**RESEARCH PROJECT PROPOSAL**

**BARBERSHOP BOOKING WEB-BASED APPLICATION**

***ADM NO :SC211/0709/2018***

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**DEGREE PROGRAM : BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)**

**DECLARATION AND APPROVAL**

I Maluki Maluki Tony Ndereva, declare that this proposal is my original work and has not been presented or forwarded to any other additional party for any kind of award or any kind of qualification

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I confirm that this(my) proposal has been exclusively submitted to Lecturer DR. MARIGA, under the school of computing and IT in Murang’a University of Technology

**CHAPTER 1 : INTRODUCTION**

**1.1 Background to the study**

- In any ideal society ,personal hygiene and grooming is an essential commodity for all genders ,both male and female, and it plays a very important role in our society in terms of how we, the society, view each other according to how we present ourselves in our day to day life.

-Therefore due to this need in the society , saw an income making opportunity to deliver this grooming services to the rest of the society.

-Among these services is male and female facial and shaving services which the barbershops would offer these services to the relevant customers , stationed at the relevant barber shops.

- After these services have been offered, the customer pays for the services in form of cash

**1.2 Problem Statement**

- Getting these services however sometimes has been a problem to clients.

- When a client goes to get these services, he may encounter several other customers in line waiting for the same services .

-This leads to excessive time wastage at the queue for both the client and the barber. Also, this leads to loss of revenue for the barber since the client may get tired for waiting at the queue and decide to seek the service at other barbershop .

- Also, the customer is required to pay for the service via tangible money which is a risk factor for being robbed cash or generally the tangible money getting lost.

-Furthermore, the client may also visit the barbershop and find that the barber has already closed the shop or has not opened the shop on that day, this will just frustrate the client since he/she has traveled all the way just to not get the services he wanted and hence wasting time

**1.3 RESEARCH OBJECTIVES**

**1.3.1 General Objectives**

- To develop an barbershop e commerce web-based application

**1.3.2 Specific Objectives**

1. to analyze existing web-based barbershop booking apps and check if any improvement can be implemented

2. design the user interface and user experience for both client-side and admin-client side

3. develop a fully secured and functioning database management system, client user interface, admin site, an API system to communicate between between front-end and the database.

4. Implementation and testing of the final application product for any bugs and system errors

**1.4 Justification**

The purpose of this project is to develop a barbershop booking web-based application that will transform the whole barbershop sector whereby clients will be able to browse ,book for the shaving services they need, schedule for the appropriate time for the service and ay for it online via the booking application.

-When the schedule time comes, the barber get all the necessary tools needed for the shave and visits the clients at his /her premises to deliver the service.

**1.5 Scope of the study**

- The system is an web-based barbershop booking application for use by clients needing shaving services.

- With the help of this system, the system will allow clients to visit the site, view the various shaving services offered by the barber, view the various barbers attendants available, book for a shaving session, schedule the date,time and place , and pay for it online using the modern payment methods eg,credit,debit cards, wire transfer, paypal merchants etc.

-A simple well designed interface will be in place making it easy for the customer to navigate through the site.

-A database will also be available to store all the customers confidential details such as payment methods, phone numbers, addresses,history of purchase of services .

-This database will also enable the admin to view the bookings made on a certain day or week .

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

- This chapter describes the research and reviews on barbershop booking systems applications that have been carried out by other researchers. Different methods and techniques used by these researchers in terms of software will be discussed.

-This system is going to integrate various modules for easy and efficient performance.

2.2 Existing barbershop booking systems

There are similar systems that have been developed to handle booking of services from a barbershop. There are also barbershops that have developed their own systems to carry out this task. The following are some of the systems developed:

Waffor

Waffor is a retail focused software product company providing a cloud-based customer engagement & retention marketing solution for retailers to identify, reward and retain customers for faster growth. Their goal is to ensure that every retailer should be able to engage their customers in the most relevant ways that results in successful customer retention. Waffor’s mission is to provide an end-to-end online platform for retailers to create long lasting loyal customers. Some of its features include: Appointment booking, billing, marketing, analytics and more. The software consists of the standard package which is $90 per month and the premium package which is $120 per month. Their services can be accessed through the website [www.waffor.com](http://www.waffor.com/).

Belliata

Belliata believes finding the prefect hair or beauty venue should not be difficult and as the Internet evolves this is becoming more and more difficult for consumers to have unbiased feedback. Their key passion is to help raise the customer experience and quality standards within the beauty sector through gaining the right insight from consumers and being an enabler for this to happen. The features of this system include: Staff scheduling, online booking, appointment reminders, customer tracking and more. The software is free but if you are willing to get extra features you need to pay an extra cost at the rate of $5 per team member. Their services can be accessed from the website [www.belliatasalonsoftware.com](http://www.belliatasalonsoftware.com/).

Vagaro

Vagaro makes it easy to schedule clients, market your barber shop, get booked online, send automatic reminders, manage packages & process payments - on any device. Vagaro's powerful barber software enables you to spend less time on the phone or answering emails. Simply watch bookings roll in. Your clients can book you from any device using the Vagaro App or website. Its features include: Online booking, customer tracking, marketing, payment processing and more. Their services can be accessed through the website [www.vagaro.com](http://www.vagaro.com/).

Salon Iris

Salon Iris is a barbershop software for booking management and marketing. Salon Iris software for barber shop helps strengthen existing client relationships while building ties with new customers. Their booking, management, and marketing capabilities make it easy to run your shop while focusing on what you do best: taking care of clients. The features of the system include appointment booking, credit card processing, automated marketing, client management, payroll and more. Their pricing comes in different packages, which are basic, deluxe, premier, professional and all in one each ranging at different prices. Their services can be accessed through the website [www.saloniris.com](http://www.saloniris.com/).

Simplybook.me

SimplyBook.me offers the most extensive online booking system on the market for barber shops, one that makes you look professional and solves all your online needs. Manage your business with one solution; website, accept bookings, marketing initiatives, business statistics and online payments. The features of the system include: Scheduling, admin & statistics, booking, email & SMS reminders, accepts payment, calendar sync and many more. The software consists of different packages. These are the free package, basic package which is $9.90 per month, standard package which is $29.90 per month, premium package which is $59.90 per month. The different packages have different features. Their services can be accessed through the website [www.simplybook.me](http://www.simplybook.me/).

The current existing barber booking systems have the following features in common: Appointment booking, appointment reminders, online payments and client management. The proposed system will have an extra feature that enables users search for barbershops in a specific location. The existing systems also don’t work in Kenya, the proposed system will be based in Kenya to serve Kenyans. The payment methods available on the existing systems are PayPal and credit card, my proposed system will also include an M-PESA payment gateway to enable clients to pay for services easily.

**2.3 Requirement gathering and Analysis techniques**

**2.3.1 User requirements**

Requirements specification involves building a system which has the following capabilities:

a)Great user design

b)Great user front user interactivity and functionalit

c)easy to find specific pages and contents

**2.3.2 Functional requirements**

- This are the requirements which the system is expected to meet in terms of functionalities and according to the specific objectives which the system is expected to achieve/deliver:

a)Define the problem at hand  
b) Gather system requirements  
c)Design the system  
d)User sign up/sign in and management  
e) Real device testing  
f)Implementation

**2.3.3 Nonfunctional requirements**

- This are requirements attributes which does not address the core functionality of the system , but are also fundamental requirements which the system must address eg:

a) security of the system

b)performance

c) scalability

d)reliability

**2.4 System Design Techniques**

**2.4.1 UML Diagrams**

- A UML diagram which serves the purpose of visually representing the relationship between various system components, how the system works correspondingly to other systems, or how keys in a database relate to each other.

**2.4.1.1 Use-Case Diagram [**[to be done]**]**

- It is a representation of user’s interaction with the system that shows the relationship between the user and different use cases in which the user is involved.

**2.4.1.2 Activity Diagram[**to be done**]**

- When the user (client) logs into the system, he is met by a good-looking and appealing home page decorated with beautiful cover photos of various haircuts and services offered.

-The user then browses various barber services available in the catalog.

-After that, the user selects an appointment date to which the barber will attend to him /her as they desire.

-The user selects the specific services he wants together being the total prices shown by the system

-The user then has a choice of logging in into the system with his account or sign up a new account or alternatively fast checkout with a valid email address.

-The user goes to the next page whereby he is required to choose payment method, eg cards,paypal ,mpesa or even pay on delivery.

- After successfully booking an appointment, the user gets a confirmation email that the booking was done successfully.

**2.5 System Development Techniques / technologies**

**2.5.1 XAMPP/LAMPP**

XAMPP is a free and open source cross-platform web server stack package. The main tools that contain in it are Apache HTTP Server, MySQL database and interprets for scripts written in PHP and Perl programming languages. XAMPP is an easy to install Apache distribution containing MySQL,and PHP

**2.5.2 React JS**

- This is a JavaScript library for building user interfaces.

-React makes it painless to create interactive UIs. Design simple views for each state in your application, and React will efficiently update and render just the right components when your data changes.

-Build encapsulated components that manage their own state, then compose them to make complex UIs.

**2.5.3 Apache**

Apache is a software foundation that creates and provides a web servers software as open source software. HTTP server which is the most popular HTTP server in use today is their main product. This service is totally free for download and use.

**2.6. System Testing Techniques**

**2.6.1 Unit testing**

- This is a testing whereby it involves testing each module if they are working correctly.

-In this system, I tested each of the system components, for example:

I) payment system to check if all payment methods were working correctly

ii) booking system to check if the database registers the correct details about the customer

iii) The API system to check if it linked and communicated well between the front end and the database.

iv) The mail chimp system to check if it was sending promotional emails and booking emails to customers.

v) The security of the system to check if the system would be vulnerable to malicious attacks by hackers.

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| --- | --- | --- | --- | --- |
| **Type of testing** | **Module** | **Objective** | **Expectation** | **Outcome** |
| Unit testing | Payment system | to check if all payment methods were working correctly | Clients should be able to successfully complete payments using all the payment methods as per what he desires | successful |
| Unit testing | Booking system | to check if the database registers the correct details about the customer | Clients details should be able to successfully be inserted and stored to the database for reference | successful |
| Unit testing | System security | to check if the system would be vulnerable to malicious attacks by hackers. | The system security should be strong for hackers to exploit or misuse the data of the system | successful |
| Unit testing | API system | o check if it linked and communicated well between the front end and the database. | The system should be able to output the correct data to the front for the client from the database. | successful |
| Unit testing | Mail chimp | to check if it was sending promotional emails and booking emails to customers. | The system should be able to send promotional emails and booking emails to the clients | successful |

**CHAPTER THREE**

**METHOLOGY**

**3.1 Introduction**

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