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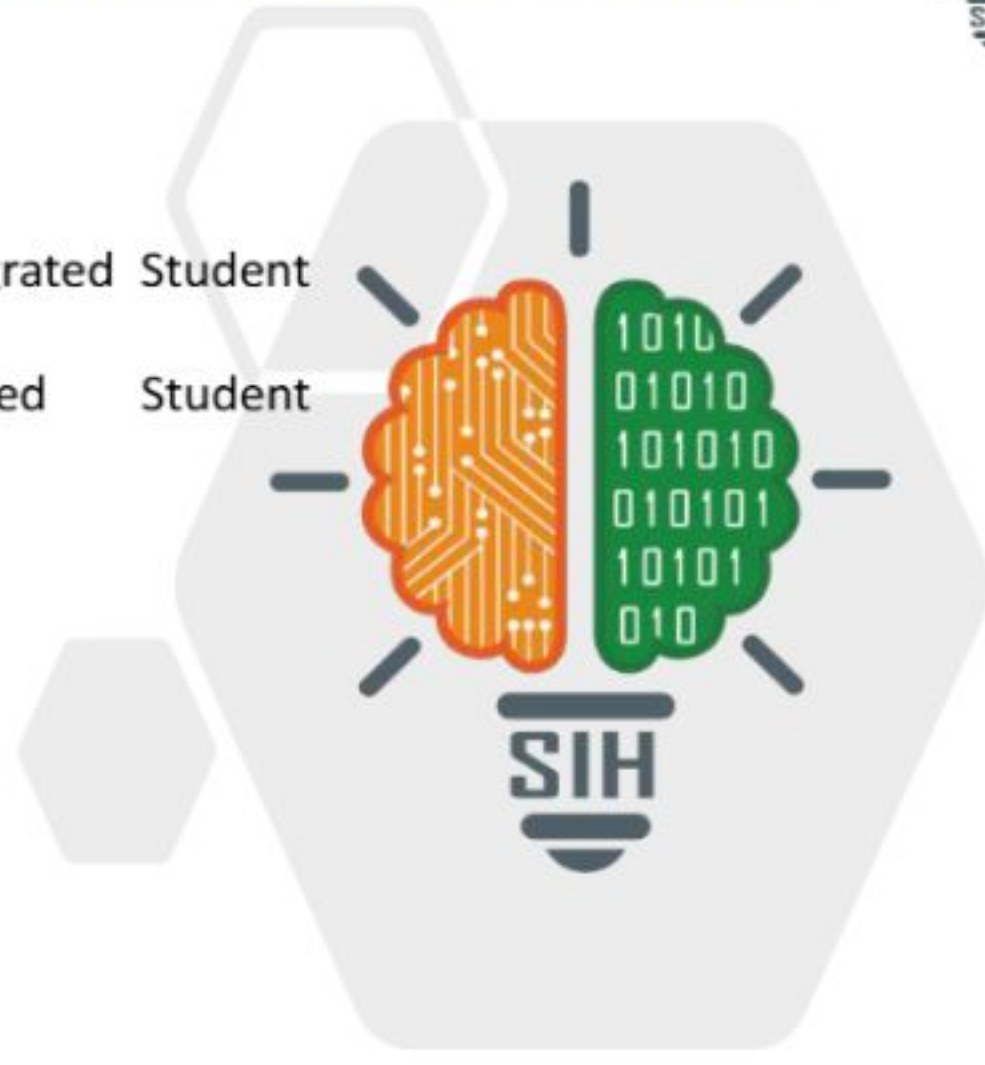
- **Problem Statement ID** –25103
- **Problem Statement Title-** ERP-based Integrated Student Management systemERP-based Integrated Student Management system
- **Theme-**Smart Automation
- **PS Category-** Software
- **Team ID-**
- **Team Name (Team Rocket)**



Development of a Digital Mental Health and Psychological Support System for Students in Higher Education

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❖Proposed Solution

Proposed Solution: Development of a **centralized ERP platform** integrating academic, administrative, and extracurricular activities.
Modules for **admissions, attendance, timetable, exams, results, fees, hostel, library, placements** in one system.
Role-based dashboards for students, faculty, and administration.

Mobile-friendly interface with notifications and real-time updates.

Detailed Explanation:

The ERP-based Integrated Student Management System will act as a **one-stop digital platform** for all academic and administrative activities. It will integrate multiple services such as **admission, attendance, examinations, fees, hostel, library, and placements** into a single portal, reducing the need for separate systems. Students, faculty, and administrators will have **role-based access dashboards** to manage their tasks effectively.

TECHNICAL APPROACH

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Technologies to be Used:rontend: Frontend: ReactJS / Angular (Web), Flutter / React Native (Mobile)
Backend: Node.js / Django / Spring Boot, REST APIs
Database: MySQL / PostgreSQL, MongoDB
Cloud & Hosting: AWS / Azure / Google Cloud
Security: RBAC, OAuth 2.0, Data Encryption
Analytics: Power BI / Tableau
Security: End-to-end encryption, role-based access, anonymous login options.

Methodology / Process:Requirement Analysis: Collect needs from students, faculty, and admin.
System Design: Define ERP architecture and workflow modules.
Module Development: Build core modules (admission, attendance, exams, fees).
Integration: Link library, hostel, and placement modules.
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FEASIBILITY AND VIABILITY

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Feasibility: Technical- Can be implemented using existing ERP frameworks & cloud infrastructure.
Operational: Easy adoption due to role-based dashboards.
Economic: Reduces paperwork & duplication, making it cost-effective in long term.
Scalability: Can be extended across institutions with modular design.

Potential Challenges:

Resistance to shift from manual/legacy systems.Data migration from existing records.Ensuring user training and adoption.Maintaining data privacy & security.

Strategies to Overcome Challenges:

Conduct **training workshops** for faculty & staff.
Ensure **step-by-step migration** with backups.
Provide **24/7 technical support** during rollout.

IMPACT AND BENEFITS

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Potential Impact:

Streamlined academic & administrative processes.
Reduced paperwork, errors, and redundancy.
Faster decision-making with real-time analytics.

Benefits:For Students: One-stop solution for academics, exams, fees, placements.
For Faculty/Admin: Automated reporting, reduced workload.
For Institution: Transparency, efficiency, and scalability.

RESEARCH AND REFERENCES

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Case studies of ERP adoption in universities (SAP, Oracle, TCS iON).

Research papers on **Higher Education ERP systems** and their effectiveness.

Government push for **Digital India & NEP 2020** supporting tech-enabled campuses.

Surveys showing ERP reduces **admin time by up to 40%** in universities.