**Report on LMS Upgrade from 3.8 to 4.0**

**Week: [10-3-2025 to 26-3-2025]**

**Tasks:**

1. **Moodle Server & System Preparations:**
   * A new staging instance has been provisioned to facilitate controlled testing and deployment validation for our Moodle LMS 4.0 development work.
   * Performed a comprehensive system health check to ensure stable server connectivity.
   * Upgraded PHP to version 8.0, aligning with Moodle 4.0’s compatibility requirements.
   * Conducted a system architecture review, validating compliance with Moodle 4.0 prerequisites.
   * Performed a risk assessment and feasibility analysis for MariaDB version upgrade on CentOS.
   * Configured domain routing and network mapping, ensuring seamless URL accessibility via <http://34.93.58.105/>.
2. **Database Administration & Optimization:**
   * Initiated the MariaDB upgrade process to the latest stable release.
   * Successfully deployed and configured MariaDB on the server, ensuring compatibility with Moodle 4.0.
3. **Plugin & Module Integration:**
   * Conducted extensive research & compatibility testing for the installation of the Mahara plugin in Moodle 4.0.
   * Evaluated the Turnitin plagiarism detection module, identifying integration challenges.
   * Implemented the archive data plugin on local environments, validating its functionality for Moodle course and user data archival via CSV automation.
4. **Stakeholder Engagement & Coordination:**
   * Daily strategic sync-ups to review progress, address bottlenecks, and recalibrate development priorities.
   * Dedicated technical deep-dive sessions focused on:
     + MariaDB upgrade impact assessment and rollback contingency planning.
     + Database integrity verification on staging environments post-upgrade.
     + Plugin dependency resolution and interoperability testing.
   * Conducted daily stand-up meetings for sprint tracking and cross-functional alignment.
5. **Next Steps & Action Items:**
   * Executing the final-phase upgrade to Moodle 4.0, ensuring zero downtime and rollback safety.
   * Remediating plugin compatibility issues, ensuring seamless integration with the upgraded LMS architecture.
   * Conducting an audit of legacy plugins, identifying deprecated modules, and implementing updated versions.
   * End-to-end testing and validation of Moodle 4.0 functionalities to ensure system resilience and performance optimization.