**A PROPOSED OFFERING OF A WEB-BASED TRAVEL BOOKING SYSTEM FOR RARE EXPLORER TRAVEL&TOURS AT DATAMEX COLLEGE OF SAINT ADELINE VALENZUELA BRANCH**

A Project Proposal 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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**MAINTENANCE DOCUMENTATION**

**INTRODUCTION**

**Overview**

The RareExplorer Travel and Tours Booking System is a web-based platform developed to make travel booking and payment processes faster, easier, and more convenient for users. The system allows customers to browse travel destinations, make reservations, and complete payments securely through GCash, with all data stored and managed using Firebase.

Maintenance plays a vital role in ensuring the long-term reliability, efficiency, and security of the system. Through regular maintenance, developers can detect and fix bugs, update system components, and apply security patches that protect user data and prevent system failures. Continuous maintenance also ensures that the system remains compatible with new technologies, browsers, and devices.

The scope of maintenance includes software updates, bug fixes, database optimization, performance improvements, and the implementation of security patches. These activities are performed regularly to maintain system stability, enhance user experience, and extend the overall lifespan of the application.

**MAINTENANCE PLAN**

The system maintenance strategy includes continuous monitoring, scheduled updates, and regular evaluations to make sure the system functions effectively and securely.

The types of maintenance include:

* Corrective Maintenance – fixing bugs or errors found during use.
* Adaptive Maintenance – updating the system to match new technologies or environments.
* Perfective Maintenance – improving system performance and usability.
* Preventive Maintenance – applying updates to avoid possible future problems.

**MAINTENANCE SCHEDULE**

The maintenance schedule ensures that the RareExplorer Travel and Tours Booking System continues to function efficiently after deployment. Regular maintenance helps identify and resolve technical issues, update system features, and maintain security standards.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Description | Frequency | Responsible Person | Status |
| Database Backup | Create full backups of the Firebase database | Weekly | Admin Name | Ongoing |
| Security Updates | Apply system patches and updates | Monthly | Development Team | Scheduled |
| Bug Fixes | Resolve user-reported issues | As needed | Support Team | Pending |
| System Performance Check | Monitor and optimize system speed and stability | Quarterly | IT Team | Not Started |

*Table 1. List of Maintenance Schedule*

**ISSUE TRACKING & BUG REPORTS**

Issue tracking and bug reporting are essential parts of the system maintenance process. They ensure that all system errors, defects, and irregularities are properly recorded, analyzed, and resolved. This process helps maintain the overall quality and reliability of the RareExplorer Travel and Tours Booking System by allowing developers to monitor the progress of identified issues and implement timely solutions.

During the maintenance and testing phases, each issue is documented in a bug tracking log, which contains information such as the bug ID, description, severity, status, and assigned developer. This structured approach allows the development team to prioritize critical issues and manage system improvements efficiently.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Issue ID | Description | Severity | Reported By | Date Reported | Status |
| BUG001 | Login page does not load | High | User A | 10/05/2025 | Fixed |
| BUG002 | Payment gateway (GCash) error | Critical | User B | 10/10/2025 | In Progress |

*Table 2. List of Issue Tracking & Bug Reports*

**BACKUP & RECOVERY PLAN**

The system uses automatic cloud backups to ensure that important data is safely stored and recoverable in case of system failure.

**Backup Procedures**

* Backups are created daily and weekly through Firebase’s built-in backup system.
* Backup copies are stored securely in the cloud to prevent data loss.

**Recovery Steps**

* Access the Firebase console to restore the latest backup.
* Verify that all restored data is accurate and functional.
* For assistance, contact the system administrator or technical team.

**PERFORMANCE MONITORING**

Performance monitoring ensures that the RareExplorer Travel and Tours Booking System operates smoothly and efficiently after deployment. It involves regularly observing system activities to identify and address performance issues such as slow loading times, failed transactions, or database errors.

The goal of performance monitoring is to maintain optimal system speed, reliability, and user satisfaction. Continuous tracking helps developers and administrators detect potential problems early and apply necessary improvements to keep the system stable.

|  |  |  |  |
| --- | --- | --- | --- |
| Metric | Description | Threshold | Monitoring Tool |
| Server Uptime | Percentage of time system is available | 99.9% | Firebase Analytics |
| Response Time | Average time for system to load pages | < 2 seconds | Google Lighthouse |
| Error Rate | Percentage of failed requests or crashes | < 1% | Log Analyzer |

*Table 3. List of Performance Monitoring*

**SECURITY MEASURES**

**Overview**

Security measures are essential to protect the RareExplorer Travel and Tours Booking System from unauthorized access, data loss, and potential cyber threats. These measures ensure that both user information and system data remain private and secure throughout all transactions.

* Security is maintained through controlled user access, authentication, and encryption methods. Only authorized users can access system data. Passwords and payment information are encrypted to protect privacy.
* Regular security patches and monitoring are done to ensure protection against unauthorized access and potential threats.

**DOCUMENTATION UPDATES**

All changes, improvements, and updates made to the system are recorded and reflected in the project documentation. This ensures that all users and developers are informed of new features or modifications.

**CONCLUSION &RECOMMENDATION**

* The maintenance plan helps ensure that the Travel Booking System remains reliable, secure, and efficient. Through regular updates, monitoring, and user support, the system can continue to meet the needs of its users.
* It is recommended to maintain a consistent maintenance schedule, perform periodic security checks, and encourage user feedback to further improve the system.