# Reservation System for a Restaurant

### KV6003: INDIVIDUAL COMPUTING PROJECT

### SCOTT MAINS

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### COURSE: COMPUTER SCIENCE WITH WEB DEVELOPMENT

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My report will be structured into the following sections:

* Abstract – Overview of the report and the project. It will tell the reader how the report will be structured and tell them if the project was an overall success.
* Introduction – Introduces the purpose and scope of the project. This section will tell the reader what I want to achieve with the system and how I intend to do this. I will also explore the background of the project and what the client wants.
* Research and Planning:
  + Literature Review – this section will look at all the literature I’ve gathered that is relevant to my project. This will help me look at their successes and failures and how I can implement their knowledge in my design.
  + Requirements Capture – This will look include the requirements proposed by the client and look at the potential target audience. I will then tailor my design regarding the user requirement plan.
  + Tools and Techniques – Look at all the methods and tools needed to develop my project. This will include all the programming languages and the database system I will use and how I will go about using them to achieve my goal.

Interview – open-ended questions to discover unanticipated things

Present wireframes and designs

Research methods and information Pickard

Evaluation – think-aloud study and chat about system x 4 – demo for client and feedback

Analysis Chapters

# 2. Literature Review

## 2.1 Introduction

This chapter will discuss literature that is relevant to creating a booking system, and how the user data can be used to create a Customer Relationship System to boost customer relations and increase repeat customers. This will help understand the challenges that surround user booking systems and the best way to tackle integrating one. I will also discuss how useful booking systems are overall, especially due to the increase in demand for them due to the COVID pandemic.

I am then going to evaluate existing CRM and Scheduling systems so that I can establish requirements for my system. I want to gather knowledge on what is the best way to manage bookings within a restaurant context, and the best way to go about utilizing the data gathered for customer engagement. I am also going to draw comparisons between different fields and see if I can integrate something to my design that can bring originality and functionality for the user.

## 2.2 Booking Systems

Booking Systems have become the norm in modern times when scheduling table slots within restaurants. The need for such a system has increased dramatically due to the COVID pandemic. This is so the restaurant can control store capacity to reduce the spread and enable no congested waiting times for customers. According to Quidini, 32% of customers believe that scheduling a time slot would make them feel safer against COVID-19 [1].

Customers can make reservations outside the restaurant’s operating hours.

## 2.3 CRM Systems

CRM stands for customer relationship management, and it is essentially a system that helps business owners nurture their relationships with their clientele [3].

## 2.4 UCD Approach

## 2.5 Security Risks

## 2.6 Competitor Review

I have looked at similar web booking systems that currently exist on the market in Appendix A. I have looked specifically at the features that these systems incorporate and how they have utilized them to make it a seamless experience for the user. I also did a separate analysis looking at the different systems from an admin perspective. I am going to summarise key points discovered in the competitor analysis below and my most important findings.

### 2.6.1 OpenTable

OpenTable is a restaurant reservation service that was founded in California but now expands internationally.

There are many different features available from an admin perspective. OpenTable manages customer relationship management very well and offers many

### 2.6.2 TheFork

### 2.6.3 SimplyBook.Me

### 2.6.4 Quandoo

### 2.3.5 Most important findings

# 3. Requirements Capture

## 3.1 Introduction

A requirement capture plan is a useful exercise to undertake early in a project life cycle to establish the scope of the project. The main reason is to understand the system from a user’s perspective and find their common needs and expectations. Within this section, I am going to discuss the research I gathered during this exercise from the various artifacts I created, and how useful they will be going forward in the overall design for the booking system.

## 3.2 Requirements for Customers

To establish the requirements for potential customers, I created a Requirement Capture Plan that contains: Personas and Scenarios [Appendix B], a questionnaire for target users to establish further requirements [Appendix C], and competitor analysis [Appendix A] (which I have already discussed).

## 3.3 Requirements for Staff

For the requirements for staff, I mainly used the client interview [Appendix D] to gauge what features they want to be added to the system to make their lives easier. I also did a separate competitor analysis looking at the systems from an Admin perspective.

# 4. Tools and Techniques

## 4.1 Database

I have opted to use MySQL to store the data for the reservation system. MySQL is a relational database management system and is the most widely used database technology used across many huge companies.

## 4.2 Programming Languages

As my project is full-stack, I will be splitting it up into server and client-side tasks which will require a variety of different languages. For the server-side, I will be using the PHP language in conjunction with React for the client-side.

## 4.2.1 PHP

## 4.2.2 ReactJS

## 4.3 Project Framework

Design, Implementation, and Testing

REFERENCES

<http://asbbs.org/files/2016/JBA_Vol9_2016.pdf#page=128>

<https://dspace.mit.edu/bitstream/handle/1721.1/86490/46888364-MIT.pdf?sequence=2>

[3] ‘What Is CRM? The Beginner’s Guide - Keap’. Accessed 1 February 2022. <https://keap.com/product/what-is-crm>.