

Software Requirements Specification (SRS) for Employee Payroll System

1. Introduction

1.1 Purpose

The purpose of this document is to specify the software requirements for the **Employee Payroll System (EPS)**. It will outline the system's core functionality, performance, and design constraints, serving as a blueprint for development and validation of an accurate, secure, and compliant payroll solution.

1.2 Scope

The system is a multi-user, web-based application designed to manage the entire payroll lifecycle. Its core functions include managing employee records, calculating wages (including deductions and taxes), generating payslips, and producing statutory reports. The system is intended for use by HR staff, finance/payroll administrators, and employees (for viewing their payslips).

1.3 Definitions and Acronyms

- **System (EPS):** The Employee Payroll System.
- **User:** Any individual interacting with the system, primarily **Payroll Administrator** and **Employee**.
- **Payslip:** A document detailing an employee's gross pay, deductions, and net pay for a specific pay period.
- **Statutory Deductions:** Mandatory deductions required by law (e.g., income tax, social security contributions).
- **Gross Pay:** The total compensation earned before any deductions.
- **Net Pay:** The final amount paid to the employee after all deductions.
- **API:** Application Programming Interface.

2. Overall Description

2.1 Product Perspective

The EPS will be a secure, web-based application hosted on a central server. It will integrate with existing HR/Time Management systems (as external interfaces) to import

employee attendance and leave data. The system must adhere to national and local regulatory standards for tax and payroll compliance.

2.2 Product Functions

The system provides the following major functionalities:

- **Employee Data Management:** Allows administrators to view, add, edit, and delete employee records relevant to payroll (salary, bank details, tax information, etc.).
- **Wages and Compensation Calculation:** Automatically calculates gross pay based on salary, hourly rates, and variable inputs (e.g., overtime, bonuses).
- **Deduction and Tax Management:** Automatically calculates and applies statutory and voluntary deductions.
- **Payslip Generation:** Generates and distributes digital payslips to employees for each pay period.
- **Reporting and Compliance:** Produces mandatory reports for tax authorities and internal finance auditing.
- **Self-Service Portal:** Allows employees to view their payslips and annual tax summaries.

2.3 User Characteristics

The system has two primary user roles:

- **Payroll Administrator:** Finance or HR staff responsible for processing payroll, verifying data, managing tax details, and generating reports. Requires high-level system permissions and financial literacy.
- **Employee:** Any staff member whose payroll is managed by the system. Needs access only to their personal payroll history and payslips via the self-service portal. Requires basic computer literacy.

2.4 Design and Implementation Constraints

- **Security & Audit Trail:** All payroll runs and data modifications must be timestamped and logged in a secure audit trail to ensure non-repudiation.
- **Compliance:** The calculation engine must be easily configurable to comply with changing tax laws and statutory deduction rates without major code changes.
- **Integration:** Must provide a secure API for integration with the college's existing accounting system for payment reconciliation.

- **Data Integrity:** The system must use encryption (e.g., SSL/TLS) for all data transmission and database-level encryption for sensitive data (e.g., bank account numbers).
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3. Specific Requirements

3.1 Employee Data Module

- **3.1.1 Employee Profile:** The system shall store and display all payroll-relevant employee data, including department, job title, salary/rate, bank account details, and tax ID number.
- **3.1.2 Payroll Status Tracking:** The system shall track the current payroll status of each employee (e.g., Active, On Leave, Terminated).

3.2 Calculation and Processing Module

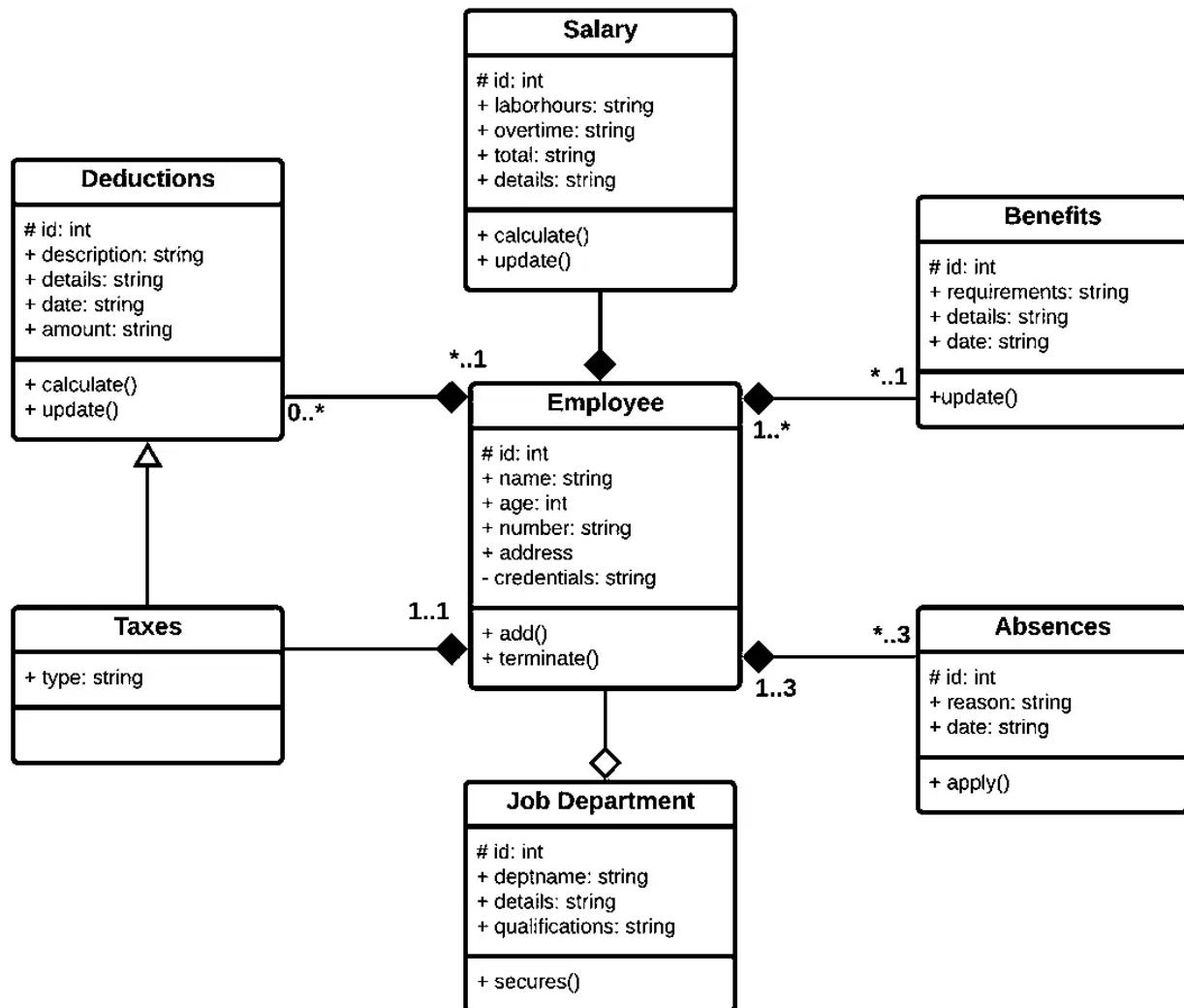
- **3.2.1 Gross Pay Calculation:** The system shall calculate Gross Pay by combining base salary/hourly wage with dynamic inputs (overtime, commissions, leave without pay).
- **3.2.2 Deduction Calculation:** The system shall automatically calculate mandatory **Statutory Deductions** (e.g., tax, pension) and user-defined **Voluntary Deductions** (e.g., loan repayments, insurance).
- **3.2.3 Net Pay Determination:** The system shall determine Net Pay as Gross Pay minus Total Deductions.

3.3 Reporting and Compliance Module

- **3.3.1 Payslip Generation:** The system shall generate a detailed, password-protected PDF Payslip for each employee per pay period.
 - **3.3.2 Tax Reporting:** The system shall generate periodic statutory reports required for tax filing (e.g., monthly withholding reports).
 - **3.3.3 Bank File Generation:** The system shall generate a file (e.g., a standard electronic funds transfer format) that can be submitted to the bank to execute the payroll payments.
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4. System Diagrams

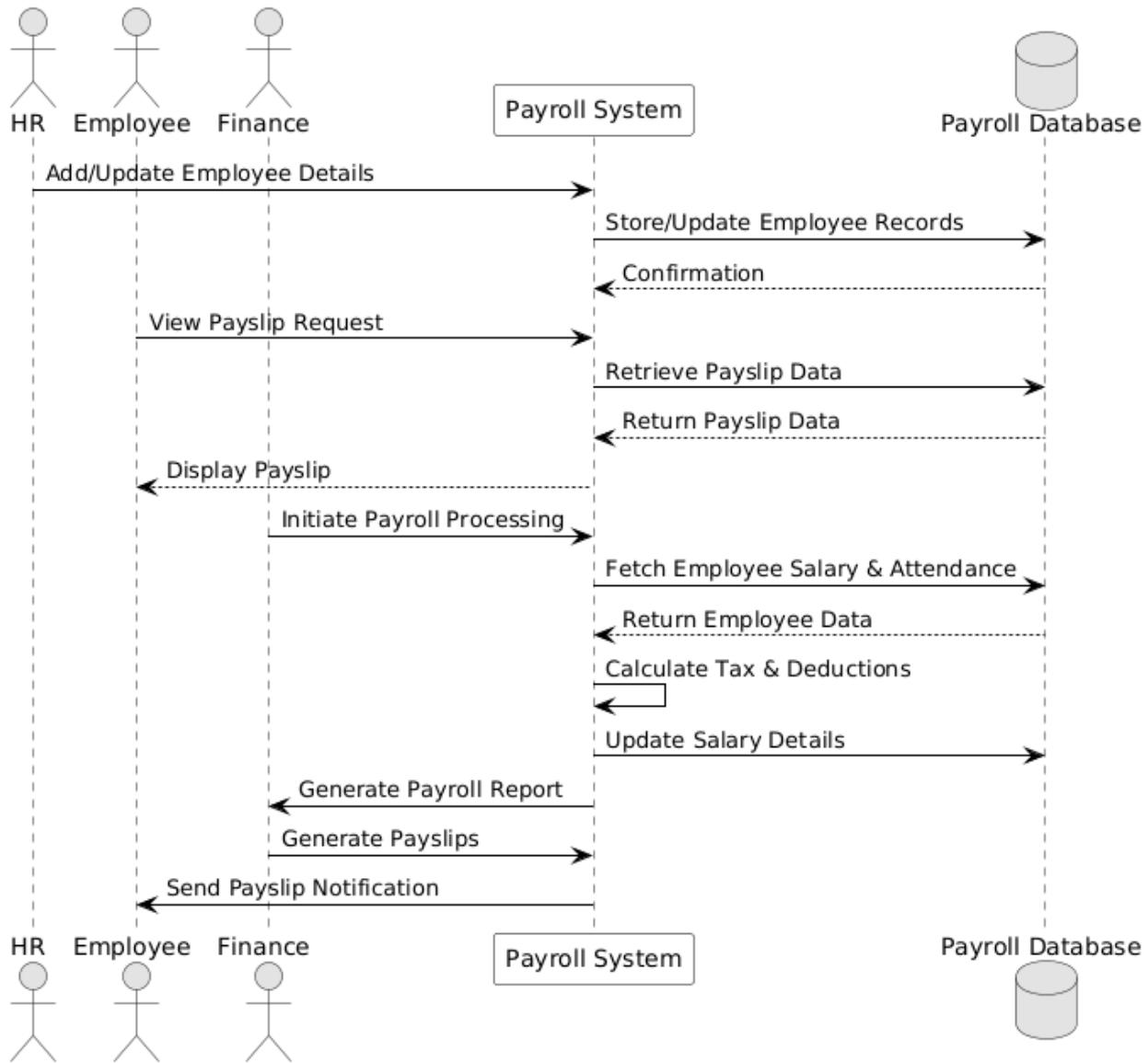
4.1 Class Diagram



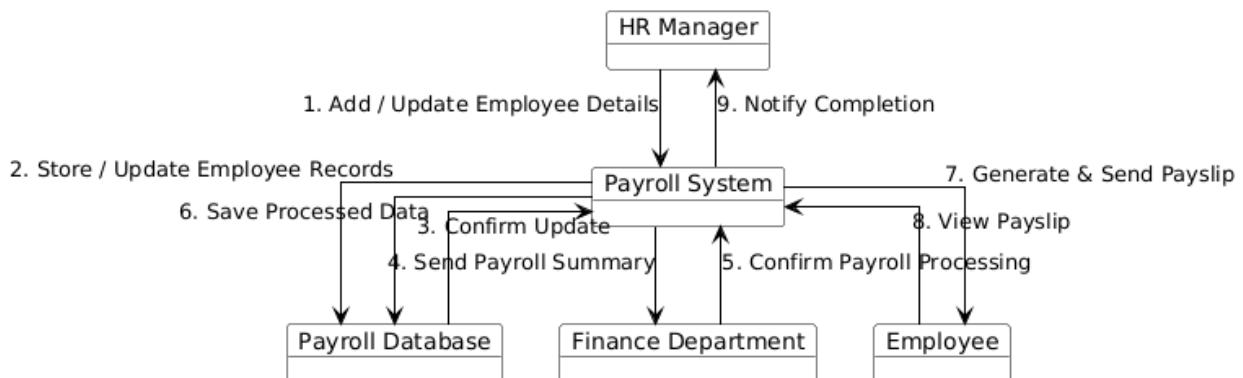
4.2 Usecase Diagram



4.3.1 Sequence Diagram



4.3.2 Collaboration Diagram



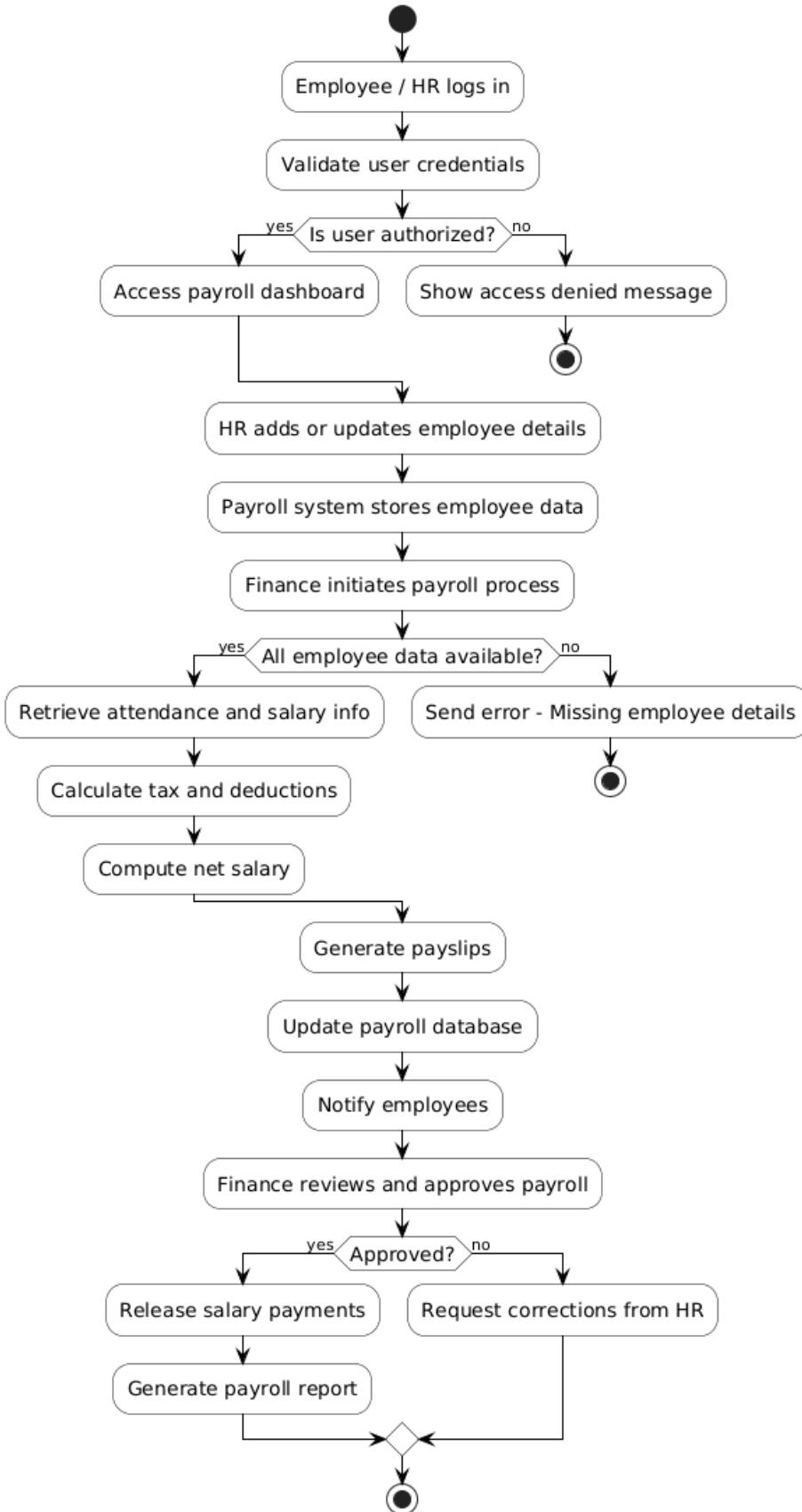
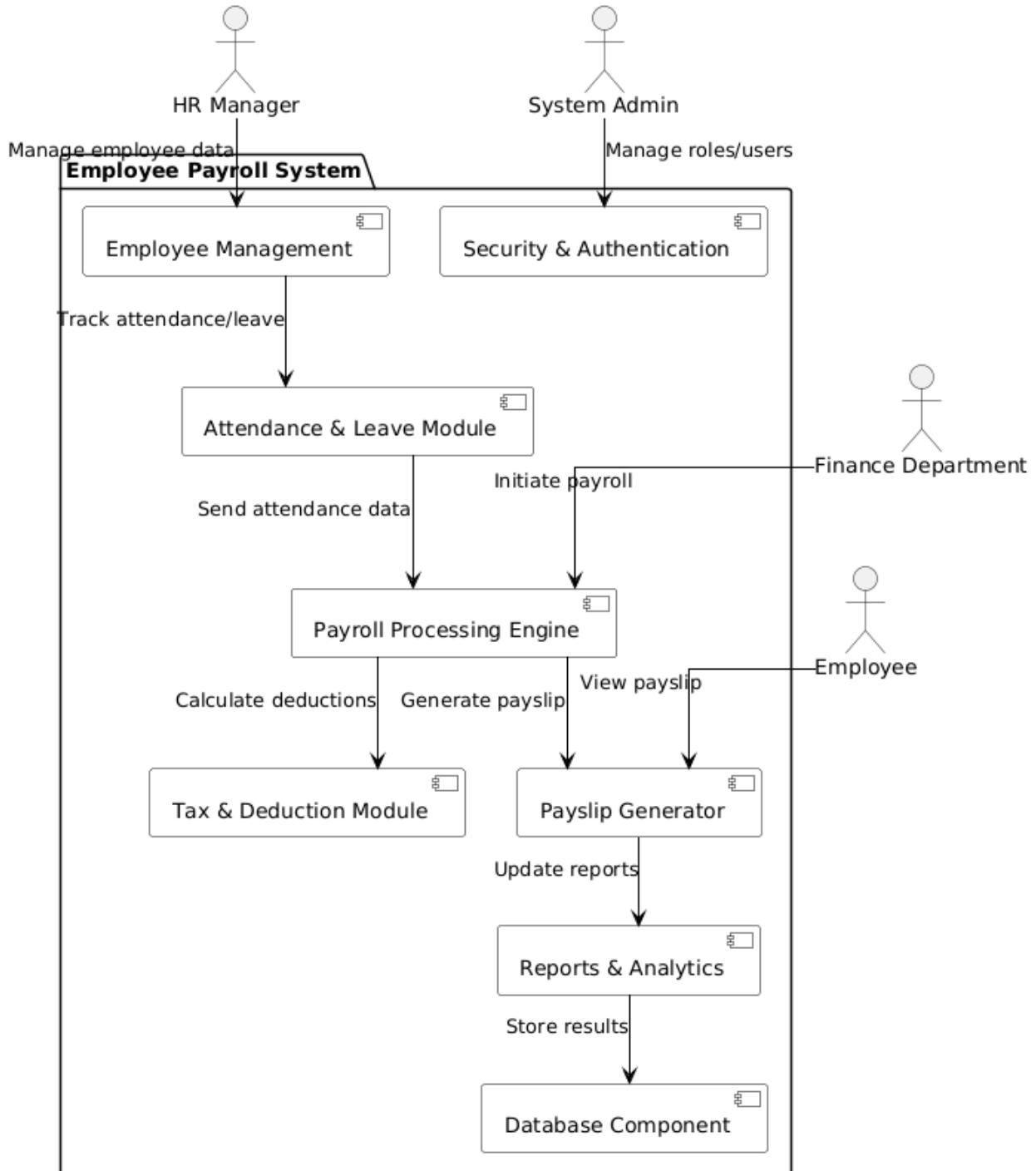


Figure 1 ACTIVITY DIAGRAM

4.5 Component / Deployment Diagram



Conclusion:

This SRS provides a comprehensive and structured overview of the requirements for the Employee Payroll System. The document and its accompanying diagrams will serve as a foundational guide for the development team. By clearly defining the scope, functionalities, and technical constraints, we ensure the final product will be a reliable, secure, and compliant solution for managing the college's employee compensation.