

Online shop product finder and stock counter

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1. Introduction, Aim & Objectives

Background

Whenever you want a simple question answered, you ask your search engine of your choice (most of the time). But, when you have a simple question regarding if a product is still available in-store, who do you ask, staff? What about if you are not in the store at the time? This report produced a website where users can check if products required identification, where the product was in-store, how much stock was in-store on shelves, where on the shelf the product was, information regarding the product (weight, allergies etc) and what aisle(s) the product was on.

Simply put, this report looked into whether users needed more information whilst shopping in-stores.

Aim

To focus on a way to track and locate stock in a physical store.

Objectives

- Survey results and implement changes;
- Research supermarkets and assess what they currently do;
- Research current technologies;
- Implement an application for users to give feedback on and implement changes;

2. Literature Review

The literature review identified areas which was useful to the project:

- Shops are formatted into different designs [1]
- Current technologies [2] [3] [4]
- New ways of checking out [5]
- Usability design & inputs [6] [7]

3. Research Methodology

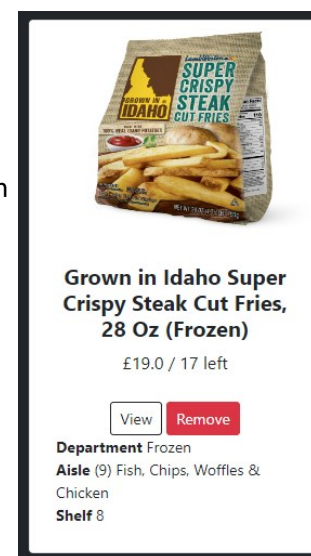
Two research methodology were used, one was survey and the other was development. These were the most appropriate methodologies to use as surveys are quick to setup and results are fast and, development was chosen as a website experiment was conducted.

4. Design & Implementation

A website was created, the server-sided language used was Php with a MySQL database linked, JavaScript with a jQuery library was used for the frontend to generate the content. Leaflet which is a library coded in JavaScript was used as part of the mapping technology.

The MySQL database only stored product information, shopping list reminders and shop information such as shelves and aisles.

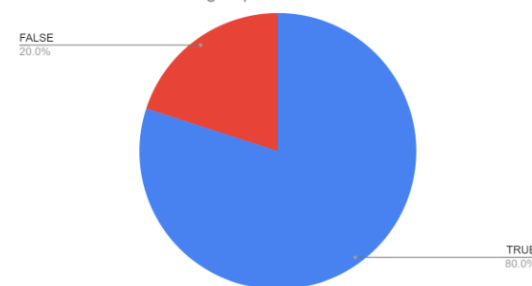
Survey respondents used a website that was accessible using a domain, this domain was encrypted with an SSL certificate so data was safely transmitted.



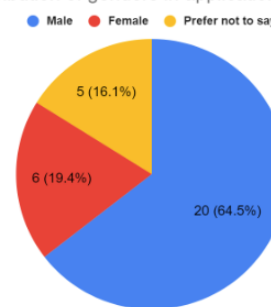
5. UX Testing & Results

The website had been tested by individuals anonymously via a survey, a focus group was also used (this was not anonymous). The survey had thirty-one responses and the focus group had five.

Success rate for focus group



Distribution of genders in application survey



6. Conclusion

To conclude this project, it was successful; the report successfully completed its aim, most objectives were completed sufficiently with a couple of criteria not being met.

It was concluded that this style of system is wanted by customers but it has been noted that the implementation of the website and, with the lack of quantity in responses may require further investigation.

Future work of this project should focus on, but is not limited to:

- Better implementation of a website
- Run a survey over a longer period and acquire more results
- Complete more focus group testing
- Run physical in-store tests

7. References

- [1]dominionprint, "4 types of store layout you need to know about", *dominionprint*, 2022, [Online.], Available: <https://www.dominionprint.com/4-types-of-store-layout-you-need-to-know-about/>, Accessed 10 Oct 2022
- [2] smartshop, "SmartShop is the new way to shop at Sainsbury's. Just scan, bag and go, it couldn't be easier!", *smartshop*, 2022, [Online.], Available: <https://smartshop.sainsburys.co.uk/>, Accessed 10 Oct 2022
- [3]justwalkout, "A new shopping experience with Just Walk Out technology by Amazon", *justwalkout*, 2022, [Online.], Available: <https://justwalkout.com/>, Available 20 Oct 2022
- [4] shopic, "Intelligent Retail with the World's Smartest Shopping Cart", *shopic*, 2023, [Online.], Available: <https://www.shopic.co/home/>, Accessed 7 Jan 2023
- [5]tracxn, "Top Self Checkout Solutions Startups", *tracxn*, 2022, [Online.], Available: <https://tracxn.com/d/trending-themes/Startups-in-Self-Checkout-Solutions>, Accessed: 20 Oct 2022
- [6]w3, "Accessibility, Usability, and Inclusion", *w3*, 2023, [Online.], Available: <https://www.w3.org/WAI/fundamentals/accessibility-usability-inclusion/>, Accessed 19 Apr 2023
- [15]twitter, "Accessibility at Twitter", *twitter*, 2023, [Online.], Available: <https://help.twitter.com/en/resources/accessibility>, Accessed 23 Apr 2023