Restaurant Management System

Project Vision Document

Version 1.0

26/09/2019

Revision History

Revision	Date	Author	Reviewed By	Summary of Changes
1	26/09/2019	Thanh Quan, Tu Nguyen	Thong Nguyen, Quang Pham	Finish the Introduction part of the Project Vision Document
2	29/09/2019	Thong Nguyen	Thanh Quan, Quang Pham, Tu Nguyen	Finish the entire Project Vision Document

Document Approval List

Version	Approved By	Signature	Date
1.0	Thong Nguyen	Thong Nguyen	29/09/2019

Document Distribution List

Version	Name of the Receiver/Group	Date
1.0	Mrs. Anjana Shah, Quang Pham, Tu Nguyen, Thanh Quan, Thong Nguyen	30/09/2019

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1 Introduction

Our vision is to simplify restaurant managements' daily tasks, and to increase restaurant employees' productivity

1.1 Purpose

The Restaurant Management Project Vision Document will provide a definition of the project including project objectives, scopes, and business opportunities. Also, this document will introduce to readers system features, and technological tools that are employed to achieve those features. Finally, this document will analyze some problems and constraints that is possible to be encountered when developing this project, so that all of our team members can build a comprehensive roadmap for the success of this application.

1.2 Scope

The Restaurant Management System project is for the creation of a contemporary restaurant management web application. The technology that our team uses to build up this project include the Angular 2 as the front-end framework, and Node.js as the main back-end language. Our team also utilizes Docker, and Kubernetes as tools for dealing with multiple platforms using, and application scaling. The user interface will be designed as minimal as we can so that everybody feels easy to use this application. There will be a corresponding application written with NativeScript for iPhones and Android based systems so that users can have the flexibility to use our app. The app must also include a tutorial to make it easy to get started.

1.2.1 In Scope

As far as the scope is concerned, this project is set to target all the medium-sized and large-sized restaurants in Ontario which need a complicated process of management.

1.2.2 Out of Scope

Franchises, small-sized and large-sized restaurants that could already have their own well-built management system or could physically manage their restaurant.

1.3 Definitions, Acronyms, and Abbreviations

Term	Explanation
BOH	Back of house employee including Kitchen staffs, Chefs
FOH	Front of house employee including Bartender, Servers, Host and Hostess, Cashier.
MEAN	MongoDB, Express, Angular, Node.js programming language combined to create a full stack
Full stack	An implementation in which the application is working with both front-end and back-end to serve the client
Front-end	Interface of the application where user can see and interact with.
Back-end	Logical thinking and information storage where user interface won't be able to access directly and see.
Docker	Docker is a containerization platform that packages your application and all its dependencies together in the form of a docker container to ensure that your application works seamlessly in any environment.
Kubernetes	Kubernetes is an open-source container management (orchestration) tool. It's container management responsibilities include container deployment, scaling & descaling of containers & container load balancing.
NativeScript	How you write truly native cross-platform mobile applications with JavaScript, TypeScript or Angular

1.4 References

Reference File Name	Version	Description
MAZARS – 2018 AI IN HOSPITALITY STUDY	1.0	This is a study about how AI is used in developing Hospitality applications

This section also contains links to all other places that were referred to in this document. These may include:

- *Web sites*
- *URLs or network locations*

Name	Link
Example of Stakeholder Analysis	https://www.brighthubpm.com/monitoring-projects/10426-example-of-stakeholder-analysis/
Definition of NativeScript	https://www.nativescript.org/faq/what-is-nativescript
How to Write a Project Scope Statement	https://www.projectengineer.net/how-to-write-a-project-scope-statement/
Role of Team and Stakeholders	https://www.greycampus.com/opencampus/certified-associate-in-project-management/role-of-team-and-stakeholders-in-a-project
What is Docker & Docker Container ?	https://www.edureka.co/blog/what-is-docker-container
What Is Kubernetes? An Introduction To Container Orchestration Tool	https://www.edureka.co/blog/what-is-kubernetes-container-orchestration

2 Positioning

2.1 Business Opportunity

Redesigning the old-fashioned working system of most medium-sized restaurants in Ontario

2.2 Problem Statement

The Problem of	Paper-based document management.
affects	Manager, BOH employees, FOH employees.
the impact of which is	Lack of storage space, Prone to natural damage, supply costs, inefficient document transportation, editing problems, tracking problems
a successful solution would be	Digital database to store, receive, edit information in which displays in a friendly interface.

Table 1 Problem Statement

2.3 Product Position Statement

For	Restaurant managements
Who	Wants to simplify the management processes, easy access to necessary information.
The Restaurant management system	Is a web application developed and deployed using the MEAN Stack.
That	Allows restaurant managements to easily manage their day-to-day business, and restaurant staffs to better interact with their managers
Unlike	Existing applications that generally focus on some specific parts of the restaurant
Our product	Will provide a comprehensive system that every manager needs to enhance the flow of their business

Table 2 Product Position Statement

2.4 SWOT Analysis

<Reference: https://www.businessballs.com/strategy-innovation/swot-analysis/)

Strengths	Weaknesses
Offers an up-to-date user interface	**Supports only a limited number of locations**
Introduces a comprehensive management system	**Team members lack practical experience**
Offers a reasonable cost	**Limited budget**

Possibly include data model in the future to bring to users a better experience	
Opportunities	**Threats**
Could extend to all Canadian and overseas.	**Users tend to stay in their comfort zones by sticking to the well-known products**
Local competitors have poor products	**The development of new applications that employs AI to personalize user experience may change the market demand**
Have some possible end-users to contribute some new ideas for the development of this application	**Lacks money to broadly run and advertise our app**

3. Stakeholder and User Descriptions

The Restaurant Management System stakeholders will consist of eight people who have different backgrounds including Restaurant Manager, Restaurant Staffs, and Developers. As far as the College Professor is concerned, our professor Mrs. Anjana Shah will be a trustworthy source of knowledge and information for our team to ask throughout our developing process. With regard to specialists from the industry, since they have practical experience working with Restaurant Management System, they can provide us with valuable pieces of advice so that we can successfully develop our app. As for the developer team, they are the ones who will be directly building the application, and thus they will determine the success of the entire project

3.1 Stakeholder Summary

Stakeholder Name	Represents	Role
Anjana Shah	Instructor, Evaluator	A knowledgeable professor who will instruct and assist our team in developing a successful application
Roberto Scala	Restaurant manager - Potential End User	An experienced manager in restaurant management that our team can consult his ideas to adapt our app to market demand
Rebecca Gutierrez	Server - a potential end user	A new professional server that can bring her practical experience to help our team accomplish our features for FOH employees

Stakeholder Name	Represents	Role
David Robinson	Kitchen Staff – Potential End User	A skillful chef that can help our team with his practical experience to accomplish our features for BOH employees
Quang Pham	Front-End Developer – Team Member	A Junior Developer with a great passion for programming who can apply his knowledge to help our team build a reliable, user-friendly Front-End for users
Thanh Quan	Front-End Developer – Team Member	A Junior Developer with a great passion for programming who can apply his knowledge to help our team build a reliable, user-friendly Front-End for users
Tu Nguyen	Back-End Developer – Team Member	A Junior Developer with a problem-solving and system-designing skill who can help us to optimize our system
Thong Nguyen	Full-Stack Developer – Team Leader	A Junior Developer with a good leadership and great overall knowledge that can encourage team members

Table 3 Stakeholder Summary

3.2 User Summary

User Name	Description	Responsibilities	Stakeholder
Anjana Shah	Project Instructor and Evaluator	- Instruct our team to achieve a successful project - Evaluate our process of development from start to end	Already a stakeholder
Roberto Scala	One of the stakeholders who contribute to the development of the application	- Give requirements that the system need to have - Provide pieces of advice to develop the system	Already a stakeholder
Rebecca Gutierrez	One of the stakeholders who contribute to the development of the application	- Provide pieces of advice to develop the system	Already a stakeholder
David Robinson	One of the stakeholders who contribute to the development of the application	- Provide pieces of advice to develop the system	Already a stakeholder

Table 4 User Summary

4 Stakeholder Requirements

ID	Requirement	Stakeholder
1	- A user-friendly, functional and easy-to-use management system to help managing restaurant resources	Roberto Scala
2	- A system that can simplify inventory checking process, and efficiently improve the process of forwarding order from station to station	David Robinson
3	- A system that can has help user to track their schedule and efficiently assist FOH employees in interacting with BOH employees	Rebecca Gutierrez

Table 5 Stakeholder Requirements

5 System Features

ID	Feature	Stakeholder Requirement ID
1	Restaurant Dashboard that helps managers visualizing profits, both human and other resources	1
2	Staff Scheduling	1
3	Inventory Managing	1, 2
4	View Schedule	3
5	Availability Report	1, 3
6	Order Handling	2, 3

Table 6 System Features

6 Assumptions

The following assumptions were made in preparing Project Vision Document:

- Our team members are willing to learn new technology which is NativeScript, Docker, and Kubernetes

- Those mentioned industrial specialists are ready to help wherever they can

- The developing process cost will not go over the planned budget so that we can keep our product price reasonable

- Project team members can collect a comprehensive data set to train a model and include in the application

- Number of project stakeholders will change since we are still approaching to more industrial experts

7 Constraints

- Project team funding is limited

- Time constraint because our team members are simultaneously working on different projects

- Team members lack the experience to work on an actual software development project