

Group B: Employee Performance Management System - Deliverable 3

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GitHub: <https://github.com/Programmermandan/IS436-GroupB.git>

Project plan board: <https://github.com/users/Programmermandan/projects/4>

(Time set aside to meet outside of class is included in the GitHub board)

Process Model Diagrams

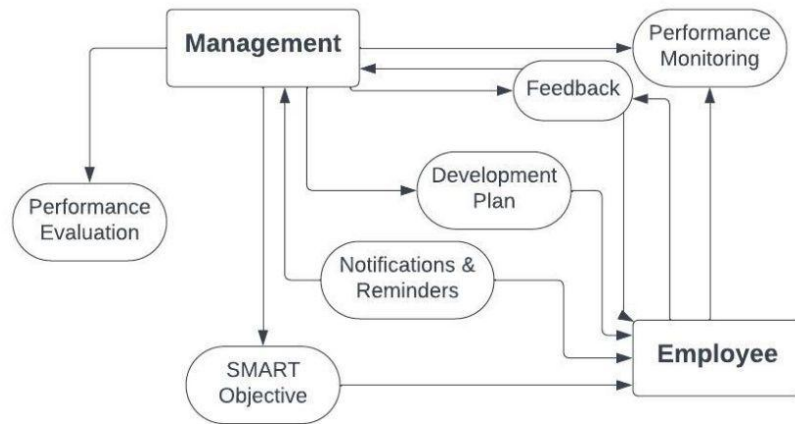


Figure 1: DFD of Employee Performance Management System

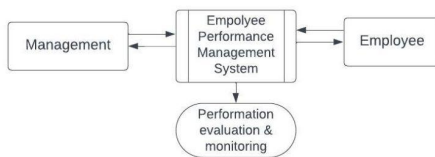


Figure 2: Context diagram

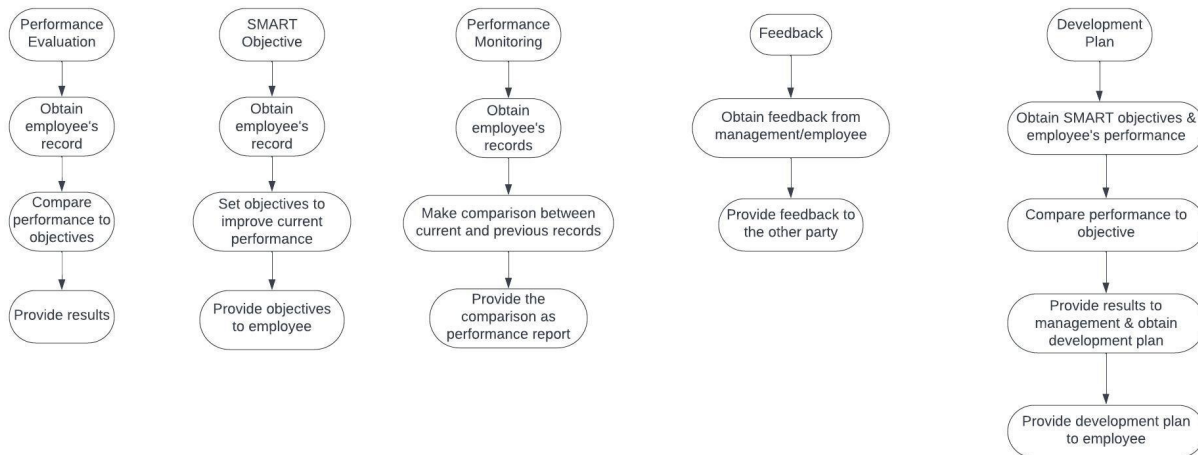


Figure 3: Level 1 diagram

Revised Requirements Definition

The Employee Performance Management System (EPMS) is a comprehensive and integrated data-driven solution aimed at enhancing employees' overall performance and productivity within the organization. The EPMS streamlines the process of setting SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) performance objectives, real-time progress monitoring, automated performance evaluation, continuous feedback management, and personalized development planning. By fostering a culture of continuous improvement, the EPMS addresses both functional and non-functional requirements to drive organizational success and accommodate input from various stakeholders. The EPMS ensures transparency, inclusivity, and data security while promoting fair and unbiased performance evaluations.

Functional Requirements:

- **Goal Setting:** The system should enable managers to set SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) performance objectives for each employee.

- Performance Monitoring: The system should allow employees and managers to track individual and team progress toward goals in real time.
- Performance Evaluation: The system must automate the performance evaluation process, enabling managers to conduct objective evaluations based on established performance criteria.
- Feedback Management: Throughout the performance cycle, the system should support constant feedback and coaching between managers and employees.
- Development Plans: The system must enable the design and monitoring of personalized development plans for employees in order to improve their abilities and advance their careers.
- Notifications and Reminders: The system must provide automated notifications and reminders to employees and other stakeholders.

Non-Functional Requirements:

1. Employee Profiles:

- The system must maintain comprehensive and up-to-date employee profiles, including personal information, job details, performance history, and skill development progress.
- Employee profiles should be stored securely in the "Employee Profiles" datastore.
- Access to employee profiles should be restricted based on role-based access control (RBAC) to ensure data privacy.

2. Performance Metrics:

- The system must capture, store, and manage various performance-related data, including key performance indicators (KPIs), ratings, feedback recordings, and historical performance records.
- Performance metrics should be stored in the "Performance Metrics" datastore.
- Data entry and retrieval should be optimized for efficient processing to support real-time monitoring and reporting.

3. Historical Performance Reports:

- The EPMS should provide a historical performance reporting feature to analyze past performance trends and identify areas for improvement.
- Historical performance reports should be generated using data from the "Performance Metrics" datastore and presented to authorized users.

Requirements for Operation:

1. User Access Control:

- The system must implement a robust role-based access control (RBAC) mechanism to ensure that users can only access information and perform actions relevant to their roles and responsibilities.
- Access levels should be defined based on job roles, such as employees, managers, HR personnel, and administrators.

2. Data Backup and Recovery:

- The system should perform regular automated data backups to prevent data loss in the event of system failures, errors, or emergencies.
- Data backups should be stored securely and can be restored to ensure business continuity.

3. Data Privacy and Compliance:

- The EPMS must adhere to data privacy regulations and standards to protect sensitive employee information.
- Sensitive data, including personally identifiable information (PII), should be securely stored, encrypted, and accessible only to authorized personnel.

Performance Expectations:

1. Response Time:

- The system must provide a responsive user experience, ensuring that user actions, such as setting goals, providing feedback, and generating reports, yield prompt responses within a maximum of 2 seconds.

2. Scalability: The EPMS should be designed to handle scalability as the organization grows, accommodating an increasing number of users, employee data, and performance metrics without compromising performance.

Security Requirements:

1. Data Encryption:

- All data transmitted over the network and stored in datastores should be encrypted using industry-standard encryption technologies to prevent unauthorized access and data breaches.

2. Authentication and Authorization:

- The system must enforce strong authentication mechanisms, including multi-factor authentication (MFA), to ensure the validity of user identities before granting access to the system.

3. Audit Trails:

- The EPMS should maintain comprehensive audit trails to track user behaviors, actions, and system interactions for security analysis, monitoring, and potential breach detection.

Cultural/Political Requirements:

1. Inclusivity and Bias Mitigation:

- The system must incorporate features to prevent bias in performance evaluation, promoting equal and fair treatment of all employees.
- Goal-setting, feedback, and evaluation processes should be designed to minimize potential biases.

2. Transparency:

- The EPMS should maintain transparency by providing clear and accessible information to all employees regarding the performance management process, objectives, and how their data is being used.

Revised Use Case Definitions

Use Case 1: Set Employee Goals

Definition: This use case enables employees and managers to collaboratively set and continually update performance goals that are aligned with the organization's objectives. The process involves capturing SMART goal details through a user-friendly form, which is validated and stored in the "Employee Profiles" datastore for future reference.

Use Case 2: Conduct Performance Evaluation

Definition: In this use case, managers utilize the EPMS to conduct comprehensive performance evaluations based on predefined criteria. The process entails retrieving performance and goal

data from the "Employee Profiles" and "Performance Metrics" datastores, conducting thorough assessments, and submitting evaluation results.

Use Case 3: Plan Skill Development and Training

Definition: Managers and HR personnel leverage the EPMS to strategically plan and assign skill development and training programs based on performance evaluation outcomes. The process involves accessing performance data from the "Performance Metrics" datastore, selecting suitable skill development initiatives, and notifying employees about the scheduled training.

Use Case 4: Provide Ongoing Feedback

Definition: Employees and managers engage in continuous feedback and coaching using the EPMS to promote growth and improvement. The process encompasses selecting an individual for feedback, entering constructive feedback through a user-friendly form, and storing the feedback data in the "Feedback Records" datastore.

Use Case 5: Generate Performance Reports

Definition: Managers and HR personnel generate insightful performance reports using the EPMS to facilitate informed decision-making. The process includes retrieving performance data from the "Performance Metrics" datastore, selecting specific employees or teams, generating detailed reports, and optionally exporting them as PDF or Excel files.

Sample Text Definitions

Figure 1 is explaining the data flow diagram of the employee performance evaluation system.

Management: Management is responsible for setting the objectives and evaluating employee's performance.

Employee: Employee entity is responsible for completing certain objectives set by the management and providing feedback.

Performance Evaluation: Performance evaluation will be completed by the management. The manager will obtain the employee performance records and evaluate the performance.

SMART Objectives: The management will set specific, measurable, achievable, relevant, and time-bound performance targets for the employee.

Performance Monitoring: The system will show the current performance of an employee to both management and employee for evaluation purposes.

Feedback Management: The system will take feedback from either management or employee and provide to the other party.

Development Plan: It is the plan to improve the performance and achieve SMART objectives for the employee.

Notifications & Reminders: It is the system to provide a certain report or reminder about a task to the employee or management.

Figure 2 is explaining the context diagram of the employee performance evaluation system.

Figure 3 is the level 1 diagram of the data flow diagram.