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HUMAN COMPUTER INTERACTION

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School of Computing
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P1 – PROJECT PROPOSAL

Projetct Title: Total Pro Food Delivery System

(Section 01)

GROUP 02 (0.0)

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1.0 PROBLEM

a. Incomplete security measures

The problem of food delivery services is incomplete security measures which do not fulfil the safety and utility design in usability goal. Firstly, the payment method of food delivery services have flaws that give chances to people with bad intentions. This is because customers can choose to make the payment only when the food is arrived as shown in figure 1 and figure 2. This has led to an increase of fake order cases as customers just need to provide the address and name while not need to provide more details about personal information when choosing this option. Based on figure 1, the payment process can be easily done with providing addresses and also choosing payment methods only. The user with bad intentions might provide the fake name and address to the restaurant just for fun or prank food deliverers and hawkers. This had let the restaurant lose a lot of money and waste food. As we know, there are many cases of fake orders by putting fake addresses and ordering large amounts of food by calling or just clicking the items on food delivery applications. Thus, food delivery services have less identification function to ensure security and benefits of users not only buyers but also sellers. On the other hand, the online payment method has become the safest method for the restaurant. However, many people do not prefer the online payment method because they are afraid of not receiving orders and also privacy leakage such as credit card numbers and login information because everything is on the internet and sensitive data may be transmitted and frequently stored, often across multiple networks and systems (Joe, 2020). The food delivery services also not satisfied user experience for some aspects in this security case. Sometimes, when payment is done but there is no message to show confirmation of payment or redirected to another website which does not have any feedback to users. This will cause users to have difficulties to confirm their orders and worry they are being cheated (Bharti, 2020). In a nutshell, there are still improvements to the security measures of the food delivery system.

Figure 1: Payment method of food delivery services

Figure 2: Payment method of Foodpanda

b. Unorganised, Incomplete & Misinformed Food Order Menu

One of the problems that we have been noticing in the food delivery system is some companies or merchants tend to not make customer's food selection easy by simply not providing the complete information regarding the food itself. For instance, Abbu, a Malay boy, who is about to make an order in a food delivery application. When scrolling through the application, he came across a picture of delicious food with the name 'Nasi Goreng Ayam Special' for example. After he clicked on the menu, he did not find the description for the food in the menu that stated why the menu was named special. This happened because the seller or merchant did not complete the information and description about the food that can cause the users to wonder and do not know what to expect from the food.

Not only that, some companies or merchants often do not display the correct photo to realistically describe the portion and ingredients of the food that they serve. Also, there have been instances where the food menus are not properly aligned or the foods are not displayed in their respective sub-category which makes the food selection and ordering process becoming much more harder to complete by the customers. This problem has caused some serious issues among the users when buying foods using food delivery applications. Some users who continue to buy without checking the desired food will always cause fights because the food received is not the same as shown in the picture.

Furthermore, nutritional content labels are rarely found in food menus provided by the restaurants. Granzin & Bahn in 1988 says that prioritising convenience and taste over nutrition has caused over 60 million persons in the US population or 30% of the population are obese classified (US Department of Health and Human Services 2005).
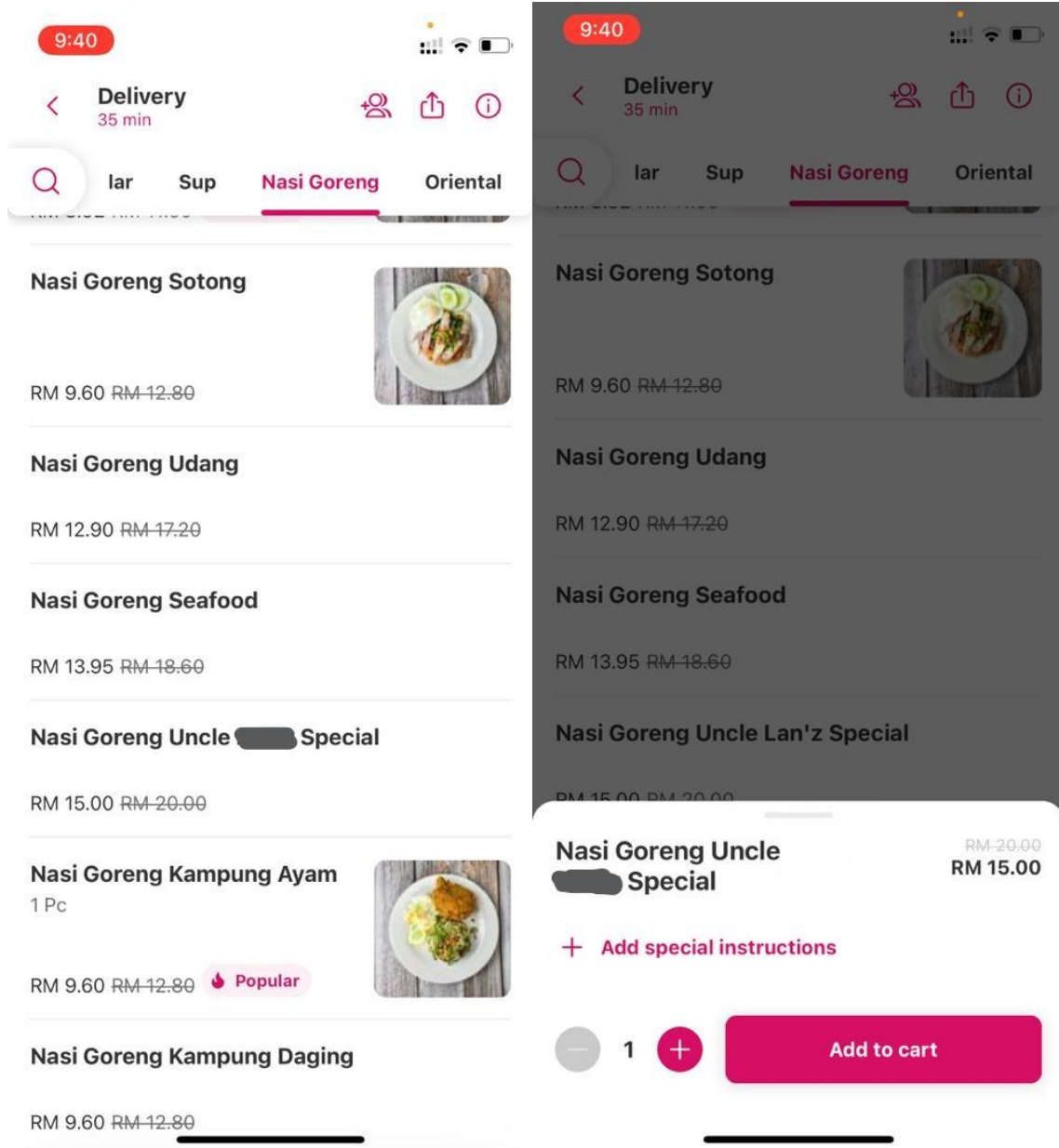
Figure 3: 'Nasi Goreng Uncle X Special' has nothing to describe the portion size. Neither a single photo nor a brief description on what comes alongside the 'Nasi Goreng'.

c. Lack of Customer Service

Customer service is the assistance that is provided to the customer before, during and even after they access and use the company's goods or services in order to help the customers to have a simple and pleasant experience. It is very important to have excellent and complete customer service to retain customers and grow business. In the food delivery services, Customers will want to contact the customer service staff, whether it is about delivery delays, dissatisfaction with food, issues about payments and refunds, or any other general questions and complaints. For example, when using the Help Centre of Grab food application only provides a way for customers to report problems via email. Then, the customers have to wait for a long time for them to resolve the problem. Figure 4 is the interface of the Grab application to report problems to customer service. At the moment, the customers are unable to understand the progress of the problem. Not only that, the problems reported by the customers might be ignored or forgotten due to mistakes. This will make the customer feel uneasy and refuse to use the application again. According to an American Express survey, 33% of US customers will turn to a rival after having a bad experience, and 50% have abandoned to repurchase due to poor service.

On the other hand, companies that provide excellent customer service will reap significant benefits, as customers are willing to spend 17 percent more money with a company that consistently provides excellent customer service. Obviously, customer service in a service industry is super important in keeping the customers informed and satisfied. So, this is a super failure from Grab's customer service. In a highly competitive market, having an efficient online customer service system that can fulfil customer needs is essential.

I have a missing or incorrect order

We're sorry that something went wrong with your GrabFood order! Let us know what went wrong through the form below, within 8 hours upon receiving your order. Alternatively, you may rate your experience and provide feedback for the delivery-partner to improve on.

Do note that by submitting this form, you agree to **(i)** requesting a refund; and that **(ii)** Grab has discretion as to whether refunds will be made.

If you have not paid for your GrabFood order due insufficient cash on hand, please reach out to us here instead **(selected cities only)**.

Email Support

How was your Help Centre experience?

How can we help?

Your email address

* Tell us, what went wrong?

| Missing | Incorrect | Both |

Description

0 of 1500 characters

Figure 4: Interface to report issues that cannot receive any instant response

2.0 PROPOSED SOLUTION

a. Improved security measurements

One of the ways to identify the identity of the users while they make the orders is via facial recognition technology. Facial recognition system is a technology which is capable of recognising the human face through digital image or a video frame and matches it with the database of the system. In the improved security system, the user is required to scan his face into the database using the camera during the new registration of his profile. This data will be recorded and saved for further uses. When the user attempts to place an order in the app, the system will require him to undergo the process of facial recognition before he proceeds to pay. This is a way to ensure the identification of the user, only those who passed the facial recognition can proceed with further processes and hence prevent fake identities from using the app for pranking or any other illegal activities.

Other than that, strong passwords are recommended to be used for this app to further enhance the safety in the step of payment. A strong password must contain at least 8 characters including capital letters, numbers and special characters. This password is set internally within the app and will be used each and every time the user attempts to place an order and pay using his internet banking account or credit card. The user will be required to key in the password set before he can proceed to the payment process. This can prevent defraudation by illegal hackers, hence protecting the privacy of user's financial information.

In summary, with these security steps, the user can have a better experience and feel safer while using the app. The user does not need to worry much about the leakage of personal or financial information.

b. Augmented Reality (AR)

One of the solutions discussed in order to solve the above problems is making Augmented Reality (AR). Augmented reality is a technologically enhanced version of the natural world that is achieved by the use of digital visual objects, sound, or other sensory stimuli. It's a growing trend among businesses that deal with mobile computing and business applications. The user will see the real world while also seeing virtual objects superimposed on or composited with it. As a result, rather than fully replacing fact, AR augments it (Ronald T. Azuma, 1997). The idea behind the definition above is to implement AR in food delivery applications. Augmented Reality will help users to understand their food choice better. The way this works is by displaying the real images in 3-dimensional form and the real-life portion size can be estimated at a glance.

When a user decides which food that she or he might be interested in, he or she will click or tap on the food menu. After that, an augmented reality platform will pop up from the food delivery applications. On the platform, users can check and be informed about the nutritional content of the food. Users can tap again on the food to check the portion of the food. Let us take a burger as a user's food of choice, by tapping at the burger on the food menu, the AR will display the breakdown of the burger's components such as the bun, patty, cheese, salad, tomato, dressings, etc.

In summary, the solution stated above can solve the problem that users face during making a food order with the correct and complete information.

c. External Service Providers

Arguably, some companies saw very little of the importance of customer service within the physical distribution of fast food industries. One of the claims is that the service only acts as an additional aesthetic value to the company and does not guarantee any solid stand to compete more productively within the market. Nevertheless, the logistic factor in the distribution of fast food is recognized by most of the company as one of the methods through which the presence of customer service must be delivered to the customer at the end of the job. Indeed, customer service may one day be the add on value customer wants every time they ordered their meal. Companies should entitle their staff to treat their fellow customers by expressing their hospitality through customer service either in literature or in practice. If the companies are to carry on with their improvements in the position in industries, a major reorganization of the customer service's performance must be exhibited. The motto "Customer is always right" must be pertained and idealized by all companies. Little that they realised the customers are the ones who filled their pockets. A customer's satisfaction determines whether or not the company can win the economic race among their rivals.

Although customer service today has become a must for each company, they all responded very differently with each other. Hence, idle food courier companies must examine and upgrade their customer service more often to make use of more efficient ways of providing excellent service throughout the whole process. These companies such as Grab Food could be embedded into their company's IT environment new customer support strategies such as allocating and managing resources through external service providers. Assigning a few personnels to handle, maintain and operate the equipment in theory sounds beneficial for its asset and risk ownership are all in the hands of the service provider (Neven, 2014). Likewise, in practical, heavy internet traffic when using a company's help centre to seek customer services could finally be overcome. In short, there would no longer be a long waiting time for the customer service team to respond or be at your acquaintance much faster without no internet delay, lagging or temporal loading time for the impatient customer.

3.0 TARGET USERS

a. Food Delivery Rider

Figure 5: Riders can delivery the meal without any stress of fake orders

As we know from the above problem and solution, the food delivery driver is the one who sacrificed the most and our system is to help them as they are our 'hero' within this COVID-19 pandemic. They always risk their life on the highway just to deliver our meal. With the presence of our system which can track the users so as the user's face, our food delivery rider will not have any fake orders related issues which would cause them to lose their hard-earned money. With this, food delivery rider's wages are secured and no more innocent food delivery riders will get pranked by irresponsible users.

b. Hawker

Figure 6: Hawker can fulfill the customer's request

After we had our delivery meal, we had the opportunity to give the rating to the hawker which is really important to them because hawkers need to be competitive to maintain their rating which can attract more customers via food delivery services. We can always propose a request to the hawkers whenever we are in the restaurant but we can't propose a request online such as adding more chili paste or do not add any coriander "ketumbar". As a result, hawkers cannot fulfill their customer's request most of the time and get a bad rating. Thus, with the Augmented Reality (AR) we proposed above, the hawkers can fulfill customer's requests and they can increase their rating. Nevertheless, with the security measure we proposed above, hawkers will not make any of the fake orders that lead to food wastage.

c. Office Worker

Figure 7: Office worker receive their food delivery

It is very true that any services must have customer service. Thus, with the external service providers, services to customers can be strengthened so as the efficiency. Not only this, with the Augmented Reality (AR), Office workers can propose any request for their meal to get the best service from the food delivery companies. This will fulfil all the needs of them in a short time and avoid them from wasting time while waiting for a response or search from other resources. On the other hand, Office Workers were also worried about their privacy and convenience when using food delivery service as it can cause loss of money and inconsistent user experience. With this new application, it will totally secure and protect customer information and provide an interesting interface to them in order to enjoy the food ordering process.

4.0 REFERENCES

1. Bharti,B.(2020). '5 Difficulties Customers Face While Ordering Food Online And How You Can Fix Them'. Rest Labs. Retrieved from: https://www.restolabs.com/blog/5-difficulties-customers-face-while-ordering-food-online-and-how-you-can

2. Innis, D.E. and La Londe, B.J.(1994). Customer service: the key to customer satisfaction, customer loyalty, and market share. *Journal of business Logistics*, *15*(1), p.1. Available at https://search.proquest.com/openview/c4f1440c30f5a75f4be5b1575a8dc848/1?pq-origsite=gscholar&cbl=36584

3. Joe,D.(2020). '*A cause for concern? Grab slapped with (another) data privacy fine*'. Techware Asia. Retrieved from: https://techwireasia.com/2020/09/a-cause-for-concern-grab-slapped-with-another-data-privacy-fine/

4. Neven,Z. (2014). '*ITIL Service Provider types – Type 3 or External Service Provider*'. Advisera. Retrieved from https://advisera.com/20000academy/blog/2014/09/30/itil-service-provider-types-type-3-external-service-provider/

5. Thomas, L. and Mills, J.E. (2006). Consumer knowledge and expectations of restaurant menus and their governing legislation: a qualitative assessment. *Journal of Foodservice*, [online] 17(1), pp.6–22. Available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1745-4506.2006.00015.x [Accessed 12 Apr. 2021].