**ONLINE BOOKING MANAGEMENT SYSTEM FOR ZERO STUDIO DANCE CENTER**

**Maintenance Plan Document**

September 2025

**Introduction**

The Online Booking Management System for Zero Studio Dance Center is a web-based platform designed to simplify class booking, scheduling, and record management. It allows students to register, reserve dance classes, and receive booking confirmations online. The system also enables administrators and instructors to manage schedules, monitor attendance, and view transactions efficiently.

System maintenance is essential to ensure long-term reliability, speed, and data security. Regular maintenance prevents technical issues, improves performance, and ensures the system remains compatible with the latest browsers and technologies.

**The scope of maintenance includes:**

* Software updates to ensure compatibility with new technologies.
* Bug fixes to correct errors affecting performance.
* Security patches to protect against data breaches and vulnerabilities.
* Database backups to prevent data loss and maintain recovery readiness.

**Maintenance Plan**

The maintenance plan provides a structured approach to keeping the system functional, secure, and optimized. Regular updates and checks are conducted to maintain stability and performance.

**Types of Maintenance:**1. **Corrective Maintenance** – Fixes bugs or system errors discovered during use, such as login failures, booking glitches, or incorrect data displays

2. **Adaptive Maintenance** – Updates the system to work with new browsers, devices, or technologies.  
3. **Perfective Maintenance** – Improves the system’s performance and usability based on user feedback.  
4. **Preventive Maintenance** – Prevents future issues by running regular security scans, optimizing code, and maintaining system backups.

**Maintenance Schedule**

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

**Issue Tracking & Bug Reports**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Issue ID** | **Description** | **Severity** | **Reported By** | **Date Reported** | **Status** |
| BUG001 | Login page does not load | High | User A | MM/DD/YYYY | Fixed |
| BUG002 | Payment gateway error | Critical | User B | MM/DD/YYYY | In Progress |

**Backup & Recovery Plan**

This section ensures that important data (student profiles, schedules, bookings, payments) remains secure and recoverable.

**Backup Procedures:**

* Daily Backup: Automatic incremental backups every night at 9:00 PM.
* Weekly Backup: Full system backup saved to both the cloud and a local drive.
* Monthly Archive: Stored backups retained for six months.
* Storage Locations: Secure cloud repository and external hard drives.

**Recovery Steps:**

1. Identify the cause of failure.
2. Access the latest backup.
3. Database restoration.
4. System configuration check.
5. Validate data integrity.
6. Validate data integrity.
7. Return to normal operations.

**Contact Information:**  
Email: [support@zerostudioph.com](mailto:support@zerostudioph.com)

Hotline: (02) 123-4567

On-site: IT support available for major recovery cases.

**Performance Monitoring**

|  |  |  |  |
| --- | --- | --- | --- |
| **Metric** | **Description** | **Threshold** | **Monitoring Tool** |
| Server Uptime | Measures system availability and reliability | 99.9% | AWS CloudWatch |
| Response Time | Tracks how quickly pages load and respond | < 2 seconds | Google Lighthouse |
| Error Rate | Monitors failed transactions or service errors | < 1% | Log Analyzer |
| Database Query Speed | Measures data retrieval and storage performance | < 1 sec/query | Firebase Analytics |
| Backup Success Rate | Ensures scheduled backups complete properly | 100% | Backup Monitor |

**Security Measures**

Security is a key part of maintenance. The system uses several layers of protection:

* Access Control: Only authorized users can log in.
* Authentication: Secure login using Firebase Authentication.
* Encryption: Sensitive data is encrypted before storage.
* Regular Updates: Security patches applied monthly.
* Activity Logs: All login and transaction activities are logged.

**Documentation Updates**

System documents such as user guides and technical manuals are updated every time new features are added.

**Each documentation update includes:**

* Version number.
* Date of revision.
* Brief description of the change.

**Conclusion & Recommendations**

The maintenance of the Online Booking Management System for Zero Studio Dance Center is vital to ensure reliability, performance, and security.

**Summary of Maintenance Tasks:**

* Regular backups and recovery checks.
* Timely bug fixes and updates.
* Continuous performance and security monitoring.
* Updated documentation after every change.

**Recommendations:**

* Conduct quarterly reviews of performance.
* Encourage users to report bugs and feedback.
* Schedule periodic system testing.
* Maintain coordination between administrators and developers.