Written Report
Project Title: SmartOrder

Group members:
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Introduction:

1.1 Issue:
This website aims to help students reduce the amount of time wasted queueing for food. It will send orders to vendors to allow them to prepare food earlier.

1.2 Rationale:
This website aims to shorten queueing time in the canteen to ensure that students have enough time to finish their food. When the queues are long, students start an unofficial rerun of the food running system, having friends buy food for them, worsening the queueing times. The website would send orders to the vendors in advance to allow them to prepare food in advance and thus allow them to cater to more students faster, reducing waiting times.

1.3 Focus and significance of the project:
The main focus is to prevent long queues in the canteen to ensure that students have sufficient time to finish their food, which thus ensures that lessons start on time.

1.4 Scope of the project
This project would apply across all meals in all the stalls in the High School Canteen.

Literature Review/Theoretical Framework/Reference Models:

2.1 Case studies

These are some of the feedback from a survey we conducted:

> "I am affected by the queues as sometimes I do not have enough time to eat. You can minimise it by having an efficient ordering system."

> "When the queues are so long till I get to order my food e.g. stall four. I paid and wanted to collect food. It was already the end of recess and my teacher locked the class door and made those who were stuck in the queue like me were made to stand outside the class even if we took away and didn't eat. We were also not allowed to eat."

More than half of the students who took the survey said that the pre-ordering system that we have created would probably help, while a quarter of the students said that the pre-ordering system may or may not help.

From the responses above, we came to the conclusion that many students are not able to finish their food in time as they spent too much time queuing for food.

2.2 References/practices cited to support ideas/issues raised:

Refer to bibliography.

Study and Methodology:

3.1 Ideation, description of study:

People in our school have told us in a survey that we send out that the queues in the canteen are just **too** long and personally, we feel that this is true to. This has led to them being late, thus we decided on this project.

3.2 Investigations, surveys, experiments, research methods(development platform, tools used):

Before developing the website, a survey was conducted via Google Forms. The website was also made using Visual Studio.

3.3 Members role and job distribution:

Member	Roles
Rodney	Group leader, coder
Zhisheng	Coder
Elliot	Learner / Designer
Dominic	Learner / Designer

3.4 Project timeline:

Date	Description
20-31 March 2021	Finish the outline of the project+slide+survey
6 April 2021	Proposal Evaluation
-	Mid-term evaluation (cancelled)
April-May 2021	Alpha testing
June-July 2021	Beta testing
August 2021	Final release
10-16 August 2021	Written report
18 August 2021	Final evaluation

Outcomes, Analysis & Discussions:

Implications and Recommendations (areas for improvement and possible further extensions):

We should have made individual accounts for each user, allowing us to collate orders within our own servers. This would also allow us to make the process more secure.

We should also have made an interface for school or system administrators to oversee and manage the system. This ensures that the system is periodically checked and there will be no errors in processing of payments.

Conclusion:

Reflections and learning points from the project development process:

Rodney: I learnt that good communication is key to leading a group. We need to keep each other updated, else we need to ensure we are all on track with our tasks for the group to function. During this covid 19 period, this

was even more important as we could not physically meet up.

Zhisheng: I have learnt how to make good presentations, because they can be more appealing to people. For example, we should include more pointers and lists in the presentation, and not make the slides too cluttered. I also have learnt good communication skills with other group members.

Elliot: I have learnt that good presentations aren't reading off the slides but actually just talking. Reading off the slides makes the audience feel that you are useless because they can just read.

Dominic: I learnt about many different things over the course of this project, like the importance of communication among our group members, especially during this period of covid 19, when we can't meet up physically. I also learnt some stuff about how to make better presentation slides, and how to manage our time properly to ensure that we meet the deadlines.

Bibliography:

1. Steen, H., Malefors, C., Röös, E., & Eriksson, M. (2018). Identification and modelling of risk factors for food waste generation in school and pre-school catering units. *Waste Management*, *77*, 172–184. https://doi.org/10.1016/j.wasman.2018.05.024