DEPARTMENT OF SCIENCE
CSI 341: SOFTWARE ENGINEERING

PROJECT REPORT FOR UB PIZZERIA

BY: GROUP 9

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DELIVERABLE 1

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Contents

INTRODUCTION

UB Pizzeria is a business solely based on producing and distributing Pizza in and about Gaborone .The current system of ordering pizza used by UB Pizzeria University of Botswana is a manual system in which the services are in person however this way of providing services has been outpaced as the city and the university population grows and not forgetting the Covid-19 virus .This manual system tends to be tedious seeing as customers have to make their way to the UB Pizzeria in order to buy their pizza of which they place spend a lot of time queuing and even going to an extent of missing lessons and also at a risk of contracting the virus and some salesperson are not patient enough to listen to people when making orders . At times, the queue is not processed quickly enough for example, in the event of few salesperson the queue will move slowly wasting people's precious time. This older system is often found to be ineffective seeing as it is time consuming, and poses health risks in the era we are living in. With the above situation software that customers can use to make orders, receive deliveries and many more services is urgent and can help Pizzeria management going forward. To bring this solution to life the waterfall methodology will be implemented thus aiding Pizzeria to move from a traditional to a contemporary way of business.

ROLES

To create this software, we will have:

- Front-End Web developers – This lot is responsible for the interfaces that will be used by the customers. HTML and CSS will be the most prominent languages used, of course not disregarding other languages that can and may be used.

- Back-End Web Developers – This lot will be responsible for “behind the scenes” part of the project. SQL & PHP will be used.

Tec Leader- Merges the whole project together and oversees the whole project

SYSTEM OUTLINE GOAL, OBJECTIVES, SUBSYSTEMS

SOFTWARE SYSTEM PURPOSE (AIMS)

Our goal is to provide a system that will be of ease of use and available most of the time, and much quicker, providing customers and salesperson with the opportunity to manage orders and place orders report by enabling users of the system to access an online UB Pizzeria web-portal from anywhere in the university premises for a better and conducive buying environment without queuing for a long time and risking their lives to contracting covid 19.

SOFTWARE SYSTEM OBJECTIVES

- To assist customers when ordering their pizza from the UB Pizzeria without going directly there
- To allow customers to take their time and customize their orders and fulfill their desires and not buying whilst they are hurried
- To help customers keep track of their orders after purchasing within the 30 minutes time given.
- To help UB pizzeria management to process orders in time and deliver goods to customers swiftly and easily.
- To help UB Pizzeria management to view orders and keep check of how many sales they are doing per day and ways of improving them

SUBSYSTEMS

Database subsystem: this subsystem will store the details of the customers / admin / salesperson /orders, such as order no and payments details .
Authentication subsystem: this subsystem will check to see if the user who is logging into the system is allowed to access the system and will check whether that user is an administrator or customer
Ordering subsystem: this subsystem will allow the user of the system to place an order and customize their orders.
Tracking subsystem: this subsystem will allow the user of the system to check if their order has been processed yet or not.
Cart Subsystem: this subsystem allows the user to view all the items in case he or she would want to buy many items at a go.
Administrator subsystem: this subsystem allows for the admin managing the accounts of the regular users of the system that is, adding a user, remover a user, editing a user's account and changing a user's password and updating order status adding products to the system and the stock.

Google Maps subsystem: this subsystem allows the user to view all he or she is to the UB Pizzeria and get his location with relation to UB Pizzeria.

Payment Subsystem: this subsystem allows the user to pay online if he or she does not want cash on delivery (COD).

Chabot subsystem: this subsystem allows the user to ask questions and get feedback instantly if all the salesperson are occupied.

Registration subsystem: this subsystem allows the users to create their accounts and register unto the system to use it.

Software Development Methodology

Waterfall Development

We have chosen to go with the Waterfall methodology which will mean creating separate focus teams. These teams will work on different sequential stages (requirements, design, implementation, verification, deployment, and maintenance).

Following a traditional development method that relies on a rigid linear model. Each of the stages must be 100% complete before the next stage can start. Just like a waterfall fills lower-level pools, the stages of the Waterfall model flow from one to another. Meaning the method does not allow for going back to modify the project or direction.

Advantages

- The model is easy to understand and manage.
- The method is suitable for projects that are smaller in size and whose requirements can be determined upfront.
- The Waterfall development is recommended for less experienced project managers and project teams whose composition changes frequently.

Disadvantages

- The Waterfall method finishes one stage before the next one can begin. So, it is impossible to go back and edit something.
- It is not flexible and does not handle project risks well.
- It is not a good model for complex and long-term projects.

Figure below shows the flow of a waterfall model:

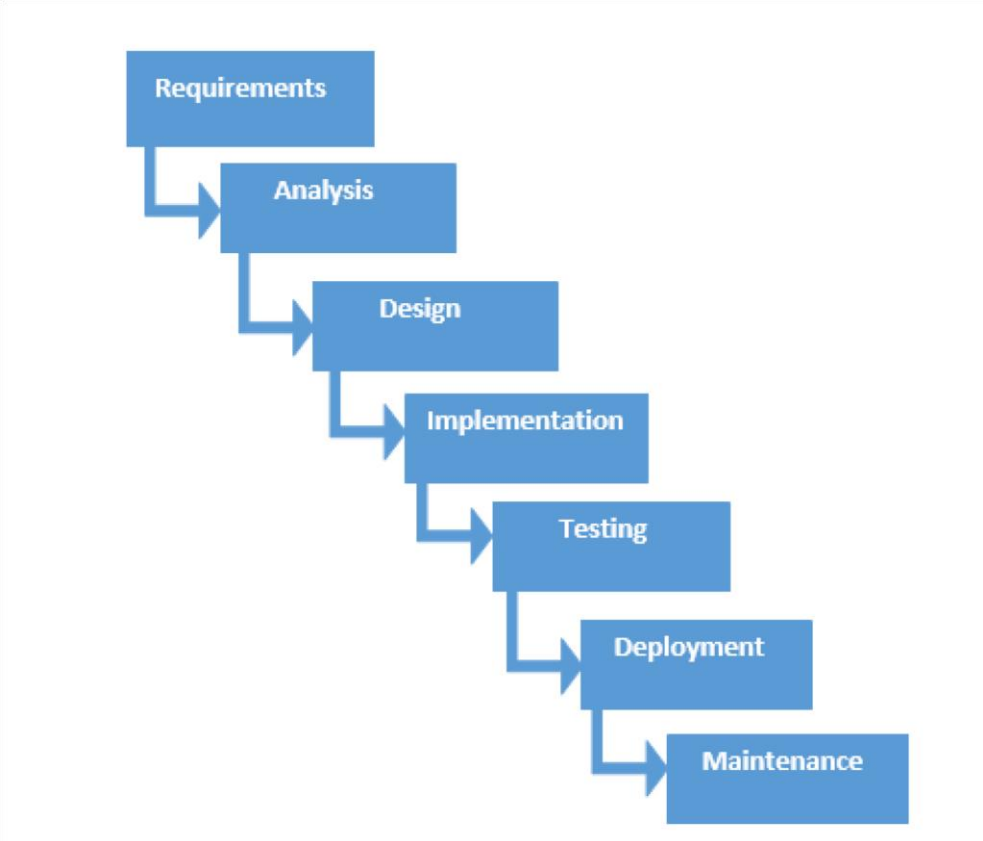

Figure 1: Waterfall Model

The Questionnaire methodology will be used to further collect data requirements from future customers of UB Pizzeria for a more accurate gauge at the specifications required for our website application interface:

Conclusions And Future Works

Conclusions

In overall the ub pizzeria project was a success both the mobile and web interfaces .We managed to finish the whole project well in time and without any serious issues at .Our future works include fixing the following things

Future Works

The customer being able to customize their pizza on the cart. Online payment will also be made available so as to enable customers to pay online without using cash on delivery .The technology will be updated using javascript .

GraphQL using the Apollo Server (with TypeScript)

- MongoDB (With TypeGoose ORM)
- Flutter (For IOS and Android)
- NextJS (With TypeScript for SSR of ReactJs)
- Dialogflow (For chatbot)
- Twillio For SMS and Calls

APPENDICES

Appendix A: Requirements Elicitation and Data Collection

Appendix B: Requirements analysis

Appendix C: Software design And Program Design

Appendix D: Work break down structure and related details

Appendix E: Weekly Reports

Appendix F: Program Implementation, Maintenance, Testing

Appendix G: Projected Estimations and Actual Estimations

Appendix H: User Documentation

Appendix I: Project Plan