BePretty Application Research Proposal

MTI 8404: Introduction to apple platform

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Abstract

Being a salon client today is becoming inconvenient. You have to remember that you need to make an appointment, then hope you remembered during business hours, and finally scramble to find the phone number and take time out of your busy day to make the call. And never mind finding user reviews of local salons and stylists; tracking those down somewhere on the web is a headache that most don't even attempt. This is the experience of countless salon-goers every day, even as we move well into the twenty first century. There is a strong, well-articulated need for a *one-stop-shop* mobile application that connects clients to stylists or salons, putting all the information users need in one convenient place, on demand.

Equally surprising, many stylists and salons today are still using paper and pencil systems to manage bookings and customers. These systems are grossly inefficient at sharing and synchronizing information, and are prone to costly human error.

BePretty seeks to end the dependence on paper-pencil systems, and put stylists in control with an easy to use interface. BePretty will be more than just a booking application; it will allow stylists to manage their services, get more customers and improve quality of service.

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Chapter One – Introduction

1.1 Background

It is the desire for any lady to look good and presentable and therefore a platform that enables them to find the best beauty services will be of benefit to them. Being a salon client today is becoming inconvenient. You have to remember that you need to make an appointment, then hope you remembered during business hours, and finally scramble to find the phone number and take time out of your busy day to make the call. And never mind finding user reviews of local salons and stylists; tracking those down somewhere on the web is a headache that most don't even attempt. This is the experience of countless salon-goers every day, even as we move well into the twenty first century. There is a strong, well-articulated need for a one-stop-shop mobile application that connects clients to stylists or salons, putting all the information users need in one convenient place, on demand.

1.2 Problem Statement

It is often the case that stylists work at multiple salons on different days, and sometimes offer a different subset of services at each salon. Locating the nearest good stylist and booking the services is what every modern lady would like. This is however not easy using the current manual systems.

1.3 Research Objectives

   i.   To determine the challenges faced in the process of locating and booking stylist services.
   ii.   To analyze the existing platforms for salon booking.
   iii. To design, develop and test a mobile application for locating and booking stylists.
   iv.   To validate whether the mobile application can be used to locate and book salon services.

1.4 Research Questions

   i.   What are the challenges faced in the process of locating and booking stylist services?
   ii.   Are there any platforms for salon booking?
   iii. How can a stylist locating and booking application be designed and developed?
   iv.   Does the mobile application solve the problem?

1.5   Justification

BePretty is an application that connects clients to beauty artists. Currently clients depend on referrals by friends to beauty artists who can provide the services they need and this at times is not assured.

It provides a platform for beauty artists to display their previous work and location making it possible for clients to find and book for best beauty services around them.

1.6   Scope

This project will be carried out within Kenya, focusing mainly on the stylists, salons and the general public who book and use beauty services. The implementation will be on the iOS platform using Objective-C programming language for development. The application will be open for use in Kenya and anywhere else in the world. This will be enhanced by enabling PayPal payments for all in-app bookings in a future update.

1.7   Limitations

i.   The project will be limited by the geographical restrictions set up in the scope.

ii.   Limited application platforms will also be a challenge in this research, locking out people outside these platforms.

iii.   Internet access will be a major limitation to this research. This will limit the reach to people with the ability to access the internet locking out the huge number of people without that ability.

Chapter 2: Literature Review

2.1   Introduction

This chapter includes the review of literature consisting of studies conducted worldwide in the related areas. The study also tries to identify any gaps in the research area and possible ways to take knowledge of the gaps in the present research investigation. It provides an overview of the theoretical background of the research disciplines, identifying the approaches adopted, and discusses the benefits and challenges posed. It also highlights the principal areas in which solutions fall short of requirements, motivating the research presented in the chapters to follow.

2.2 Overview of Related Works

This section highlights work done by others that somehow ties in with this study. It will cover work that shows others attempts to solve the same problem.

2.2.1 Book My Salon

Book My Salon is a mobile application for fixing appointments with the professional salons nearby online. Book My Salon is perfect for hair salons, beauty spa's, hair dressers, massage parlors, beauty salons etc.

It enables one to locate the nearby stores and salons and fix appointments with the professionals in just three easy steps. Select your date, choose your salon and service and book the appointment, or if one is a vendor, then they can register their shop and can add the offers and services they provide. The customers will select and compare between the shops and will select the most suitable one for them. Customers can share their experience by giving ratings and reviews to the salons.

Though there is no much information about Book My Salon, finding professional care is simple with Book My Salon, since it can fix the appointments on the day you require and the time you require.

2.2.2 OpenTable.com

OpenTable developed a Windows-based restaurant management application that allows reservations to be made, cancelled, and viewed locally. Additionally, this application stores customer data and reservations locally. It is also in constant communication with the website,

which is designed to allow diners to book reservations in real time. This model of local software combined with a web application is ideal because it maintains all data locally in case the internet fails, yet it still gives customers real time access to the reservation book.

2.2.3 Google Calendar

Another noteworthy set of prior work is the use of Google Calendars in third party schedule-related applications. The Google Calendars API is robust, and allows developers to harness the functionality of Google Calendars as a back-end for storing and retrieving calendar events. One example is the Ithaca College school library website, which inputs its fluctuating hours into a Google Calendar, and then daily pulls that information into a MySQL database to then be displayed on the website front-end.

2.3 Development platform and framework

This application will be developed on the iOS platform. Xcode 7.2 will be used and Objective-C as the programming language.

2.4 Software development methodology

Agile methodology will be used in this project. According to agilemethodology.org, agile methodology is an alternative to traditional project management, typically used in software development.
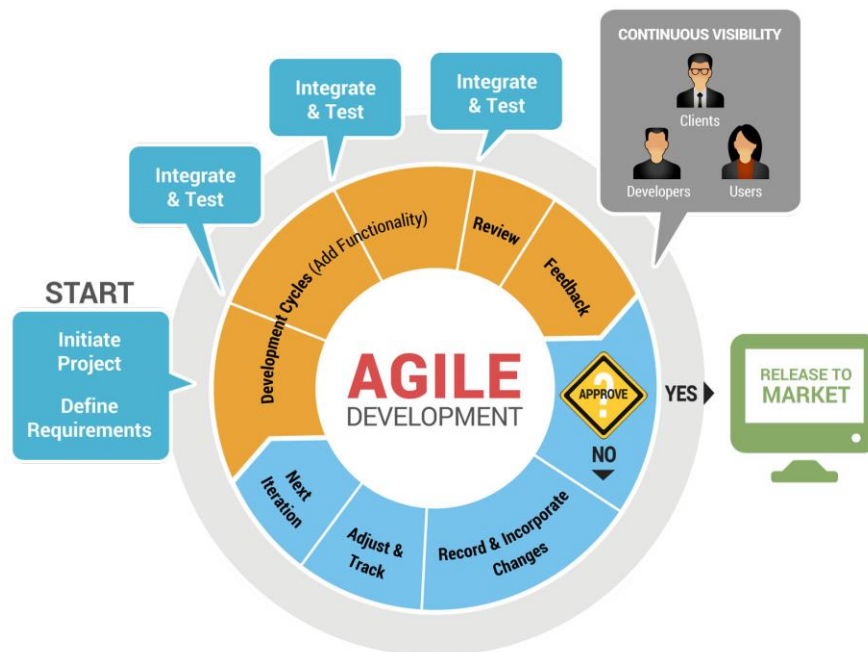
It helps teams respond to unpredictability through incremental, iterative work cadences, known as sprints. Agile methodologies are an alternative to waterfall, or traditional sequential development.

2.4.1 Why Agile

Agile development methodology provides opportunities to assess the direction of a project throughout the development lifecycle. This is achieved through regular cadences of work, known as sprints or iterations, at the end of which teams must present a potentially shippable product increment. By focusing on the repetition of abbreviated work cycles as well as the functional product they yield, agile methodology is described as "iterative" and "incremental." In waterfall, development teams only have one chance to get each aspect of a project right. In an agile paradigm, every aspect of development requirements, design, etc. is continually revisited throughout the lifecycle. When a team stops and re-evaluates the direction of a project every two weeks, there's always time to steer it in another direction (agilemethodology.org).

The results of this "inspect-and-adapt" approach to development greatly reduce both development costs and time to market. Because teams can develop software at the same time they're gathering requirements, the phenomenon known as "analysis paralysis" is less likely to impede a team from making progress.

2.5 Conclusion

This chapter reviewed the literature available on salon stylists booking and it included several studies that described the benefits of the same. However, the study has shown that the available solutions are mostly for internal business operations. Although there are many such applications, none allows customers to locate nearby and book them. This shows that the application will help solve this problem.

Chapter 3: Research Methodology

3.1 Introduction

This project targets to determine the challenges faced by Kenyan ladies while they are looking for professional salon stylists and when booking their services. It aims to make stylists easily accessible for beauty services based on a customer's location.

This chapter will look into the methodologies that will be utilized in the quest to achieve desired results from this project. It looks into data collection tools used, analysis of the data collected and data manipulation for comparisons and conclusions. The target population, sample size and location of study used for testing of the application are also discussed.

3.2 Development Process

Figure 3.1 below is a diagram detailing on the stages that the project will follow with the aim of achieving the set objectives.

```
Feasibility
    Sampling
        Data Collection
            System
                System Design
                    Implementati
                        System Testing
                            Deployment and
                            Maintenance
```
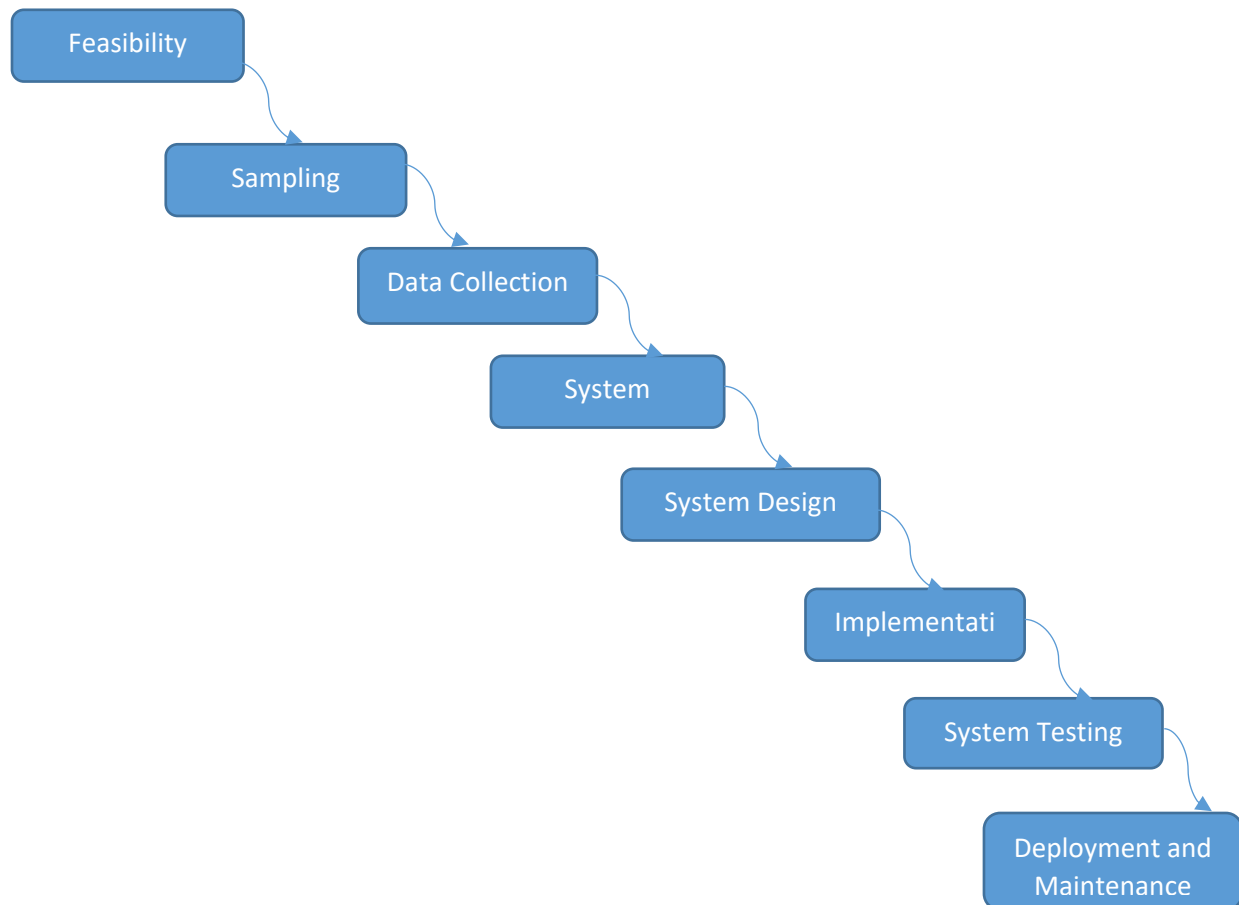
Figure 3.1: Development Process

The first stage is feasibility study which will involve analyzing whether the idea is viable in terms of market issues involved which could involves checking whether there is potential market, organizational or technical issues and financial issues that is can it fall within the budget? The next stage is population sampling which involves selection of a subset of individuals from within a statistical population to estimate characteristics of the whole population. Stratified random sampling strategy and Judgmental sampling will be used to decide on the sample that will be used in the research.

Data Collection will follow where data required will be collected using interviews and questionnaires. The data collected will then be analyzed that is findings shall be derived from it, it will be manipulated and compared to allow for necessary conclusions be drawn out of it. Any additional user requirements will also be incorporated during this stage. System design will be the next stage where the architecture, components, modules, interfaces of the application will be defined. The system shall then be developed following the system design decided upon and tested to ensure that it is bug free before it is deployed and maintained.

3.3 Research Design

Creswell (2012) states that research designs are types of inquiry within qualitative, quantitative and mixed methods approaches that provide specific direction for procedures in a research study. This section explains the different design strategies that will be used throughout the research. These strategies will help the researcher get answers to research questions by simplifying them and availing information in an easy and understandable way. Both qualitative and quantitative research methodologies will be used by the research.

Qualitative Research entails looking in-depth at non-numeric data. This research method will be used to understand on how people currently get to know of the nearby stylists and how they contact the them to make reservations. It will also help to know how the stylists reach to their customers about their services. Interviews will be used as the data collection tool in this case.

Quantitative research looks at patterns in numerical data. This research methodology will be utilized to get to know the number of people who are interested in the idea and who would use the application to check on nearby stylists and book services. It will also help get the number of stylists who would list themselves in the application. It will also contribute in the calculations

of unnecessary costs and time wasted when one has to visit a salon to make reservations for services. The data collection that will be used to collect the above data is a questionnaire.

3.4 Location of Study

This study will be conducted in Nairobi County in Kenya. The study will be targeting the ladies living in Nairobi and the beauty stylists operating within Nairobi County. The reason behind this selection is because Nairobi town is one the fastest growing and most populated in Africa and has recorded the highest technological trend uptake rates (Joan, 2015). It is a suitable town for this research because almost 90% of people occupying it are technologically advanced and possess mobile devices.

3.5 Target Population

The concept of population is fundamental in any research. Busha & Harter (1980) delineates population as any set of persons or objects that possess at least one common characteristic. It refers to the aggregate of all cases that conform to some designated set of specifications. The target population will include people of all ages and both genders who have smart devices and use mobile applications; and beauty stylists.

3.6 Research Purpose

The purpose of this research is to find out the challenges ladies go through while looking for beauty stylists. It further explores how hard it is for one to reserve a stylist. It also looks into the difficulties different stylists find while trying to reach out to the customers. That is, to pass information to customers about their services.

This research will go further to explain some of the positive and negative impacts of using a mobile application to view the nearby available stylists in Nairobi, how one can reserve a time slot with a stylist through the mobile application and how salons and beauty stylists will be listing their services.

3.7 Sample size

Emmel (2013) defines sampling as a process done when the researcher aims to draw conclusions for the entire population after conducting a study on a sample taken from the same population. A sample should be a representative of the population. Sampling is concerned with the selection of a subset of individuals from within a statistical population to estimate

characteristics of the whole population. Determining the sample size that will be used for data collection is affected by the following factors: accuracy precision, confidence levels and the degree of variability necessary. Accuracy and precision which is the closeness of a measurement to the true value, confidence levels refer to the percentage of all possible samples that can be expected to include the true population parameter and degree of variability indicate the degree to which the scores in a distribution are spread out.

After analyzing and comparing the different sampling techniques we will use the following for the research:

3.7.1 Stratified random sampling strategy

This is a probability sampling technique wherein the subjects are initially grouped into different classifications such as age, socioeconomic status or gender. After which the researcher randomly selects the final list of subjects from the different strata. Researchers usually use stratified random sampling if they want to study a particular subgroup within the population hence this will be suitable in determining the classification stylists and those who make reservations fall into. Its advantage is that it warrants more precise statistical outcomes.

3.7.2 Judgmental sampling

This reflects a group of sampling techniques that rely on the judgement of the researcher when it comes to selecting the units (e.g., people, organizations, pieces of data) that are to be studied. In this type of sampling, subjects are chosen to be part of the sample with a specific purpose in mind. With judgmental sampling, the researcher believes that some subjects are fit for the research compared to other individuals. This is the reason why they are purposively chosen as subjects. This will help in the identification of beauty stylists.

3.8 Validity

Validity defines whether or not a study is well designed and provides results that are appropriate to generalize to the population of interest. It ensures that the researcher measures exactly what he or she wanted to measure and not something else.

3.9 Reliability

Reliability is the degree to which an assessment tool produces stable and consistent results (Phelan and Wren 2015). It implies that the researcher will get similar results if they repeated their questionnaire soon afterwards using the same population sample.

3.10   Ethical Measures

The research process will ensure that all human rights are preserved and that for all the participants their privacy and confidentiality is maintained. Only data necessary for the research will be collected.

3.11   Research Instruments

For the purpose of achieving the set objectives and answering questions on this research the interviews and questionnaires will be used as the data collection instruments.

3.11.1 Interviews

Interviews is a data collection instrument which allows a researcher to ask a respondent questions to get information on a certain subject. Interviews will mostly be used when interviewing the stylists to know the experiences they have had while trying to reach out to customers about their products and services.

3.11.2 Questionnaire

A questionnaire is a series of questions designed for acquiring information. It can be conducted either as oral or written. Both oral and written questionnaires will be used in the research on potential customers of beauty services to know the challenges they have when looking for reliable stylists using the currently available methods.

3.12 Data Collection Procedure

Data will be collected through face to face interviews with sample groups of people and questionnaires. These groups will be chosen because of their almost direct relationship with the research subject and objectives. The idea will be to find out some of the key factors influencing the way people get to know of and book beauty services and how the beauticians let their customers know.

3.13   Conclusion

In summary, this chapter looks at the procedures of development, the target population, sampling method and data collection methods that will be used to carry out the research and draw conclusions from the findings. Data collection methods will be put into use, keeping in mind the research topic, objectives and questions which had been highlighted in chapter 1.

References

Agile Methodology. (2016). *Agile Methodology*. Retrieved from The Agile Movement:
    http://agilemethodology.org/

Busha, C. H. (1980). *Research Methods in librarianship: techniques and interpretation.* New York:
    Academic press.

Court, A. (2015, February 10). *Marketplace Africa*. Retrieved from CNN:
    http://edition.cnn.com/2015/02/10/africa/nairobi-africa-intelligent-city/

Creswell, J. (2012). *Planning, conducting, and evaluating quantitative and qualitative research.* Upper
    Saddle River: NJ: Prentice Hall.

Emmel, N. (2013). *Sampling and choosing cases in qualitative research: A realist approach.* London:
    Sage.

Gillham, B. (2008). *Developing a questionnaire (2nd ed.).* London, UK: Continuum International
    Publishing Group Ltd.

Hunt, N., & Tyrrell, S. (2001). *Stratified Sampling*. Retrieved from Coventry University:
    http://www.coventry.ac.uk/

Joan, S. (2015). *What is Joan*. Retrieved from JOAN Meeting Room Assistant.