Stay Safe Research Poster

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Objectives

1. Table Service for all.
2. Advertisement to local businesses.
3. Save businesses and save lives.

Introduction

▶ Stay Safe Project aims at saving businesses that have been struggling to stay open during Covid 19 UK lockdowns. The project concept ensures a future to local pubs/restaurants post Covid-19. Educational and Hospitality are targeted in the target audience, as our project concept can theoretically save lives.

Future Technologies

▶ Vending Machine Purchasing (VMP)
VMP technology is what the Stay Safe project intends to introduce. Vending machine's syncronise with the Stay Safe application. The vending machine dispenses when the user that ordered the item, scans their student/business card or application.

Figure 1:Long Queues at Canteen [1]

▶ Effective Social Distancing (ESD)
The figure shows queues of a University Cafeteria, which suggests that our application can reduce queues and user interaction with staff and student. Same goes with businesses that have no space and a lengthy queue. Customers can still talk to staff, whilst the order is preparing, if they choose to.

Attributes

The project was put together by **Edward Patch** and **Joseph Ross**. Edward Patch focuses on the Android Development and Server side of the project. Joseph Ross focuses on the Website Development side of the project.
Teamwork is required to coordinate the project. The application/server-side developer has to coordinate with the website developer, making sure the server and project is working together and on track.
Our check/track list: https://github.com/ShinkuKira21/Stay-Safe/projects/1
Some chat logs of us communicating as a team:
https://github.com/ShinkuKira21/Stay-Safe/projects/2

Figure 2:How Teamwork Drives Success [2]
What does teamwork mean to us? Read Teamwork by Edward Patch [3].

Tools Outside Area of Study

MySQL, Python, BCrypt (Jupyter)
To control the database, the decision to use Jupyter and MySQL as the base of the database was setup. Jupyter works with GitHub integration, and BinderHub (which can integrate into a website).

▶ The decision of Jupyter Notebook with the Python language is made, due to the Python's ability to work with BCrypt and SQL/MySQL servers with ease. Jupyter Notebook enables HTML/CSS to stylise the notebook, making the user interface to look nicer to use.

Java, JBCD, JBCrypt, and C++ (Android Studio)
Android Studio is the decided choice to create an Android application. Instead of using Kotlin, Java and C++ was the deciding factor. The reason for this analogy is that the native language, C, works with Java (JNI).

▶ C++ is best for performance, allowing an activity to do more.

▶ Java is used to create dynamic XML scripting and to connect to the MySQL database. JBCrypt is the decision made to compare any encrypted password, set by BCrypt Python (Jupyter Application).

Figure 3:Understanding BCrypt [4]

XML/HTML/JS/PHP (App-Side)
XML is the front-end language for Android Studio. The majority of XML and Java will style the front-end of the application.

▶ HTML, JS and PHP languages will fill gaps in the Staff Control Activity. These languages picked are to make the Staff Control Activity lighter.

These add up to a total of 8 technologies that are not related to Edward Patch's area of study.

Statistics: Table

▶ Reasons consumers use the Starbucks mobile app in the United States as of October 2019.

Description	Value	in unit
To pay for my order in-store	31.7	in %
To order ahead	26.1	in %
To review the menu, but not to order or pay	18.5	in %
To have my Starbuck's order delivered	1.7	in %
Others, please specify	1.6	in %
I do not use the Starbucks Mobile app	38.6	in %

Table 1:Mobile app use of Starbucks consumers US 2019 [5]

The information above suggests that the majority has 38.6% that does not use the application, Starbucks has to offer in the United States. However, 31.7% use the Starbucks application, which is a 7% change between the the majority of votes.
79.6% of people that could potentially use our application, including a method of looking at the menu.
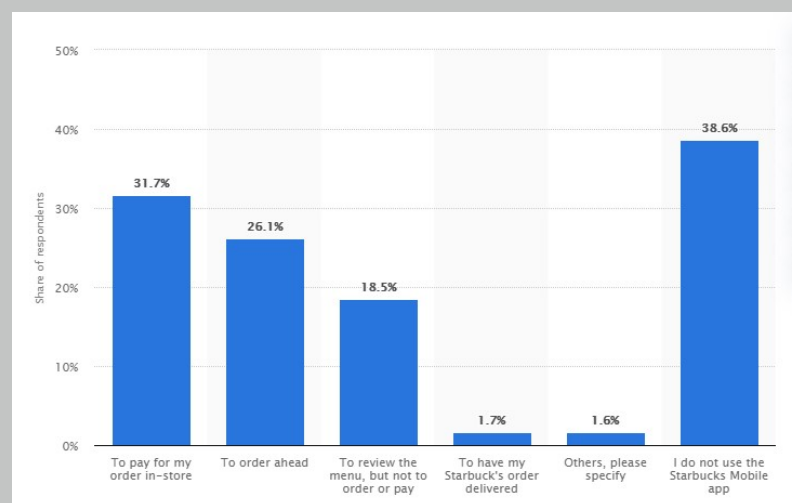
Results: Figure

Figure 4:Mobile app use of Starbucks consumers US 2019 [5]

Existing Technology

NFC technology can be used to withdraw a vending machine purchase.

Figure 5:NFC Technology [6]

Step counting technology can determine healthy discounts.

Figure 6:Step Counter [7]

Conclusion

▶ Stay Safe aims to save lives, add convenience and increase customer satisfaction.

▶ Stay Safe aims to help local businesses and pubs that have not been functioning very well in 2020 to prosper.

▶ Stay Safe aims at Educational, Hospitality and Business platforms. If we can make our canteens safer, and increase ease of use then we will increase safety and convenience.

▶ Technology is growing. Stay Safe as a way to create an affordable table service, available for all.

References

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Portfolio Information

▶ Web: https://github.com/ShinkuKira21/Stay-Safe/wiki/Stay-Safe