AUTO DETAILING CLIENT MANAGEMENT SYSTEM PROJECT

System Request, Feasibility Analysis, Project Plan

Overview

This document will provide and understanding of our Auto Detailing Client Management System. In this document we will cover the project methodology that we are going over, team roles, the system request along with the feasibility analysis. We will also provide technical feasibility, economic feasibility that will include the cost benefit analysis, and the organizational feasibility.

Team D

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Meeting Times: Tuesday, Wednesday, and Sunday evenings according to the Sprints we will be running.

Team Members:

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System Request— Auto Detailing Client Management System Project

Project Sponsor: Self sponsored with aid from Prof. Sharma

Business Need - This project has been initiated for the auto detailing company in order to streamline their operations, increase efficiency, and provide a better customer experience. Currently, the company is using a paper-based system to manage client bookings and details. This can often be deemed time-consuming and prone to scheduling errors. Many of our other competitors have similar client booking systems that are mainly done over the phone and a lot of their websites are outdated and do not have online booking capabilities. We want to create something that is user friendly and new for our customers while also providing an organizational benefit.

Business Requirements: Use of this online system will allow customers to have an easy and hassle-free experience when booking an appointment for their vehicle. There are several different features that this system needs to include:

- Client management: The system should allow the company to manage client details, such as name, contact information, and vehicle details.
- Booking management: The system should allow clients to book appointments online, and the company should be able to view and manage these bookings in the system.
- Payment management: The system should allow the company to manage payments from clients, including invoices, payment processing, and receipt generation.
- Notification system: The system should send automatic notifications to clients regarding their upcoming appointments and any possible changes that may occur.
- Reporting and analytics: The system should provide the company with reporting and analytics capabilities, such as booking history, revenue, and client information.
- Point System: The system should provide a reward system for loyal returning customers.

Business Value: Moving this booking system online will benefit the business and not just the customer. Ease of access to customer information, scheduling, and payments will save time and money. Allowing customers to book appointments online will also save the organization time and money by mitigating the need to answer phones and have lengthy conversations with clients while other work needs to be performed. Additionally, by making it easier to book an appointment, the organization will also see an increase in sales.

Special Issues: The system needs to be secure enough to protect private customer information.

Feasibility Analysis—Auto Detailing Client Management System Project

1. Introduction

The auto detailing industry has grown exponentially in recent years, with many companies vying for a share of the market. As competition increases, it becomes imperative for businesses to adopt technology-driven solutions to enhance their customer experience and operational efficiency. Our team of six individuals, comprising two developers, a project manager, a business analyst, and a QA expert, aims to conduct a feasibility analysis on a project that aims to streamline the operations of an auto detailing company. The current paper-based system is prone to errors and can lead to scheduling conflicts, which can result in customer dissatisfaction. Our proposed solution aims to provide a user-friendly platform that will enable clients to make bookings online, thereby improving the overall customer experience while also providing organizational benefits to the auto detailing company. This feasibility analysis will explore the viability and potential challenges of the proposed project, as well as the potential benefits and returns on investment. In the following we will explain which project methodology has been chosen along with the information related to the technical feasibility, economical feasibility, and organizational feasibility.

2. Project Methodology: Agile

After reviewing the various project methodologies, the team decided to utilize an Agile/SCRUM framework in order to ensure a well delivered final product. For this project we are developing a web-based client management/booking system for a small auto detailing company. We decided to go with the Agile framework because it provides flexibility, adaptability, and constant collaboration amongst the team. Unlike a traditional Waterfall model, where everything is completed in order, SCRUM allows us to work on small chunks of features from our backlog on a timely basis. This allows us to write out our different features in the backlog on GitHub while also using the Kanban board to keep track of and select which features we want to implement during the sprint. Features that are integrated with one another or rely on one another can be completed at same times during sprints. At the end of each sprint, the team will review their progress and make any necessary adjustments before starting the next sprint. We will be hosting our SCRUM meetings at a time that is convenient for all team members using When2Meet in

order to compare availability, meetings will be held over Discord where we can update one another on our progress. The use of cross-functional collaboration allows us to continuously improve on our product, frequent planning, and feedback from one another will allow us to fix our mistakes and make a working system. Although Agile is an excellent framework, different issues can arise. It requires discipline and needing to be there for the team, everyone on the team operates on different schedules and are doing different things but creating a balance and communicating with the team effectively is incredibly important. Another issue we may face is scope creep, we may want to add more features as our project comes together, however we will try to only focus on the features we already have. We want to focus on delivering our consumers a product that can bring them value and in order to ensure we can accomplish that; we need to operate on a framework that can provide us with the most efficient and accurate results.

3. Technical Feasibility

Our sources of technical risk come from individual members having a lack of familiarity with the business application area and the technology being used. However, our team is well-rounded enough that members more knowledgeable in these areas can fill in the gaps for the others. Some of us are more familiar with our backend technology and frontend technology than others, so roles have been assigned accordingly. There are six members on our team, and we will be implementing this project over the course of three months. Our distinct features will include a client database and a booking system that integrates with it, all with an easy-to-use frontend to enable clients to book detail appointments online. Compatibility with existing systems is not an issue, as the business currently books appointment via phone and has no automated client management system.

4. Economical Feasibility

Our cost-benefit analysis shows that this project is absolutely feasible. It will have a relatively low impact on the organization’s budget since most of the associated costs will be in the development and initial setup of the system. Once it is operational, maintenance and operational costs will be low. Increased sales estimates are based on the number of clients that the business is currently losing due to a lack of availability for booking via the phone. By making it easier for clients to get on the schedule, we can expect at least one more ceramic coating job per week. As a result, this system will turn a profit by year 2 of operation.

Cost-Benefit Analysis:

Benefits	2023	2024	2025	Total
Increased Sales	78000	78000	78000	234000
Decreased booking cost	30000	40000	50000	120000
Total Benefits	108000	118000	128000	
				354000

Development Costs				
Project Manager	22500	0	0	22500
QA Tester	16000	0	0	16000
Frontend Developer	28000	0	0	28000
Backend Developer	39250	0	0	39250
Business Analyst	19500	0	0	19500
Network Engineer	24750	0	0	24750
Hardware and Software				
Server and network hardware	1000	0	0	1000
Office Space and Equipment	1500	0	0	1500
Operational Costs	0	0	0	0
Hardware	1000	1000	1000	3000
Software	2000	2000	2000	6000
Total Costs				161500
NPV				192500

5. Organizational Feasibility

This system is very much aligned with the business's strategy, as it will allow for "hands-off" booking on the organizational side that will allow employees to put all their focus on detailing cars rather than answering phones. We will still have phone support for clients that need it, but this system will not only attract more customers by making booking easier, but it will also increase organizational efficiency by eliminating booking errors and conflicts, and decreasing time spent answering phones instead of working on cars. Since this is a low-volume business with a small team, it is important that the business works as efficiently as possible.

Project Work Plan (Kanban Board) —Auto Detailing Client Management System Project