Motomax Motorshop System

**VISION DOCUMENT**

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**TABLE OF CONTENTS**

1. Introduction
2. Positioning
   1. Problem Statement
   2. Product Position Statement
3. Stakeholder Descriptions
   1. Stakeholder Summary
   2. User Environment
4. Product Overview
   1. Product Perspective
   2. System Features
5. System Requirements
   1. Software / Platform requirements
   2. Hardware requirements
6. Constraints
7. Documentation
8. Appendix A
   1. Interview
   2. Glossary
   3. References

**INTRODUCTION**

**Overview of the system**

The system that will be developed is entitled Motomax Motorshop System. This will be used by the client which is the Motomax, a motorshop in Mandaluyong City that offers various services and products to cater the needs of the customers according to their own preferences. The system encompasses various management functions that will be vital to the business and will aid the client in generating profits. The main platform that will be used for the system is a desktop computer where it will be used by the Motorshop Owner as well as the Service Technicians of the motor shop.

Our software helps you manage a motor shop more efficiently, more cheaply, and with a superior customer experience by streamlining and automating the processes required. Our system is the all-inclusive management tool you require for your business, with capabilities like customer management, inventory management, service management, invoicing and billing, and financial administration.

**Purpose of the system**

The purpose of the Motomax Motorshop System is to ensure that the business in the Motor shop runs smoothly and efficiently. The system’s priority will be the functionalities and capabilities agreed upon together with the client and the beneficiaries. Mainly this system will help with the daily operations of the business from product inventory management, services management, output of mechanic’s labor, and also the sales of the business.

**Scope**

This vision document applies to the Motomax Motorshop System that will be developed by the Project Management Group led by Mr. Ian Conner Earl Gaspar. The system that is being deployed is designed to streamline and automate the processes involved in running a motor shop, helping you to increase efficiency, reduce costs, and provide an exceptional customer experience.

* Inventory managing and tracking of the products and services - the admin has the control to add, update, and delete product stocks and also the services,
* User friendly interface with labels, icons, and placeholder texts that will guide the user upon the operation of the system - the system is labeled accordingly and also placeholder texts are placed so the user will not be lost or confused upon the operation of the system.
* Mechanic service rendered and commissions - the system has the capability to display all the services that are assigned and done by the mechanic as well as to view their labor or commission from the work that they have performed.
* Mechanic and Admin login system for accessing their modules - in order to separate the user controls, a login system module is programmed to the system for them to access their respective modules and functions.
* User payment processing with storage of records - the system is capable of computing and storing the payment of the customer to the system.
* Receipt printing as proof of payment - the system is capable of printing a receipt in order to serve as a proof of purchase from the system which can be used as a reference for sales or repair.
* List of total bill of the customer before printing receipt - the system is capable of displaying the items added to the cart as well as to compute the total bill together with the payment and change of the customer.
* Tracking of motorcycle history services based on motor type and plate number - the mechanic has the capability to check the motorcycles that they have performed on the services of the business.

**Definitions, acronyms and abbreviations**

Define all terms, acronyms, and abbreviations that are required to interpret the vision correctly. This information might be provided by reference to the project glossary.

| **Acronym, Term, Abbreviation** | **Definition** |
| --- | --- |
| KU | Key User |
| PM | Project Manager |
| BA | Business Analyst |
| QAS | Quality Assurance System |
| User Enviroment \* | User Acceptance Testing, performed in QAS |
| Escalation | An anticipated rise in uncommitted costs of resources (labor, material, equipment) over time |
| Constraints / Limitations | An activity or event that may compromise the success of a software development project |
| Stakeholders | An individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project |

**POSITIONING**

**Problem Statement**

| **No.** | **Description** |
| --- | --- |
|  | The problem of our system will be technical issues and security concerns it affects the users of the system. |
|  | The impact of the problem are decreased productivity and poor customer satisfaction. |
|  | A successful solution would include ongoing monitoring and updating of security measures this is critical to maintaining a secure motorshop system. This includes regularly checking for updates to software and hardware, as well as monitoring for potential threats or breaches. |
|  |  |
|  |  |
|  |  |

**Product Position Statement**

For the motorcycle users, our motorshop business requires a modern, efficient, and reliable system to manage inventory, customers, and sales. The current manual process is time-consuming and prone to errors, resulting in delays and decreased productivity. By implementing a motorshop system, we aim to improve our inventory management, streamline our sales process, and provide better customer service. This will enable us to increase efficiency, reduce costs, and grow our business by enhancing our reputation and attracting new customers. The pipe is an exhaust category. Our exhaust pipe is designed to improve the performance and efficiency of your vehicle by increasing exhaust flow and reducing backpressure. With our exhaust pipe installed, you can enjoy a more responsive engine, increased horsepower, and improved fuel economy. Additionally, our exhaust pipe is built to last with high-quality materials and expert craftsmanship, providing you with a durable and reliable product that will enhance the overall driving experience of your vehicle. The primary competitive alternative to an exhaust pipe would be other types of exhaust systems available in the market like stock exhaust pipe, and other aftermarket exhaust, Our exhaust pipe is designed with a mandrel-bent construction that allows for smooth and unrestricted airflow, resulting in improved engine performance and efficiency. Unlike other aftermarket exhaust systems that may restrict airflow and cause backpressure, our exhaust pipe maximizes exhaust flow to provide increased horsepower and better fuel economy. Additionally, our exhaust pipe is crafted from high-quality stainless steel, providing superior durability and resistance to corrosion. With our exhaust pipe, you can enjoy a performance boost and a longer-lasting, more reliable exhaust system.

**STAKEHOLDER DESCRIPTIONS**

**Stakeholder Summary**

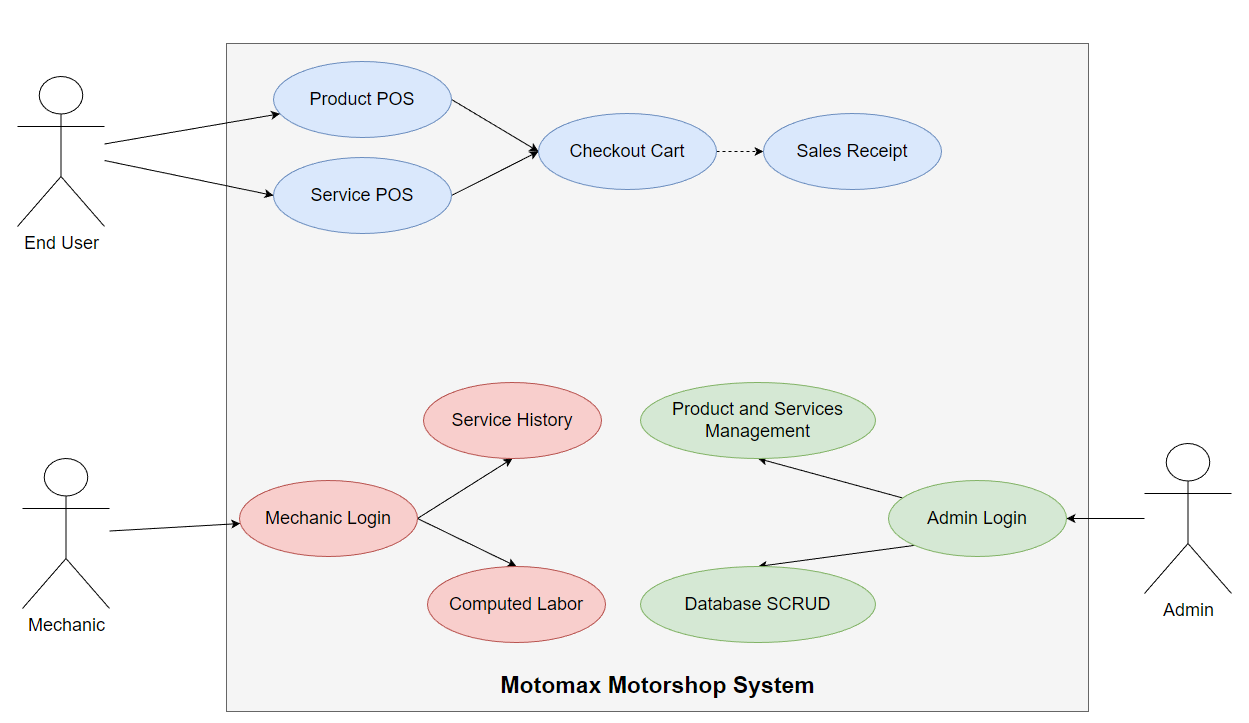
| This section provides a profile of the stakeholders and users who are involved in the project. This section also identifies the key problems that stakeholders and users consider that the proposed solution must address. | | |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Larry Gaspar (Motorshop Owne)r | This is the individual who is responsible for running the motor shop and whose primary interest is the improvement of efficiency and productivity of their business. | This stakeholder is responsible for leading and managing the company to achieve its objectives as a business. |
| Denneil Vasquez, Aljay Banal  (Service Technicians) | These are the individuals who perform the service work on vehicles, and who will benefit from a system that streamlines the service process and provides them with the tools they need to perform their work efficiently. | This stakeholder ensures that technical equipment or systems in the motorshop operate efficiently and effectively, and to minimize downtime and disruptions to business operations. |
| Motorshop Accessories and Customization Customers | Customers who shop for parts and customize their motorcycles according to their preferences. | This stakeholder is responsible for generating profits to the motorshop by buying accessories for their motor customization |
| Repair and Maintenance Customers | Customers who come to the motorshop to get their motorcycles repaired and/or maintained. | This stakeholder is responsible for generating profits to the motorshop by utilizing the services offered within the motorshop. |
| Ian Conner Earl Gaspar | Project Manager | This stakeholder oversees the project and development of the Motomax Motorshop System |
| Ishmael Ramirez | Business Analyst | This stakeholder handles the document requirements, analyzation, and interpretation of gathered data |
| Mea Flor Cariloria | UI/UX Designer | This stakeholder is responsible for the overall design and layout of the proposed system |
| Julia Lairine Javier | Front-End Developer | This stakeholder ensures to create an engaging, user-friendly, and responsive user interface that meets the needs of the website or application's target audience. |
| Joshua Daniel Ocray | Back-End Developer | This stakeholder is responsible for ensuring that the server-side infrastructure of an application operates smoothly and efficiently, and for enabling communication between the server-side components and the front-end components. |

**User Environment**

The system compiles and runs on the Microsoft Windows platform, but with growth it is natural to accommodate other platforms, such as Linux and Mac OS X.

**PRODUCT OVERVIEW**

**Product Perspective**

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Put the product in perspective with regards to other related products and the user's environment. If the product is independent and completely self-contained, state it here. If the product is a component of a larger system, relate how these systems interact and identify the relevant interfaces between the systems. One way to display the major components of the larger system, interconnections, and external interfaces is to use a business process or use case diagram.

**System** **Features**

Summarize the major benefits and features that the product will provide.

| Feature | Benefits |
| --- | --- |
| **Inventory management** | Keep track of the parts and products that are sold in the motorshop, including the ability to manage stock levels, and either add or delete products for sale from the shop. |
| **Employee management** | Keep track of employee information rendered within the business which will generate their salary from the labored service. |
| **Service management** | Keeping track of the available services that are performed on vehicles. It includes the ability to add or remove services that is offered by the shop. |
| **Sales management** | Keeping track of sales information, such as the accumulated sales of the business. |

**SYSTEM REQUIREMENTS**

Defines the system requirements for the application. These can include the supported host operating systems and network platforms, configurations, memory, peripheral devices, and companion software.

| **Software Requirements** | |
| --- | --- |
| * **Operating system** | A modern operating system, such as Windows 10, is required to run the motorshop system. |
| * **Database management system** | A database management system, such as MySQL, is required to store and manage the customer, service, and inventory information. Specifically XAMPP Control Panel for the system. |
| * **Programming language** | A programming language, such as C# , is required to develop and implement the motorshop system. |

| **Hardware Requirements** | |
| --- | --- |
| * **Workplace Computer** | A computer with 1.8 ghz or above and 4GB RAM or above is needed for the system for full functionality. |
| * **Network** | A network is required in order for the functionality of the database within the system. |
| * **Mouse and Keyboard** | This devices will help with the use and navigation of the system. |
| * **Printer** | This device will print the receipt generated by the system. |

| **Configuration Requirements** | |
| --- | --- |
| * **.Net Framework 4.6.1** | This framework will be the foundation for running the system, ensure that the version is specifically 4.6.1 |
| * **XAMPP Control Panel (Apache and MySQL Modules)** | Ensure that the control panel has apache and mysql modules installed and running properly on to the system. It must be ensured that is running before the system or program is launched. |
| * **Hardware** | Check if the mentioned hardware requirements are met in order to make use of the functionalities of the system. |
| * **Backup and Maintenance** | The system is advised to have regular backups of the database as well as maintenance to check if the modules are functioning properly. |
| * **Database Security** | The database should be protected with a password and should not display complete or essential values and columns that can be prone for hacking or data breaches. |

**CONSTRAINTS**

Constraints/Limitations

1. Materials

**Business:**

* 1. Availability of Materials - The motorshop may have limited access to the supplies it needs to restock its inventory because of restrictions on the suppliers it can work with, shipping limitations, or other issues.
  2. Issues regarding quality - To ensure the safe and efficient operation of vehicles, materials used in motorshop activities must meet specific quality criteria. Lack of effective quality control can result in product flaws, unhappy customers, and possibly hazardous circumstances.

1. Cost

**Business:**

* 1. Limited Budget - The motorshop's capacity to provide business in the vicinity may be limited by the lack of financial resources it has to invest in inventory, equipment, and technology.
  2. Rising cost of materials - he price of supplies and parts used in motorshop operations can change depending on the state of the market, which can affect the company's profitability.
  3. Overhead Cost - The amount of money secured for other expenses by the business may be restricted due to the overhead costs of the motorshop such as rent, utilities, and insurance.

1. Safety

**System:**

* 1. Cybersecurity risks: If the motorshop system is not adequately secured against cyber threats, such as hacking or malware attacks, it can put the safety of workers and customers at risk.

**Business:**

* 1. Limited Safety Equipment for Technicians - The business may be lacking in the safety equipments present and may increase risk of injury to the workers.
  2. Crowded Workspace - Technicians will have a hard time working within the confines of the business because of the limited availability of space within the shop.

1. Reliability

**System:**

* 1. Technical Issues - The hardware, and software infrastructure that the motorshop management system depends on may malfunction or fail, resulting in system downtime or data loss.
  2. User Error - Inaccurate data can result from human mistakes, including data entry errors or improper system configuration.
  3. Security - The security and dependability of the motorshop management system could be disrupted by hacker attacks or security lapses.

**Business:**

* 1. Unreliable equipment: If the equipment used in the motorshop is not reliable, it can lead to delays and downtime, which can affect the shop's ability to service customers.
  2. Unreliable supplier: If the shop relies on unreliable supplier for parts or supplies, it can lead to delays in obtaining the necessary items.

1. Performance
   1. System responsiveness - Users may become impatient and lose productivity if the motorshop management system takes too long to respond to their requests or directions.
   2. Integration issues - It may be necessary to interface the motorshop management system with other programs or platforms which could lead to compatibility problems could then affect the system's efficiency.
   3. Hardware problems - The hardware that the motor shop management system is based on, such as out-of-date or underpowered technology that cannot meet the system's demands, may be a constraint.
2. Maintenance
   1. Technical expertise - Technical know-how is important to run a motorshop management system, and competent staff members with those skills may be in limited supply.
   2. Data Backups - The motorshop may be at danger of data loss in the event of a system failure since the management system for the motorshop may not have proper data backup measures.
3. Ease of Use
   1. User Interface - Beginners and first-time users may find it challenging to use the user interface of the motorshop management system, which will frustrate users and lower production.
   2. System Integration - The motorshop management system may need to be integrated with other programs or systems.
   3. Limited resources: Motorshops may have limited resources to invest in new equipment or technology that could make their processes easier to use. This can result in outdated or inefficient processes that are challenging for employees to work with.
4. Aesthetic Considerations
   1. System Design - Others may find the motorshop management system unattractive and unpleasant.
   2. Font Displays - The motorshop management system could make use of illegible fonts that make it tiring for users to use and less productive.
5. Policies
   1. Legal requirements: Motorshops must comply with various laws and regulations, such as safety standards and environmental regulations.
   2. Customer satisfaction: Policies that prioritize cost savings or efficiency may not always align with customer expectations or satisfaction. This can impact the reputation of the motorshop and result in lost business.

**DOCUMENTATION**

**Release notes, read me file**

This release note contains the summary of features and capabilities of the system that is specifically built for Motomax motorshop. This system will mainly help with the daily operations of the shop from product and inventory management, service management, and the mechanic’s performed services within the shop.

As of the Version 1.0 of the system the following features and functions are offered:

* Product and Inventory and Service management - customers have a dedicated product cart feature in which they can choose products that they want to buy. They can also choose a service they want for their motorcycles. Admin has the control to manage the products and services.
* Mechanic Module - mechanics have the ability to check their total labor and also the motorcycles they serviced.
* Receipt generation - the system can print out a receipt as a proof of transaction with the business.
* Payment method selection - the customers can choose whether they want to pay through cash payment or GCASH payment.
* User friendly interface - the system is labeled accordingly and also placeholder texts beside text boxes to guide the user about the inputs.

For any issues and concerns regarding the system please contact the project team for clarifications through motomax.projteam@gmail.com

**Installation guides**

Prepare the following prerequisites softwares before the installation or launch of the executable file:

* .NET Framework 4.6.1
* XAMPP Control Panel (Ensure that Apache and MySQL servers are running)

Once all the requirements are prepared follow the following steps for installation:

1. Locate the executable file or .exe of the system.
2. Double click the file and click next upon the installation wizard.
3. Once everything is installed, locate the shortcut of the system and run by double clicking.

For any issues and concerns regarding the system installation please contact the project team for clarifications and guidance through motomax.projteam@gmail.com

Alternate installation guide if the above mentioned installation are not working properly:

Provide a copy of the system’s source code and Visual Studio 2017 with a .NET Framework of 4.0 and above and perform the following steps:

1. Build your project: In Visual Studio, click on Build > Build Solution to build your project.
2. Locate the output files: After building, navigate to the output directory where your project was built. By default, the output directory is located in the bin/Debug or bin/Release folder of your project.
3. Copy the output files: Copy all the files in the output directory to the desired location on the computer where you want to install your program.
4. Create a shortcut: Right-click on the executable file of your program and select "Create Shortcut". You can then drag this shortcut to your desktop or start menu for easy access to your program.
5. Test your program: Double-click on the shortcut you just created to run your program and ensure it is working as expected.

**User Guidelines**

* Make sure you have a clear understanding of how to use the system before attempting to use it.
* Use the system as intended: Follow the system's intended use and don't try to use it in ways that it was not designed for.
* If you need to input data into the system, make sure you do so accurately and double-check your work before submitting it.
* Depending on the complexity of the system, it may take some time to get used to using it. Be patient and give yourself time to learn how to use it effectively.
* If you're having trouble using the system or have questions about how to use it, don't hesitate to seek help from the appropriate project manager.

**APPENDIX**

Interview

Glossary

References