

# Eastern Eggs

Daniel Adrião Lopes, 315274

Kamil Fischbach, 315273

Laura do Bem Rebelo, 315174

Robert Barta, 315242

Steffen Vissing Andersen, SVA

Henrik Kronborg Pedersen, HEKP

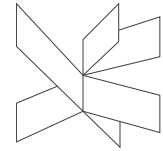
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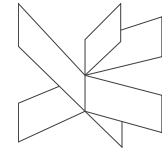
Template responsible: [dans@via.dk](mailto:dans@via.dk)



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## 1 Background description

VIA's Campus Café was freshly inaugurated, providing the students with a place to have a cup of coffee, relax, study and play boardgames inside of the guest canteen. However, the fact that it is recent means that there has not been time for their management methodologies to be honed. So far, their strategy for managing orders relies solely on human interaction: when a customer fancies a coffee, they walk up to the barista and place an order. The barista then either memorizes the order or writes it down on paper for another colleague.

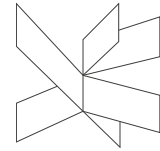
This procedure has its imperfections, though: both these steps enable human error and take time, which could make the queue longer and upset those at the end of it. Another thing that could increase queue time would be if one employee was working alone. First of all, they would have to play the role of both barista and cashier. Secondly, memorizing all orders is too demanding, so they would have to write them down. Subsequently, with the external pressure, they are also more prone to making mistakes in the orders, which leads to a “snowball” of issues for one person to deal with alone.

The problem also arises on the other side of the counter: for example, customers who are introverted might be reticent to approach a barista and make their order. Alternatively, they might take a long time, which increases waiting time for other people. Another thing that can cause complications is the indecisiveness of humankind: if a customer wants to change their order, they will have to phrase this request to an employee, which can confuse them and take up more of their valuable time.

Additionally, the inconvenience of the present situation does not stop there: currently, the existing menu is on paper, and it does not feature all of the possible extras at the Campus Café. This makes it so that customers do not always know what syrups are available to add to their coffee, making them miss out on a potentially more tasteful experience. Furthermore, if a change to the menu is to be made, a whole new set of physical menus will have to be printed and laminated, which is harmful for the environment, unsustainable and, overall, a waste of resources.

Back in 2003, McDonalds introduced self-service Kiosks for their fast-food restaurants in response to customers' *“complaints about long queues and slow service at lunch time”*.

The steps followed by someone ordering at a touch-screen Kiosk are the following: a customer scrolls through the options available, adds what they want to their order, finishes their order and pays either at the Kiosk itself or at a cashier. The language featured in these self-service Kiosks is usually the local language and English, due to the latter being an excellent business and tourism-facilitating language (Why English Is The Dominant Business Language, 2022).



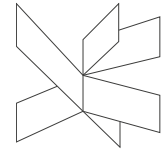
This solution has had significant growth in the past few years: 16 years later, *“in 2019, Tillster has found that self-service kiosks are popular across all age groups. It is a deciding factor when choosing a venue: 65% of customers say they would visit a restaurant more often if it provided self-service.”* (Tšernov, 2021)

On top of that, particularly since the COVID-19 pandemic, it is said *that “the market for self-service kiosks is expected to grow at a compound annual growth rate of 6.4% during 2021 to 2026”*, mainly due to *“shortening the queue length for customers and cutting down on their time spent during each interaction”*, meaning that it succeeded in solving the initial problem. (Growth in The Self-Service Kiosk Market - UCP, n.d.)

The rise of these self-service kiosks has also brought other benefits to both customers and companies: *“with the speed and convenience that they offer, kiosks can improve the overall operations of a restaurant, from traffic flow to staffing. In essence, kiosks automate ordering, which can re-allocate personnel resources for higher value activities, whether that is food prep or keeping the restaurant clean. Or, without adding staff, you can add new services such as table delivery”*. (Rasmussen, n.d.)

Moreover, The Dodgers Stadium concession stands showed that changing from traditional point-of-service systems to self-service kiosks increased the average order size by more than 20%. (Tšernov, 2021)

In summary, the Campus Café at VIA is struggling to keep up with orders in days of higher demand, in which it would be overwhelmed with customers, causing longer waiting times, general dissatisfaction and unreasonable pressure on employees.

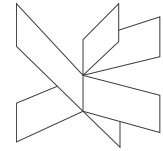


## 2 Problem statement

### Main problem:

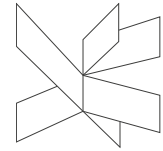
VIA's Campus Café is struggling to manage all of their orders, which results in longer queues, in an increase in mistakes and impatient and unsatisfied customers.

1. What steps should be taken when ordering as a customer?
2. Where can a customer gain knowledge of the available items in the Café?
3. What does a barista have to do view and manage current orders?



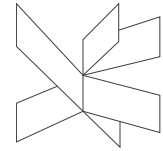
### **3 Definition of purpose**

The purpose of this project is to decrease queue lines and increase customer satisfaction by developing a system that receives and manages the Campus Café's clients' orders efficiently.



## **4 Delimitation**

1. The system will not feature actual payment methods.
2. The system will only be accessible through a Java application, not through a physical interactive Kiosk.
3. The system will only be available in English.



## 5 Choice of models and methods

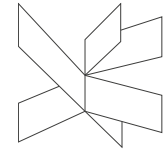
Throughout the development of this project, we will be following Scrum and Unified Process.

Scrum is related to project management.

Unified Process is a way to develop systems.

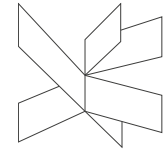
*We will elaborate further when we have had the presentation on Scrum and UP.*





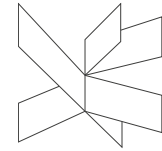
## 6 Time schedule

Week	Date	Number of hours/member	Tasks
6	7/2 – 11/2	3 + 4 = 7	Intro, Groups, project Proposals
7	14/2 – 18/2	5	Deadline/Feedback: Project proposals + Project Description start
8	21/2 – 25/2	5	Project Description work
9	28/2 – 4/3	5	Project Description work
10	7/3 – 11/3	5	Project Description work
11	14/3 – 18/3	6	Introduction to SCRUM (Inception)
12	21/3 – 25/3	10	Product backlog, SCRUM roles, plan
13	28/3 – 1/4	5	Feedback product backlog
14	4/4 – 8/4	15	Group work
15	11/4 – 15/4	0	BREAK
16	18/4 – 22/4	10	Sprint Planning
17	25/4 – 29/4	20	Hand-in sprint backlog
18	2/5 – 6/5	20	Group work
19	9/5 – 13/5	40	Review and retrospective, sprint planning
20	16/5 – 20/5	40	Project Period
21	23/5 – 27/5	40	Project Period
22	30/5 – 2/6	40	Project Period



## 7 Risk assessment

Risks	Likelihood	Severity	Product of likelihood and severity	Risk mitigation	Identifiers	Responsible
Incorrect database	4	5	20	Make proper diagrams and follow them	Information displays incorrectly or not at all	Daniel
Too many clients & baristas accessing at the same time	2	5	10	Implement proper multithreading	Synchronization problems	Robert
Users unwilling to use system	2	3	6	Make a proper user guide	User guide not clear enough	Kamil
Counter-intuitive system	2	2	4	Proper design, surveying potential customers	Users quit too frequently in the middle of an order	Laura



## 8 Sources of Information

2022. [online] Available at:  
<[https://money.cnn.com/2003/08/11/news/companies/mcdonalds\\_diy/index.htm](https://money.cnn.com/2003/08/11/news/companies/mcdonalds_diy/index.htm)  
<https://ucp-inc.com/growth-in-the-self-service-kiosk-market/>> [Accessed 18 February 2022].

Medium. 2022. OBSERVATIONAL RESEARCH—MCDONALD'S SELF-ORDER KIOSK. [online] Available at: <<https://yammiengkl.medium.com/observational-research-mcdonalds-self-order-kiosk-c0321ced638c>> [Accessed 18 February 2022].

Rasmussen, B., 2022. Self-Service Kiosks are Becoming Popular in Restaurants. Here's Why. [online] Blog.ingenico.us. Available at: <<https://blog.ingenico.us/blog/self-service-kiosks-are-becoming-popular-in-restaurants.-heres-why#:~:text=According%20to%20a%20new%20report,the%20food%20and%20beverage%20industry>> [Accessed 18 February 2022].

Tšernov, K., 2022. How McDonald's Self-Service Kiosks Changed the Customer Experience Game | Qminder. [online] Qminder. Available at: <<https://www.qminder.com/blog/customer-service/mcdonalds-self-service-kiosk-benefits/>> [Accessed 18 February 2022].

Medium. 2022. Why English Is The Dominant Business Language. [online] Available at: <https://englishforward.medium.com/why-english-is-the-dominant-business-language-bc24820369b0> [Accessed 7 March 2022].