# Project Design Phase

# Proposed-Solution

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| **Date** | 2 November 2025 |
| **Team ID** | NM2025TMID01472 |
| **Project** | Educational Organisation |
| **Maximum Marks** | 2 Mark |

## Project Design Phase:

The Project Design Phase outlines the technical and functional architecture of the Smart Attendance & Performance Monitoring System tailored for education organizations. This phase focuses on converting user needs into structured system components that can be developed, tested, and deployed.

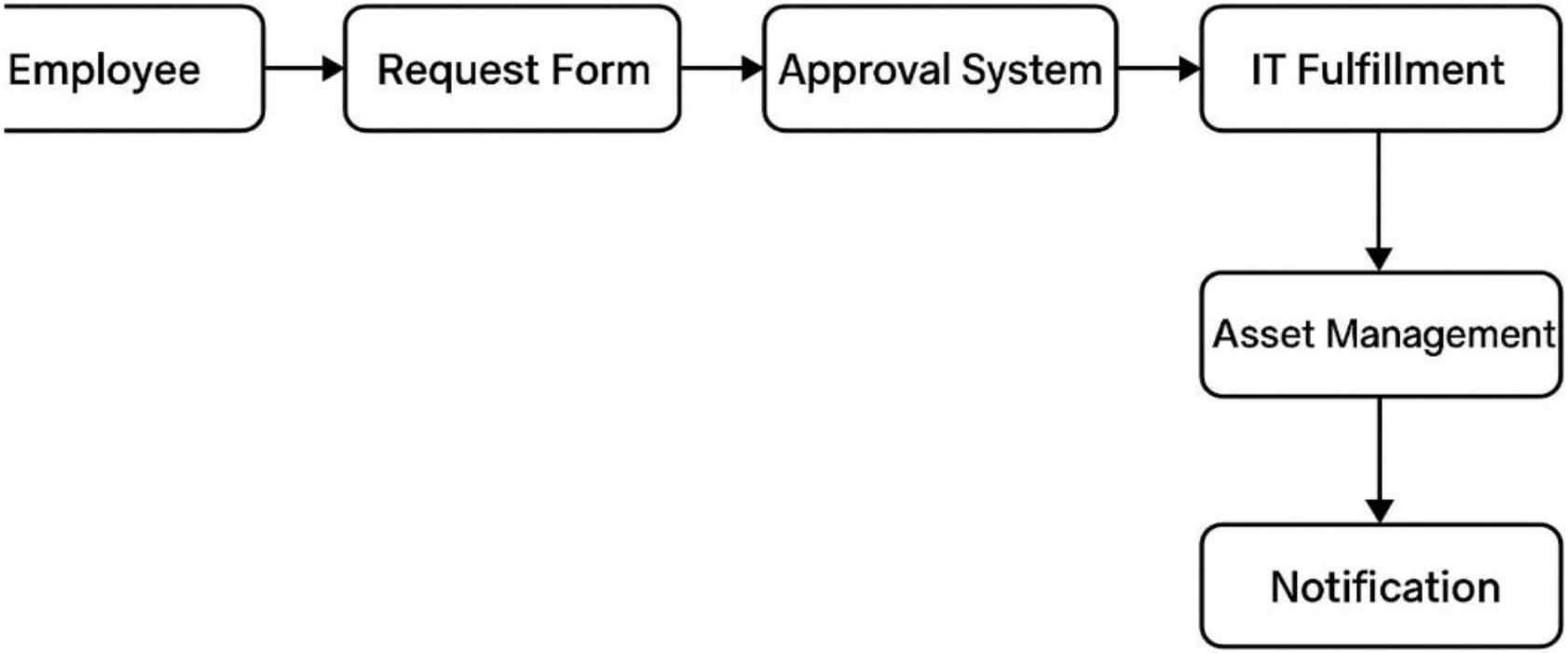
## Purpose:

To design an efficient solution that digitizes attendance tracking, monitors academic performance, and automates report generation to support students, teachers, and administrators.

## System Overview:

The system will include:

- Biometric or QR-based attendance module
- Performance tracking dashboard (grades, participation, assignments)
- Admin panel for student/staff management




## Design components:

| S.NO | NAME | DETAILS |
|---|---|---|
| **1.** | Data Flow Diagram (DFD): | Illustrates how data moves between students, teachers, the database, and analytics modules. |

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| **2.** | Entity-Relationship Diagram (ERD): | Models the database structure: Students, Courses, Attendance, Grades, Users. |
| **3.** | Use Case Diagram: | Shows interactions for stakeholders like Admin, Teacher, and Student. |
| **4.** | System Architecture: | A 3-tier architecture: Presentation (UI), Logic (Backend API), Data (Database). |

## Solution Description:

Implement a centralized digital request system to manage resource requests within the institution. Features include:

- Online request forms for faculty, students, and staff.
- Automated approval workflows (HOD, admin, etc.).
- Integration with inventory and asset records.
- Real-time tracking, status updates, and notifications.
- Audit logs and reporting tools for transparency.

## Conclusion:

The proposed solution creates a transparent, efficient, and trackable request system tailored to an educational setting. It reduces administrative overhead and ensures timely delivery of resources to staff and students, enhancing productivity and institutional effectiveness.