

HCiBooking

**Creating an Ordering System for items in the student
lounges**

Members:

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We want to create an ordering system for the various food items in the student lounges.

The problem we identified:

When the student lounges (re)opened earlier this year, we observed that these lounges were a more popular destination compared to the school canteen when it came to buying food for lunch or recess. This resulted in long queues for food items in/outside the lounges, even before they open at 2pm, sometimes causing delays as long as 15 minutes, resulting in those coming in later to be unable to finish their food in time for their classes starting at 2.30. Also, there is also a problem of the lounges not having sufficient stock of these food items for all the people who queue up for them. It is sadly unfortunate for the last of the last in the queue, who stand in line for 20 minutes and end up with nothing except wasted time as they simply didn't get to eat lunch.

Our Solution

Problem	Solution
Long queues for ordering food	A system to allow students to place orders in advance
Insufficient stock	a system to allow the student councillors running the lounges to forecast the numbers of each food item to order in advance, to avoid both wastage and shortage

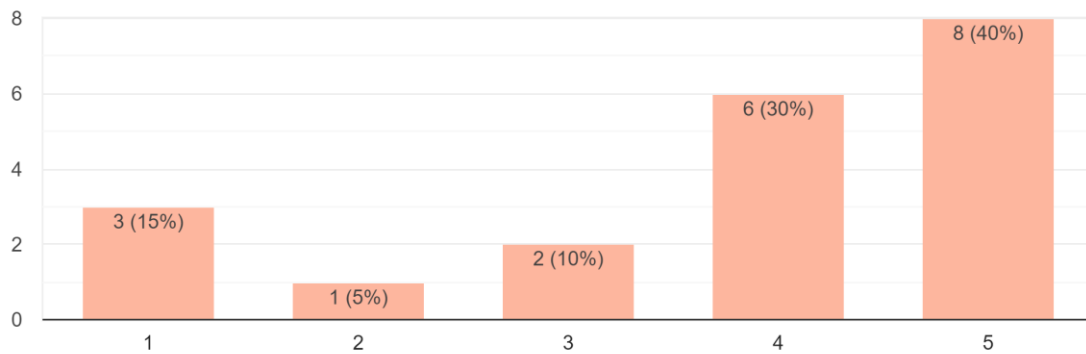
The eventual solution was to create an ordering system for food items in the lounges where the (would-be) customers would pre-order their items on the app/website we would be creating. This would mean that the queues for ordering in the lounges would be significantly reduced, flow can be much faster, and also there wouldn't exist the excess/shortage stock scenario.

Our Study and Methodology

In our initial survey where we started off our project, a good majority of our respondents said that they would like to see such a software for pre-booking items in the lounges.

How useful do you think a food booking system for the student lounges in Hwa Chong Institution will be?

20 responses

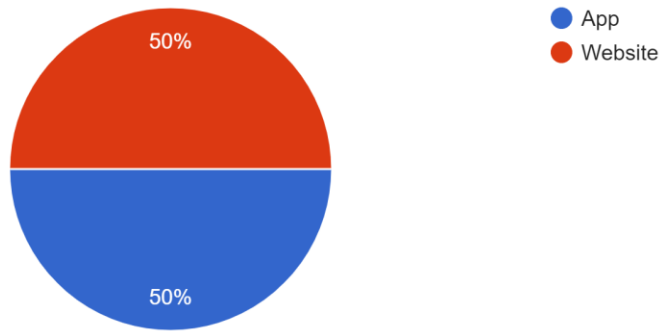


According to our survey, approximately 70% of the respondents showed that they would find such a system useful.

We also had to decide whether to make the system an app or a website. For this, we consulted what most people wanted through a survey.

Would you rather it be an app or website?

20 responses



As you can see, the respondents felt that both an app or website would be useful. However, for the sake of simplicity, we decided to just go with the website instead.

Member role and job distributions

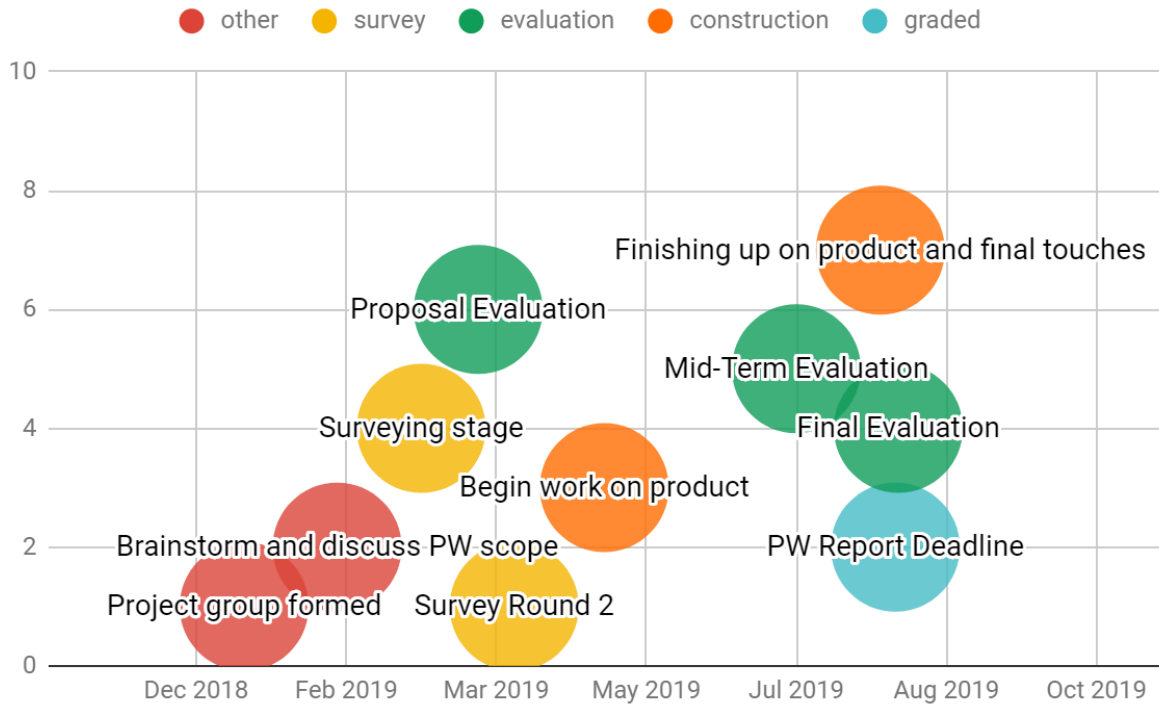
General admin stuff - Duan Ran (leader)

Report writing - Duan Ran (leader)

Presentations and graphic design- Tang Xuyuan

Coding - Ivan Yin + Tang Xuyuan

Project Timeline



Explanation of system

Sign in page

In this page, the student will make an account with their email and a password of their choosing, with which they will order their food in this system

Once they do so, it will be registered in the system and they can start ordering

Sign Up Here!

Email:

Password(At least 6 characters):

Log in page

In this page, the student will sign in with their pre-made account to order food. Once, they do, they will be redirected to the booking page

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Order food in iLounge.

E-mail:

Password:

Don't have an account? [Sign Up](#)

Booking page

Here, the student gets to choose their food and submit it to the database for collection later

Order Here!

- Cup Noodles - Chicken | \$1.50
- Cup Noodles - Chicken | \$1.50
- Oreos | \$0.30

There are some sample food items in this screenshot

Implications and Recommendations

This project would have been very likely a useful one. The project fulfilled many of the objectives which were put forth by those who were surveyed in the initial stages - a simple, fast and efficient ordering system that would allow many to skip the long queues at the student lounges and be able to get what they want, fast!

However, some sections of the systems may not be well-coherent with one-another---in terms of authentication, I think we are severely lacking. Most of the orders were streamlined straight into the database without really grouping them into sets of who ordered what, so in a hypothetical scenario, it'll probably result in an even more chaotic situation so the streamlining of orders into individual users' accounts is rather important but unfortunately we couldn't implement it.

Payment is also a rather large hurdle for us to overcome in order for us to implement the system, or rather, we didn't address this issue in our project, due to the large numbers of plugins needed to support the extension for digital payment. Also, it would be unlikely for students to be holding credit cards. Thus, digital payment was not an option. This is bad because then, the councillors still have to collect from the payment from the students. A handful of those surveyed indicated that the service may not be useful due to the fact that handling cash is the most time-consuming part of the purchase. However, I feel that while the queue time argument for this project may have been defeated, the stock argument remains: Such an ordering system allows those councillors to predict in advance the demand of individual food supplies!

AFIs

Although the system is well-developed and can run properly, there are a handful of aspects about the system which can be further improved, touched-up and polished.

Firstly, the webpage aesthetic can certainly be improved on. The background of the product was generally rather plain and drab, and there were random hitboxes appearing on the page. We feel that this problem could have been solved with more troubleshooting of technical difficulties.

Reflections

Throughout the process, we learnt that database connection can be a lot more complicated than we thought it would. We should have finished the database part of the website a lot earlier and spent 2 months touching up and improving the aesthetics of the website, to make it look more friendly and easier to use. Also, we could have found a way to potentially link the system to students' school accounts. It would make the entire process simpler and less prone to unnecessarily large amounts of accounts that are made by students not knowing their account details and simply making a new account.

This process has taught me how hard it really is to manage a group of rather incompetent group members who do not have much enthusiasm for the project and also it is through this PW that has probably showed us how packed everyone's schedule is when the whole group can't even schedule a meeting. But I feel that it is through these tight schedules and when we finally have a meeting, that we actually value the passage of time. It also showed me that not everyone's progress is the same. We were expected to complete 80% of our task by the Mid Term Evaluation (MTE). However, we did not quite meet the mark. Instead, we really tried our best to catch up in the final 4 weeks from MTE all the way to the finals, and we hope for the best. This was when I truly understood the "early bloomer, late bloomer" theory and told ourselves never to give up.

~Duan Ran, Group Leader of PW 9-10, HCiBooking

Note: This is a student-initiated project done without external sources. There will be no bibliography section.