Project Evaluation

Graded Unit

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# **To what extent did the solution meet the original requirements?**

## Assignment Outline

The objective of the project was to create a websites to allow Lidiflu ltd to sell their products to consumers. These products consist of engineering parts related to the wind turbines. The website was to allow customers to login and give their details, search through product lists and purchase them using Paypal or credit cards. Users were also to be given the option to purchase maintenance for their wind turbines as well.

The assignment also consisted of creating a mobile app that would allow engineers to view job required and to assign themselves to these jobs.

### Functional Requirements of LidiFlu Ltd website

* 1. Sell engineering products for the windmill industry
  2. Allow customers to login, save details, purchase goods and services online
  3. Book maintenance of windmills online
  4. Show information about the weather(wind speed) on the site
     1. If it’s very windy display advertisement for maintenance of windmills
  5. Display gallery of windy places
  6. Display twitter feed
  7. Login as customer
  8. Login as owner
  9. Access current database for products to be displayed for sale
  10. Add/remove products to the products database
  11. Store customer information for repeat business in database

### Non-Functional Requirements of LidiFlu Ltd website

1. Must be designed to appeal to and be easy to use for target audience
2. Fully accessible on pc/laptops
3. Fully accessible on mobile devices
4. Complies with current web standards for accessibility, usability and coding
5. Payment system should be by paypal
6. Must use current logo
7. Must be completed by
8. Must be completed for £
9. Must be SEO
10. User friendly
11. Design must reflect type of business and incorporate elements such as colours form logo

### Functional Requirements of mobile app

* 1. Secure login by engineers
  2. View all active jobs in their area
  3. Sign-up for job
  4. Mark job as complete

### Non-Functional Requirements of mobile app

1. Complies with current web standards for accessibility, usability and coding
2. Must use current logo
3. Must be completed by
4. Must be completed for £
5. User friendly
6. Design must reflect type of business and incorporate elements such as colours form logo

## How did the project meet these requirements?

|  |  |
| --- | --- |
| Requirement | How was this met? |
| Sell engineering products for the windmill industry | Created fully operational shopping cart facility that allows logged in and anonymous users to add products to shopping cart |
| Allow customers to login, save details, purchase goods and services online | Uses ASP.NET user authentication and roles to allow customer to create new profile. Creation of database that stores customers previous order information and details |
| Book maintenance of windmills online | Allows customer to purchase maintenance. Full booking ability not implemented |
| Show information about the weather(wind speed) on the site | XML data is retrieved using Yahoo Weather API. Wind speed is displayed, along with maintenance message based on wind speed. |
| Display gallery of windy places | Not Implemented |
| Display twitter feed | Twitter feed is retrieved in JSON format and parsed and displayed using Javascript/Jquery |
| Login as customer | Uses ASP.NET user authentication and roles to allow customer to create new profile. |
| If it’s very windy display advertisement for maintenance of windmills | XML data is retrieved using Yahoo Weather API. Wind speed is displayed, along with maintenance message based on wind speed. |
| Login as owner | Use of ASP.NET roles allows creating of Admin User with access to restricted Admin page |
| Access current database for products to be displayed for sale | Created database to store product information. Created LINQ to SQL data model to query database and retrieve product information. Combination of front-end and server coding used to display database based on certain queries. |
| Add/remove products to the products database | Creation of admin page with data tables which allow CRUD operations to the product table of the shop database. |
| Store customer information for repeat business in database | Creation of database that stores customers previous order information and details |
| Must be designed to appeal to and be easy to use for target audience | Simple layout using compositional skills used to create balanced and readable layout |
| Fully accessible on pc/laptops | Completed to web standards, see accessibility section |
| Fully accessible on mobile devices | Not implemented |
| Complies with current web standards for accessibility, usability and coding | See accessibility section |
| Must use current logo | Current Logo Used |
| Payment system should be by paypal | Paypal API implemented |
| Must be SEO | Use of keywords and semantic HTML |
| Design must reflect type of business and incorporate elements such as colours form logo | Use of colours consistently used throughout the website with |
| User friendly | See usability section |

# Unforeseen events?

During development the major unforeseen event was the conflict between the classes created by the LINQ to SQL dbml file, and implementation. The schema was not sufficiently flexible enough for my needs in the development of the shopping cart facility. Conflicts arose due to constraints within the schema. I created some stored procedures to create and update user information in the database.

Implementation of the Express shopping cart API from paypal made the introduction of a login facility requiring the user to enter their details such as name, address and email became redundant as user information was stored on the paypal website. Instead the user information was retrieved from the paypal website after purchasing the product and stored in the database. A .NET User Profile facility which accepts a user name and password was used for authentication of the user on the website instead. The user ID of the .NET profile was used as a reference in the customer table of the database to create a relationship between the two databases.

During the development of the mobile app I was unable to bind the results of the call to the webservice and so display the job list. The time constraints of the project meant that I was not able to finish development of the mobile app.

# Knowledge and Skills gained and developed

During implementation of the project I further developed on previous skills including HTML, CSS, C#, jQuery, as well as working within the ASP.NET framework. I gained skills in:

1. Customising and implementing .NET datacontrols such as datagrids, viewgrids
2. Creating relational databases and data contexts
3. Creating stored procedures to perform functions against the database
4. Creating data access layer
5. Working with paypal API
6. CSS3 animation
7. Working with JSON formatted data
8. Retrieving and parsing XML documents

# Strength and weakness of all outputs and assignment

|  |  |  |
| --- | --- | --- |
| Output | Strength | Weakness |
| Website | Functioning Cart | Not yet deployed |
|  | Ability to login | UI controls not skinned and styled for consistency |
|  | Pleasingly yet simply designed | Sometimes products are not loaded from database |
|  | Functioning twitter list | Some graphic elements not completed to high standard such as photographs |
|  | Shows wind speed information gained from yahoo weather | More user elements such as rollovers to provide information to users could be implemented |
|  |  |  |
| Phone App | Partially implemented | Not completed |

# Recommendations for future development of project

Future developments for the project could involve increasing the complexity of the database to include product category information, shipping details for the customer, a shop table to store information about quantities in stock and any further information that would be need for a fully operational shopping cart.

Addition of more detailed images of each product, and a zoom function on the product images so people can see the products better.

Integration of the full paypal API would allow a more seamless user experience and also allow customer to pay with credit cart straight from the site without having to sign-up to paypal.

Email confirmation of purchase.

Allowing user who purchase engineering service to fully enter details about what they require being done. This could then be flagged up to an admin user, who could confirm the order and automatically send those details to an engineer’s phone.

# Improvements to project

Development of the project could have been improved with a clearer understanding of databases and datacontexts. A lack of understanding of these things meant that implementation was slower than expected and meant aspects such as the phone app were not able to be implemented in time.

A more detailed project plan would have allowed me to develop the project better as it would have given me a clearer set of task to work through in a logical way.