A PROPOSED OFFERING OF A HOTEL RESERVATION MANAGEMENT SYSTEM FOR EUROTEL NORTH EDSA

A Maintenance Document Presented to the

Faculty of Datamex College of Saint Adeline, Inc.

In Partial Fulfillment of the Requirements for the

Degree of Bachelor of Science in Information Technology

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INTRODUCTION

Maintenance is an important process that helps keep any software or system in good working condition. It involves checking, updating, and improving the program to make sure it continues to perform well and meet the needs of its users. Over time, systems may encounter issues such as bugs, errors, or slow performance due to frequent use and technological changes. Through regular maintenance, these problems can be identified early and fixed before they affect the system's performance.

The main goal of maintenance is to ensure that the software remains reliable, secure, and efficient. It helps prevent unwanted system failures and reduces the risk of data loss or downtime. Maintenance also plays a big role in improving the overall user experience by making the system faster, safer, and easier to use. Regular updates, security patches, and bug fixes allow the software to stay up-to-date with new technologies and protect it from potential threats.

Another purpose of maintenance is to extend the lifespan of the software. Instead of creating a new system from scratch, maintaining the existing one saves time and effort while ensuring continuous improvement. Maintenance can also include adding new features, optimizing performance, and making adjustments to adapt to changes in the environment or user needs.

In conclusion, maintenance is not just about fixing what is broken it is about keeping the system healthy, secure, and effective for long-term use. It ensures that the software can continue to perform its tasks properly, meet the expectations of its users, and adapt to the changes brought by new technology. Without proper maintenance, even the best system can eventually fail, which is why it is considered a vital part of software development and management.

MAINTENANCE PLAN

A maintenance plan is a structured approach designed to ensure that a system continues to function efficiently and effectively after its implementation. It outlines the strategies, procedures, and schedules for maintaining the system's performance, reliability, and security over time.

The maintenance plan is created to make sure that the Hotel Reservation Management System continues to work properly even after it has been developed. It serves as a guide for keeping the system stable, secure, and updated as time goes on. Since technology and user needs can change, regular maintenance is very important to make sure the system stays useful and reliable for both the hotel staff and the guests. The main goal of this plan is to prevent problems before they happen, fix any issues that may appear, and improve the system based on user experience and feedback. Maintenance helps ensure that the system performs well and keeps up with the hotel's operations, such as managing room availability, processing walk-in reservations, and recording guest information smoothly.

The maintenance plan includes different types of maintenance, each with its own purpose:

- Corrective Maintenance – This type of maintenance is done when problems or errors occur in the system. It focuses on finding and fixing bugs or technical issues that may interrupt the system's performance.
- Adaptive Maintenance – This involves updating or changing parts of the system so it can adjust to new requirements, technologies, or processes in the hotel. For instance, if the hotel updates its pricing rules or adds new room categories, adaptive maintenance will make sure the system can handle those changes properly.
- Perfective Maintenance – This focuses on improving the system's features and performance. It includes making enhancements based on staff feedback, such as

improving the interface, speeding up processing time, or adding new helpful options. The goal is to make the system more efficient and user-friendly over time.

- Preventive Maintenance – This type of maintenance is done regularly to prevent future problems from happening. It includes performing system check-ups, security updates, data backups, and other preventive actions that keep the system safe and running smoothly. This helps reduce the chance of errors and data loss in the future.

MAINTENANCE SCHEDULE

A Maintenance Schedule is a plan that lists all the activities needed to keep a system working properly. It defines what tasks need to be done, how often they should be done, who is responsible, and the current status of each task.

To ensure the Hotel Reservation Management System operates efficiently and continuously meets users needs, a regular maintenance plan is implemented. This plan helps prevent system errors, security issues, and data loss that may affect hotel operations.

The schedule below presents the different maintenance activities, their frequency, assigned personnel, and current progress.

Task	Description	Frequency	Responsible person	Status
Database Backup	Create full backups of the hotel's reservation records and guest information to prevent data loss and ensure data recovery when needed	Weekly	Admin Staff	Ongoing
Security Updates	Install the latest patches	Monthly	Development Team	Scheduled

	and updates to keep the system protected against security threats, viruses, and unauthorized access.			
Bug Fixes	Identify, report, and repair system errors or glitches that may interrupt the booking process or cause inconvenience to users.	As Needed	Support Team	Pending
System Performance Check	Monitor and review the system's overall performance to ensure smooth transactions, quick responses, and	Quarterly	IT Team	Not Started

	reliable operation.			

Table 1. Maintenance Schedule

ISSUE TRACKING AND BUG REPORTS

Issue Tracking and Bug Reports is the process of recording, monitoring, and managing all the problems or errors found during the development and testing of a system. It helps developers identify what went wrong, understand how serious the problem is, and track the progress of fixing it.

Issue ID	Description	Severity	Reported By	Date Reported	Status
Bug001	Login page does not load properly	High	User A	October 7, 2025	In Progress
Bug002	Room availability not updating after booking	Critical	User B	October 8, 2025	In Progress
Bug003	Reservation form not saving	Medium	User C	October 9, 2025	Pending
Bug004	Confirmation message not displaying after successful booking	Low	User D	October 10, 2025	In Progress

Bug005	Admin dashboard charts not loading	Medium	User E	October 12, 2025	In progress
Bug006	Guest details not displaying correctly in reservation summary	High	User F	October 13, 2025	In Progress
Bug007	Booking history not updating	Medium	User G	October 14, 2025	Fixed
Bug008	Room details not displaying correctly in reservation form	High	User H	October 15, 2025	Pending

Table 2. Issue tracking & Bug Reports

This table shows the different issues encountered during the testing phase of the Hotel Reservation Management System. Some problems, such as the login and confirmation message errors, are still being worked on, while others are pending for further review. Regular tracking of these issues ensures that the system becomes more stable, efficient, and ready for deployment.

BACKUP AND RECOVERY PLAN

The Backup and Recovery Plan for the Hotel Reservation Management System is designed to make sure that all important hotel information including guest records, room reservations, and transaction details from walk-in payments are always safe and protected. This plan serves as a safety measure to prevent data loss caused by system errors, power interruptions, or accidental deletion of files.

Having a backup system in place helps the hotel continue its operations smoothly, even if unexpected technical problems occur. It ensures that all essential information can be easily restored, so the staff won't have to worry about losing booking details or guest data. The plan also helps maintain the accuracy, security, and availability of records, which is very important in providing reliable service to customers.

5.1 Backup Procedures

- Frequency of Backups: The system performs weekly backups of all essential data, including customer reservations and transaction records.
- Storage Locations: Backups are stored in both cloud storage and an external hard drive to ensure data safety and easy recovery.

5.2 Recovery Steps

- In case of system malfunction or accidental data loss, the latest backup will be restored immediately to recover all hotel records.
- The IT or support team will handle the recovery process and verify that the system returns to normal operation.
- Users or staff can contact technical support if they encounter problems during the recovery process.

PERFORMANCE MONITORING

Performance monitoring is the process of checking how well the Hotel Reservation Management System is running. It helps identify issues like slow loading or errors so they can be fixed right away. This ensures the system works smoothly and provides a good experience for users.

This part of the maintenance plan focuses on checking how well the Hotel Reservation Management System performs. It helps make sure that the system runs smoothly and gives users a good experience when making reservations. The team regularly observes the system's performance using key performance indicators (KPIs) to know if there are any issues that need fixing or improving.

Metric	Description	Threshold	Monitoring Tool
System Uptime	Measures how often the system is available and working properly	90%	Uptime Robot
Page Loading Speed	Checks how fast the pages load when a user makes a booking or views room details	Less than 3 seconds	Google Lighthouse
Error rate	Observes if the system experiences issues during operation	< 1%	Log Analyzer
Database Response Time	Measures how fast the database responds when searching for room availability or customer records	Under 2 seconds	MySQL Performance Monitor
Server Memory Usage	Tracks how much memory the server	below 80%	Windows Server Monitor

	consumes		
User Satisfaction Score	Evaluates feedback from users	89% positive feedback	User Feedback Form

Table 3. Key Performance Indicators

SECURITY MEASURES

Security measures are the actions and rules used to protect the system and its data from unauthorized access or possible threats. These include using passwords, encryption, and regular security checks to keep information safe. They help ensure that the system remains secure, reliable, and protected at all times.

This section focuses on the different ways used to protect the system and its data from unauthorized access or possible threats. Security measures are very important to maintain the privacy and safety of both users and system data.

It includes creating strict access control rules to make sure only authorized users can use certain features or data in the system. Authentication methods, such as usernames and passwords, are also used to verify user identity before allowing access. Encryption is applied to secure sensitive information like passwords, customer records, or any confidential files, ensuring that even if data is intercepted, it cannot be easily read or misused.

The system also performs regular security audits and updates to check for vulnerabilities and ensure that all safety features are working properly. By doing this, the team can quickly fix possible security issues and maintain a reliable and safe environment for users.

DOCUMENTATION UPDATES

Documentation update is the process of revising and adding new information to system records whenever changes are made, such as new features, fixes, or improvements.

Version	Date	Changes Made
1.0	October 2, 2025	Separate the deluxe and regular rooms
2.0	October 4, 2025	Update the picture of rooms
3.0	October 5, 2025	Other choices of specific booking time
4.0	October 7, 2025	Improved loading speed and fixed text alignment issues
5.0	October 9, 2025	Fixed minor errors in room availability
6.0	October 19, 2025	Revision of contents

Table 4. Documentation Update

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the system maintenance process is very important in keeping the system secure, organized, and working properly. Through regular updates, backups, and security checks, the system continues to perform smoothly and reduces the chances of data loss or system errors. These maintenance activities also help ensure that all stored .

information remains accurate, safe, and accessible whenever needed.

It is recommended that the development team continue doing regular monitoring and maintenance to keep the system updated and protected from possible issues. The team should also focus on improving the system's performance, design, and security features to make it more user-friendly and reliable. Updating the documentation regularly is also suggested to make it easier for future users and developers to understand the system's current functions and updates.

Lastly, it is advised to conduct periodic system evaluations to identify areas that can still be improved. Adding new features, enhancing database efficiency, and upgrading hardware or software when necessary can help maintain the system's quality. By doing this, the system will remain effective, secure, and beneficial for continuous use in the future.