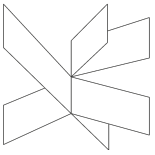

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Information Communication Technology Engineering

3rd Semester

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Version: August, 2018
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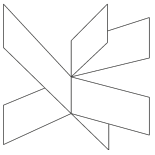
Table of content



1 List of figures and tables

2 Background description

In today's integration of taking orders within a restaurant, customers will make orders to a waiter or at a bar counter and would wait for their order to be served. However, from here on out, the customers would face inconsistency in communication between them and the waiter about their order therefore, this leading to probable mistakes in the order, longer wait times and potential business profit losses. Having less control and information over their order, customers are more prone to feeling dissatisfaction, leading to less satisfaction on the restaurant's side and the experience of the customers***(Restaurant Technology Guys, 2015)***.

Field study has shown, that the hospitality industry can benefit financially from the use of self-service systems. In one study, the introduction of table-top self-service devices resulted in customer processing time being reduced by over 20 minutes when comparing only with customers using the system, and by 5 minutes when averaging the processing time of all customers, of which some did not use the system. While this shows significant cost reduction potential, it also indicates, that reluctance among customers to use the systems is a large inhibitor for this cost reduction.***(VirginiaTech, 2016)***

Average meal duration, Study 1

	Pre-Adoption	Post-Adoption	Post-Adoption	Post-Adoption	Post-Adoption
Condition	No Device	Average All Three Conditions	No Device	Payment Only	Order and Payment
Meal Duration	1:02:58 (13:41)	57:40 (8:27)	1:01:08 (16:08)	50:33 (12:43)	42:04 (7:28)

Figure 1: Average meal duration(VirginiaTech, 2016)

Online ordering, as mentioned in the first paragraph, is part of one of the system's client integrations. It is estimated that this implementation would be successful in terms of business profits, ease of accessibility and use.***(GloriaFood, 2017)***

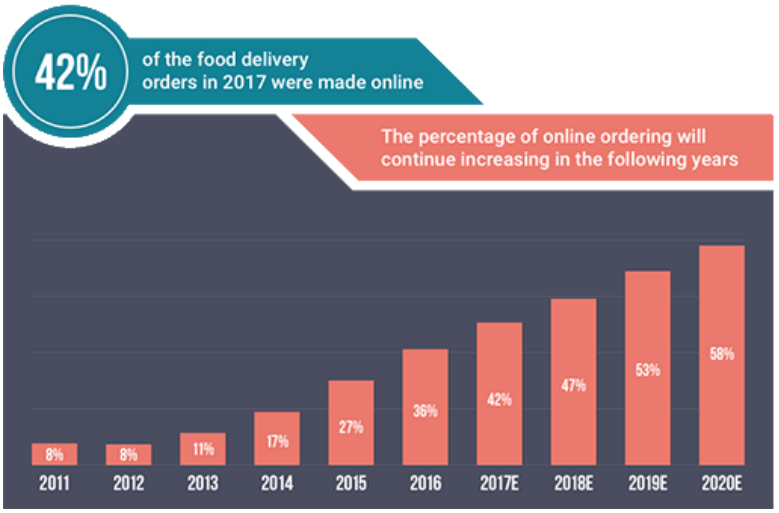
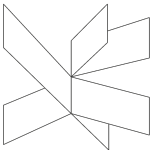
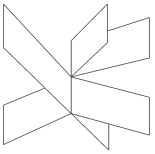


Figure 2: Estimate of online orders (GloriaFood, 2017)



3 Definition of purpose

The system is able to handle orders coming from multiple clients and eases the staffs' way of managing the orders.

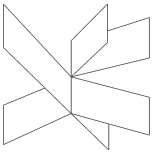


4 Problem Statement

Currently, there is a lack of automation within restaurants which slows down restaurant workload.

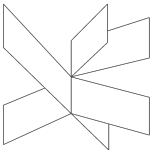
Questions to be answered are the following:

- How will user identification be handled?
- How are the orders processed?
- How will the system know the permissions of its users?
- How will multiple clients interact with the server?
- How will the system filter search results?



5 Delimitation

- System is not going to handle 3rd party payment authentications
- System is not going to support delivery features.
- System will not provide recipe instructions to chefs.



6 Choice of models and methods

First, the requirements are going to be elaborated on within the inception phase. Requirements are going to be divided within sprints following the priorities of user stories.

What?	Why?	Which?
How will user identification be handled?	System needs know which actions are a part of the same session and which user is performing them.	Multiple clients are going to be addressed within the system.
How are the orders processed?	Orders should be processed in a sensible order and should not be processed more than once.	Orders have statuses and timestamps as attributes that ensure orderly processing.
How will the system know the permissions of its users?	System needs to differentiate between different staff members that are using it.	The staff client will have different UIs for different staff.
How will multiple clients interact with the server?	Different clients written in different programming languages should be able to communicate with the server	Multiple clients are going to communicate through a unified interface.
How will the system filter search results?	System will search for results by category	The client side, that will be provided to customers, would have a filter section.

7 Time schedule

The following table shows an overview of the time schedule that the group will follow:

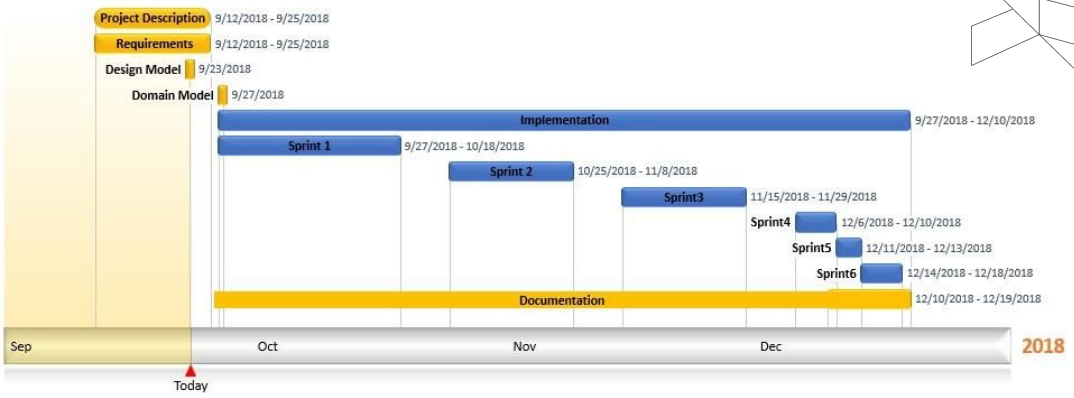


Figure 3 - Time Schedule

Time plan for Figure 3:

- Project Description: 12/09/2018 → 25/09/2018;
- Requirements: 12/09/2018 → 25/09/2018;
- Design Model: 23/09/2018;
- Implementation: 27/09/2018 → 10/12/2018;
- Sprint 1: 27/09/2018 → 18/10/2018;
- Sprint 2: 25/10/2018 → 08/11/2018;
- Sprint 3: 15/11/2018 → 29/11/2018;
- Sprint 4 - 06/12/2018 → 10/12/2018;
- Sprint 5 - 11/12/2018 → 13/12/2018;
- Sprint 6 - 14/12/2018 → 18/12/2018;
- Documentation: 10/12/2018 → 19/12/2018;

8 Risk assessment

Risk	Description	Likelihood Scale: 1-5 5 = high risk	Severity Scale: 1-5 5 = high risk	Risk mitigation e.g. Preventive & Responsive actions	Identifiers	Responsible
Computer crash	One of the computers stops working	3	2	Upload files online	Computer stops working	Affected member
Illness	One of the members gets sick	5	4	Redistribute workflow	Person is not able to work	All members
Missing meetings	Tasks are not going to be finished	4	4	Notify supervisors	Tasks are not finished	All members
Not meeting sprint goals	Tasks are not finished in proper time	5	5	Restructure workflow	Tasks are not finished	All members
Lack of knowledge	No solutions from group members	4	4	Research and study more	Struggling with implementation	Affected member

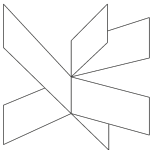
9 Sources of Information

1. Restaurant Technology Guys, 2015. 5 Reasons Your Restaurant Needs a Table Ordering System. [online] Available at: <https://restauranttechnologyguys.com/5-reasons-restaurant-needs-table-orderi

ng-system/ > [Accessed 23 September 2018].

2. VirginiaTech, 2016. The Influence of Table Top Technology in Full- service Restaurants. [online] Available at: <*https://vtechworks.lib.vt.edu/handle/10919/81890*> [Accessed 23 September 2018].
3. International Journal Of Engineering Research And Development (IJERD), 2015. Automated Food Ordering System. [pdf] Available at: <*http://www.ijerd.com/paper/Conference/Version-1/H4145.pdf*> [Accessed 23 September 2018].
4. GloriaFood, 2017. Advantages Of Online Food Ordering System For Restaurants. [online] Available at: <https://www.gloriafood.com/restaurant-ideas/advantages-of-online-food-ordering> [Accessed 23 September 2018].

Appendices



- Group Contract