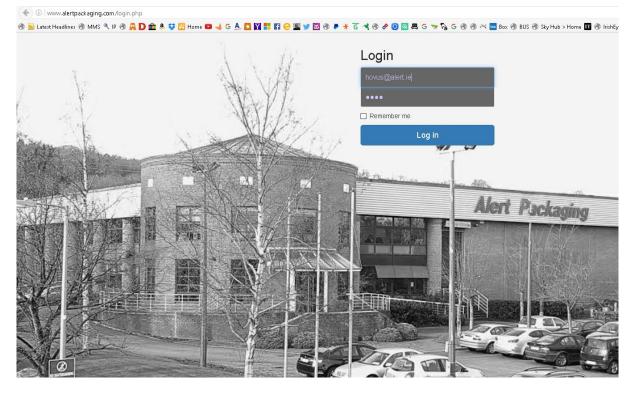
Today I was learning bootstrap, looks like the tool to use for my project, looks very much user friendly and easy to use.

Going to start with login, looking for examples that I could use for my project.

Did research on logins, I am going to use this guy: <u>https://www.youtube.com/watch?v=1kJWxm4_olk</u>

12.10.2016

I chose my login and finally made it work on a live server



This is what I will use; I even did some work on the picture which I will use too.

19.10.2016

Today I am working on my Proposal, I had some material prepared for Project pitch, which they didn't want to hear so, part of it I am using for the proposal, so had a good start.

Looking for project planning software, looks like need to use Microsoft version because its one of the best out there.

26.10.2016

Today learning AJAX, I need this because I want my website to loud information on the same page instead of creating multiple pages for different SQL queries. <u>http://www.w3schools.com/xml/ajax_intro.asp</u> this is great website for learning new things like this one.

Found something else interesting for my website. I would like customers to see their info and sales personnel their info, but there is one more thing I would like them to do is to have one central location for artwork; there are three parties involved: Sales, customer, and Artwork people, there are different stages for approving artwork, I would like them to do it through the website, uploading, editing, deleting, approving... so here is the link where I found and I might use it: <u>https://www.youtube.com/watch?v=8mTluuvOGbY</u>

There is one more: <u>https://editor.datatables.net/examples/simple/join.html</u>

My Achievements

Right, its 1.16 am - 27.10.2016 - Finally got it working

http://www.w3schools.com/xml/tryit.asp?filename=tryajax_post got the code from here

And change to mine

```
<button type="button" onclick="loadDoc1()">Live Orders</button>
<button type="button" onclick="loadDoc2()">Orders in Stock</button>
<script>
function loadDoc1() {
 var xhttp = new XMLHttpRequest();
 xhttp.onreadystatechange = function() {
 if (this.readyState == 4 && this.status == 200) {
   document.getElementById("demo").innerHTML = this.responseText;
 }
 };
 xhttp.open("POST", "LiveO.php", true);
 xhttp.send();
function loadDoc2() {
 var xhttp = new XMLHttpRequest();
 xhttp.onreadystatechange = function() {
 if (this.readyState == 4 && this.status == 200) {
   document.getElementById("demo").innerHTML = this.responseText;
 }
 };
 xhttp.open("POST", "OrdersIn.php", true);
 xhttp.send();
</script>
```

What that does on request (when you click button) loads the page, while you on the same page. LiveO is php page that contains php code with mysql query that displays data from database, same as OrdersIn.php different mysql query

Next is mysql - write working queries that displays data I need.

My Reflection

Was a good month learned bootstrap and ajax, already have working page, so far I am positive about my project, at the later stages will be harder but I had a good start.

Supervisor Meetings

Just got assigned Paul Hayes, hadn't had a chance to set the meeting yet, but will try to set the meeting very soon.

7.3.3 November

Reflective Journal

Student name: Rolandas Vizbara – x07109075

Programme: Business Information Systems

Month: November

Here we go, November, less and less time and more things to do. Reading week was useless in terms for project and studies, mainly because my kid had a week off so was spending time with my kid.

Today will start on my Requirement Specifications, took a day of tomorrow just I could finish it.

10.11.201

I'm on the day off doing Project requirement specification. Have to say programming now looks like very easy thing even if I don't understand it and it is difficult. I would definitely prefer to do some programming then writing this spec. That been said, I have to admit that it definitely help to see some other aspect of your project.

One of problem that I am having is the language barrier, when you get to that part where nee to write functional requirements everything sounds the same, like scope – description, or case diagram and flow description...

I'm off to college now, did all functional requirements left no non-functional requirements, will try to come back to it on Friday or Saturday and finish it this week, because there a lot of other assignments to do...

16.11.2016

Still not able to get appointment with my supervisor Paul, yesterday left work early and was sitting in the traffic and then when I arrived to college was sitting in front of car park for half an hour... Today will try to finish the Spec requirements, and then work a bit on my project.

Finished S requirements, just going to tidy up and upload to moodle. Have to say, wasn't easy and not really happy with the spec, and I am pretty sure that the Technical requirements will be even harder. I was thinking to work on the project but I think I'll start on Technical requirements instead.

My Achievements

Met my supervisor ...

My Reflection

Not a good month with all CA's and stuff, will need to do a lot of cathing upo over the holidays ...

Intended Changes

Next month still CA's to do, but after that holiday and will do a lot of project, not going to leave myself a lot for next year...

Supervisor Meetings

Date of Meeting: 16.11.2016

Items discussed: midterm presentation

Action Items:

7.3.4 December

Reflective Journal

Student name: Rolandas Vizbara – x07109075

Programme: Business Information Systems

Month: December

December was pretty busy so didn't get much done, except Midterm presentation, which went OK I guess, the preparation for presentation was a bit paint full ,

because when I looked over the code I couldn't remember some things, so I went back to the source of the code and it was taken down, all the videos and code was code. I still did the presentation but explained that I will have to start again. After midterm presentation was difficult to get going mainly because the time I thought it will better used for exams, but I will be back into it as soon as exams are over.

My Achievements

Didn't achieve much this month except that I am looking for new code for my project...

My Reflection

I felt that this month didn't have that much time and next month will be the same

Intended Changes

I intend to start everything from the beginning, the idea still same but just the code.

Supervisor Meetings

Date of Meeting: this month I had only one day that I could meet Paul H., but he wasn't available, so we decided to meet some time after exams.

Items discussed:

Action Items:

7.3.5 January

Reflective Journal

Student name: Rolandas Vizbara – x07109075

Programme: Business Information Systems

Month: January

January was busy month again, didn't do much on the project. Exams were difficult and I am not in the mood to do the project. Started year well and I thought I did a lot for the project and because I have to start again I think my time would be better spent on the CA's and next exams. I will be spending some time on the project but not as much, mainly because I can see a trend with lecturers, they want their stuff to be done I they have little regards for the final year project, so be it... I had a look at times and I think I can do most after last exams, but will see how everything goes..

I found the source for my login page and I think I will go with that.

http://untame.net/2013/06/how-to-build-a-functional-login-form-with-php-twitterbootstrap/

My Achievements

Found Login page, and I got to do some MySQL practise in work, so getting better with MySQL...

My Reflection

I Feel I getting good with MySQL which should help for my project

Intended Changes

Can't change anything because I don't have anything to change...

Supervisor Meetings

Spoke to Paul H., on the phone and we decided that there is no point of meeting because I have nothing to show, he told me don't leave everything to the last day, so have to do some work on my coding next month.

Date of Meeting:

Items discussed:

Action Items:

7.3.6 February

Reflective Journal

Student name: Rolandas Vizbara - x07109075

Programme: Business Information Systems

Month: February

Once again didn't do much this month except created login landing page, would you like to see it? I'm sure you do...



I know it looks similar to one before, but I put a lot of work in this picture, playing different shades and plus other people liked it a lot, so will keep the picture. Here is the code for the design:

http://bootsnipp.com/snippets/56A0W

My Achievements

My Login works, happy with that...

My Reflection

I felt that classes and CA's takes huge amount of time, so what eve I managed to do so far, I am OK with that...

Intended Changes

No changes planed yet, well I thought I liked the animated part on login and thats why I choice, but when I spoke to Darren in work he said that is probably to much, so had to make change and go back to my lovely picture of Alert Packaging...

Supervisor Meetings

Spoke to Paul H., on the phone he incurred me to have a bit more time dedicated to the project, I said OK, but honestly I don't think I can spend more time then I already am...

Date of Meeting:

Items discussed:

Action Items:

7.3.7 March

Reflective Journal

Student name: Rolandas Vizbara – x07109075

Programme: Business Information Systems

Month: March

Busy busy month...

Did a lot of searching mostly and found some sources that I am planning to use, first page after login:

http://getbootstrap.com/examples/starter-template/

and the Ajax tabs

http://www.ajaxblender.com/howto-create-custom-jquery-tabs.html

Once again the amount of CA's is unreal, as an evening student I think at least Saturdays could be free, there was one Saturday this month where I woke up at 6 and came back from college straight home and it was almost 7 pm.. so when you think you can do all the CA's, project and work, and find the time to meet your supervisor, for final year students I think it's a bit too much...

My Achievements

Learning about Ajax, once again...

My Reflection

I felt like I need 48 hours in a day...

Intended Changes

Not changing anything yet...

Supervisor Meetings

Spoke again to Paul H, on the phone, explained what are my intentions for my project and he said that's not enough and I need to think about more functionalities, so I will be thinking what else I can add to my project...

Date of Meeting:

Items discussed:

Action Items: