**Live Project 1 Part 1**

**Business Case Document –**

**1. Why is this project initiated?**

The college currently relies on manual or semi-automated systems, leading to inefficiencies in data management and communication. Data is scattered across departments, making it difficult to access and maintain consistency.

The increasing complexity of college operations demands a centralized platform to streamline processes. This project aims to modernize operations, improve accessibility, and enhance user experience for students, staff, and alumni.

**2. What are the current problems?**

* Fragmented data management creates inefficiencies and makes it challenging to retrieve updated records for students, staff, and events.
* Alumni engagement and placement tracking are inconsistent, missing opportunities for collaboration and support.
* Manual tracking of fees, inventories, and visits leads to errors and delays in decision-making.
* Communication gaps between stakeholders result in confusion during event scheduling and coordination.
* Repetitive tasks consume valuable administrative time, reducing overall productivity.

**3. With this project, how many problems could be solved?**

The College Management System Application addresses the following problems:

* Centralized data management will resolve inefficiencies and provide seamless access to accurate records across departments.
* Alumni and placement tracking will improve through an organized and accessible system.
* Automation of fee records, inventory tracking, and event scheduling will eliminate errors and delays.
* Enhanced communication channels will ensure smooth coordination among students, staff, and administration.
* Administrative workload will reduce significantly, boosting productivity and efficiency.

**4. What are the resources required?**

**Human Resources:**

* Project Manager
* Business Analyst
* Developers
* UI/UX Designer
* Database Administrator
* Network Admin
* Testers

**Technological Resources:**

* Web and mobile application development tools
* Cloud servers for hosting the application
* Security protocols to ensure data privacy and compliance
* Databases to store customer, flight, and booking information

**Financial Resources:**

* Budget of **2 Crores INR**

**Time Resources:**

* **18 months** to complete the project

**5. How much organizational change is required to adopt this technology?**

Moderate organizational change is required, including:

* Workflow adaptations are needed to align with the new system’s processes.
* Staff and administrators require training on system functionalities and best practices.
* Communication channels will shift to centralized platforms, requiring buy-in from all stakeholders.
* Resistance to change might arise, but proactive engagement and support can mitigate challenges.
* A phased implementation plan will minimize disruptions during the transition.

**6. Time frame to recover ROI?**

The estimated time frame to recover the return on investment (ROI) is **12-18 months**, based on the following:

* Savings from reduced administrative workload and error correction will contribute to faster recovery.
* Improved alumni engagement and placements can boost college reputation, driving long-term financial gains.
* The system’s scalability ensures sustainable benefits over time.
* Ongoing monitoring will ensure continued value realization.

**7. How to identify Stakeholders?**

The stakeholders for this project are categorized as follows:

**a. Project Stakeholders:**

* Project Manager
* Developers
* Testers
* Database and Network Administrators
* Students, Faculty
* Administrative staff and Department Head

**b. Business Stakeholders:**

* College Management
* Placement Officers
* Coordinators

**c. Third-Party Stakeholders:**

* External vendors
* Alumni
* Event Organizers

### **Document 2: Business Analyst (BA) Strategy Document**

#### ****Steps to Complete a Project****

#### **1. Requirement Gathering and Analysis (Initiation Phase)**

#### **In the Waterfall model, this phase is crucial as it sets the foundation for the entire project. My role as a BA began here. I conducted stakeholder interviews and workshops to gather high-level requirements. This included understanding the business objectives, scope, and constraints of the project.**

#### **To ensure we didn’t miss anything critical, I employed **elicitation** **techniques** like brainstorming sessions, document analysis, and even job shadowing where needed. Once I collected the requirements, I worked with stakeholders to validate and prioritize them, ensuring we were aligned from the start. This phase also involved identifying potential risks and dependencies.**

#### **2. System Design (Documentation and Review Phase)**

#### **Once the requirements were finalized, the next phase was to translate those into actionable system designs. My job here was to document the requirements in two key deliverables:**

#### **• **BRD (Business Requirements Document)**: This captured the "what" of the project— what the business needed.**

#### **• **FRS (Functional Requirement Specification)**: This focused on the "how"—how the system would fulfill the business needs.**

#### **After preparing these documents, I organized **review meetings** with stakeholders to walk them through the details. During these sessions, I clarified doubts, incorporated feedback, and ensured everyone was on the same page. Once the documentation was finalized, I facilitated the formal sign-off process to lock the scope.**

#### **3. Implementation (Development Phase)**

#### **In this phase, the developers started building the system based on the FRS. Although my primary responsibility was in the earlier stages, I remained involved here by providing **requirement clarifications** whenever needed. For example, if the developers encountered ambiguities, I facilitated meetings with stakeholders to resolve them quickly.**

#### **I also collaborated with the QA team to ensure the test cases aligned with the requirements. This was critical to ensure that the system would meet user expectations during testing.**

#### **4. Verification (UAT and Testing Phase)**

#### **Once the system was developed, we moved into the testing phase. As the BA, I worked closely with the QA and user teams during **User Acceptance Testing (UAT).** My role here was to ensure that the system met all documented requirements. I facilitated UAT sessions with end users, guiding them on how to test the system and providing support where needed.**

#### **During this phase, we received feedback from users, which sometimes led to **change requests.** To handle these, I coordinated with the **Change Control Board (CCB)** to evaluate the impact of changes on the project’s timeline, scope, and budget. Only critical changes were approved to keep the project on track.**

#### **5. Deployment and Maintenance (Project Closure Phase)**

#### **In the final phase, we deployed the system to production. My role here was to ensure that everything was properly handed over to the end users and support teams. I conducted **knowledge transfer sessions** to explain how the system worked and shared all relevant documentation.**

#### **I also ensured that we obtained formal sign-offs on the UAT and project acceptance forms. This marked the official closure of the project. Finally, I documented lessons learned and archived all project artifacts for future reference.**

#### ****1. Elicitation Techniques Used****

* **Interviews: Directly engage with stakeholders to understand requirements.**
* **Workshops: Conduct collaborative sessions for brainstorming and consensus.**
* **Surveys/Questionnaires: Gather input from a broader audience efficiently.**
* **Observation: Study existing processes to identify pain points.**
* **Prototyping: Create mock-ups for stakeholder validation.**

**2. Stakeholder Analysis (RACI/ILS)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activity** | **Business Analyst** | **Project Manager** | **Technical Head** | **Developers** | **QA Team** | **Department Head** | **Students** | **College Administration** |
| **Project Planning & Scope Definition** | R | A | C | C | C | C | C | I |
| **System Design** | C | A | R | C | C | C | C | I |
| **Development** | C | A | A | R | C | C | C | I |
| **System Integration** | C | A | R | C | C | C | C | I |
| **Testing and Quality Assurance** | C | A | C | C | R | C | C | I |
| **Deployment & Release Management** | C | A | R | C | C | C | C | I |
| **UAT** | R | A | C | C | C | C | C | I |
| **Reporting & Analytics** | R | A | C | C | C | C | C | I |

#### ****3. Documents to Write****

* Business Requirements Document (BRD).
* Functional Requirement Specification (FRS).
* Stakeholder Register.
* Change Request Form.
* Project Status Reports.
* UAT Plan and Sign-off Document.

#### ****4. Process to Follow to Sign Off on Documents****

1. Present the draft document to stakeholders in a review meeting.
2. Incorporate feedback from all stakeholders.
3. Obtain verbal or email confirmation from key stakeholders that the document meets their expectations.
4. Submit the final version for formal approval, with signatures from stakeholders.

#### ****5. How to Take Approvals from the Client****

* Schedule regular review meetings to walk through the deliverables.
* Share finalized documents via email or a collaboration platform (e.g., SharePoint, Jira).
* Collect formal approvals through email acknowledgments or e-signature tools.

#### ****6. Communication Channels to Establish and Implement****

* Tools like Slack, Microsoft Teams, or emails for day-to-day team communication.
* Weekly stand-up meetings to discuss progress
* Weekly progress reports to the committee.
* Monthly review meetings with the client for milestone updates.

#### ****7. How to Handle Change Requests****

1. Document the change request in a formal Change Request Form.
2. Assess the impact of the change on scope, time, and budget.
3. Present the impact analysis to stakeholders for decision-making.
4. If approved, update the project plan and inform all stakeholders.
5. Ensure traceability by updating the RTM with the change.

#### ****8. How to Update the Progress of the Project to the Stakeholders****

* Bi-weekly progress reports via email.
* Monthly dashboards showcasing key metrics like milestones completed, pending tasks, and risks.
* Regular status meetings to discuss updates, risks, and mitigation plans.

#### ****9. How to Take Sign-Off on the UAT****

* Organize a UAT (User Acceptance Testing) phase with test scenarios and cases shared in advance.
* Guide stakeholders through the testing process and collect their feedback.
* Resolve all critical issues raised during UAT.
* Obtain formal acceptance and sign-off using the **Client Project Acceptance Form.**

**Document 3- Functional Specifications**

|  |  |
| --- | --- |
| **Field** | **Details** |
| **Project Name** | College Management System |
| **Customer Name** | ABC Educational Institution |
| **Project Version** | 1.0 |
| **Project Sponsor** | John Smith |
| **Project Manager** | Jane Doe |
| **Project Initiation Date** | January 1, 2025 |

**Functional Requirement specifications:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** | **Priority** |
| FR0001 | Student Registration | Allow students to register online by filling a form with personal details. | 10 |
| FR0002 | Course Management | Enable administrators to add, update, and remove courses offered by the college | 10 |
| FR0003 | Fee Payment System | Provide an online portal for students to pay their fees securely. | 10 |
| FR0004 | Attendance Tracking | Enable teachers to work and track student attendance digitally. | 10 |
| FR0005 | Staff Management | Maintain records of all staff members, including roles and departments. | 8 |
| FR0006 | Event Calendar | Display an interactive calendar for all college events and activities. | 9 |
| FR0007 | Lab Inventory Management | Track and manage all lab equipment, tools, and resources. | 9 |
| FR0008 | Alumni Portal | Provide a platform for alumni to connect and contribute to placements. | 9 |
| FR0009 | Placement Records | Maintain detailed records of student placements for each department. | 9 |
| FR0010 | Expert Lecture Records | Record details of expert lectures conducted across various departments. | 9 |
| FR0011 | Industrial Visit Records | Store information about industrial visits organized for students. | 8 |
| FR0012 | Notification System | Send automated notifications for important updates and deadlines. | 10 |
| FR0013 | Performance Analytics | Provide analytics on student performance based on grades and attendance. | 7 |
| FR0014 | Document Management | Allow uploading and downloading of important documents, like syllabi. | 9 |
| FR0015 | Role-Based Access Control | Ensure secure access to features based on user roles. | 10 |
| FR0016 | Multi-Language Support | Offer interface support in multiple languages for accessibility. | 6 |
| FR0017 | Feedback Support | Enable students to provide feedback on courses and faculty. | 7 |
| FR0018 | Help Desk and Support | Provide an integrated help desk for resolving user issues. | 8 |
| FR0019 | Real-Time Reporting | Generate real-time reports on various administrative and academic activities. | 9 |
| FR0020 | Mobile App Support | Offer a mobile-friendly version for accessing key features on the go. | 8 |

**Document 4 - Requirement Traceability Matrix**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Des** | **Design** | **D1** | **T1** | **D2** | **T2** | **UAT** |
| FR0001 | Student Database | Centralized storage of student records | Yes | Yes | Pending | Yes | Yes | Pending |
| FR0002 | Staff Management | Manage staff profiles and roles | Yes | No | Pending | Pending | No | Pending |
| FR0003 | Event Tracker | Tracks and schedule college events | Pending | Yes | No | No | Yes | Yes |
| FR0004 | Fee Management | Automate fee collection and tracking | Yes | Yes | Yes | Pending | Yes | Pending |
| FR0005 | Placement Records | Maintain placement details | Pending | Pending | Yes | No | No | No |
| FR0006 | Alumni Portal | Support alumni engagement | No | Yes | No | Pending | Pending | Yes |
| FR0007 | Inventory Tracker | Manage lab and equipment inventory | Yes | Yes | Yes | Yes | Yes | Yes |
| FR0008 | Notifications | Send notifications to users | Yes | Pending | No | Pending | Yes | Pending |
| FR0009 | Field Visits | Record and track field visits | Pending | Yes | Yes | No | Yes | Yes |
| FR0010 | Reports Module | Generate reports for analysis | Yes | Pending | Yes | Yes | Pending | No |
| FR0011 | Authentication | Secure user login and authentication | Yes | Yes | Yes | Yes | Yes | Yes |
| FR0012 | Dashboard | User-friendly dashboard interface | Pending | No | Pending | Pending | Pending | Pending |
| FR0013 | Timetable Manager | Create and update timetables | No | Pending | Pending | No | Yes | Yes |
| FR0014 | Role Management | Manage user roles and permissions | Yes | Yes | Yes | Yes | Pending | No |
| FR0015 | Audit Logs | Maintain system audit trails | Pending | Yes | Pending | Pending | Pending | Yes |
| FR0016 | Resource Booking | Allow booking of resources like labs | No | Pending | Pending | No | Yes | Yes |
| FR0017 | Attendance System | Track attendance of students and staff | Yes | Yes | Yes | Yes | Pending | Pending |
| FR0018 | Feedback Module | Collect and store user feedback | Pending | No | Pending | Yes | Yes | Yes |
| FR0019 | Alerts System | Trigger alerts for deadlines/events | Yes | Yes | Pending | Pending | Yes | No |
| FR0020 | Mobile Integration | Enable mobile app compatibility | No | Pending | No | Pending | Pending | Yes |

**Document 5 – BRD**

**College Management System**

**Version 0.1**

**Author – Prathamesh Chaudhari**

Contents

[1. Document Revisions](#_Toc454914111)

[2. Approvals](#_Toc454914112)

[3. RACI Chart for This Document](#_Toc454914113)

[RACI Chart](#_Toc454914115)

[4. Introduction](#_Toc454914116)

[4.1. Business Goals](#_Toc454914117)

[4.2. Business Objectives](#_Toc454914118)

[4.3. Business Rules](#_Toc454914119)

[4.4. Background](#_Toc454914120)

[4.5. Project Objective](#_Toc454914121)

[4.6. Project Scope](#_Toc454914122)

[4.6.1. In Scope Functionality](#_Toc454914123)

[4.6.2. Out Scope Functionality](#_Toc454914124)

[5. Assumptions](#_Toc454914125)

[6. Constraints](#_Toc454914126)

[7. Risks](#_Toc454914127)

[Technological Risks](#_Toc454914128)

[Skills Risks](#_Toc454914129)

[Political Risks](#_Toc454914130)

[Business Risks](#_Toc454914131)

[Requirements Risks](#_Toc454914132)

[Other Risks](#_Toc454914133)

[8. Business Process Overview](#_Toc454914134)

[8.1. Legacy System (AS-IS)](#_Toc454914135)

[8.2. Proposed Recommendations (TO-BE)](#_Toc454914136)

[9. Business Requirements](#_Toc454914137)

**1. Document Revisions**

|  |  |  |
| --- | --- | --- |
| **Date** | **Version Number** | **Document Changes** |
| 02/01/2024 | 0.1 | Initial Draft |
| 05/01/2024 | 0.2 | Added stakeholder inputs |
| 10/01/2024 | 1.1 | Updated with feedback from stakeholders |
| 12/01/2024 | 1.2 | Finalized version for approval |

**2.Approvals**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Name** | **Title** | **Signature** | **Date** |
| Project Sponsor | John Doe | Chief Operating Officer |  | 02/01/2024 |
| Business Owner | Sarah Smith | Head of Operations |  | 02/01/2024 |
| Project Manager | Michael Brown | Project Manager |  | 02/01/2024 |
| System Architect | Emily Davis | System Architect |  | 02/01/2024 |
| Development Lead | Alex Johnson | Lead Developer |  | 02/01/2024 |
| User Experience Lead | Rachel Green | UX Lead |  | 02/01/2024 |
| Quality Lead | Liam White | QA Lead |  | 02/01/2024 |

**3. RACI Chart for This Document**

* **( \* )Authorize** - Has ultimate signing authority for any changes to the document.
* **(R)Responsible** - Responsible for creating this document.
* **Accountable** - Accountable for accuracy of this document (for example, the project manager)
* **(S) Supports** - Provides supporting services in the production of this document
* **(C ) Consulted -** Provides input (such as an interviewee).
* **( I ) Informed** - Must be informed of any changes.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Position** | **\*** | **R** | **A** | **S** | **C** | **I** |
| Prathamesh [BA] | Business Analyst |  | ✔ | ✔ |  |  | ✔ |
| John Doe | COO | ✔ |  |  |  | ✔ | ✔ |
| Sarah Smith | Head of Operations |  |  | ✔ | ✔ |  | ✔ |
| Michael Brown | Project Manager |  | ✔ | ✔ | ✔ | ✔ | ✔ |
| Emily Davis | System Architect |  |  |  | ✔ | ✔ | ✔ |
| Alex Johnson | Lead Developer |  |  |  | ✔ | ✔ | ✔ |
| Rachel Green | UX Lead |  |  |  | ✔ | ✔ | ✔ |
| Liam White | QA Lead |  |  |  | ✔ | ✔ | ✔ |

### **4. Introduction**

#### 4.1. Business Goals

#### The primary business goal of this College Management System is to streamline college operations by implementing an efficient, centralized management system. This system addresses the organization’s need to enhance data accessibility, automate processes, and improve stakeholder communication. By integrating student, staff, event, and inventory management, it ensures seamless coordination and resource optimization. The solution also supports alumni engagement and placement tracking, aligning with the institution’s objective to foster academic excellence and future career opportunities for students.

#### 4.2. Business Objectives

To achieve the business goals, the following functionalities are incorporated into the system:

* **Centralized Management System**: Develop a unified platform to manage all aspects of college operations, including student records, staff details, inventory, and financial data.
* **Automation of Processes**: Streamline manual processes such as fee collection, timetable management, and event scheduling to improve efficiency and reduce errors.
* **Improved Reporting and Analysis**: Provide robust reporting tools for real-time insights into student performance, placement records, and departmental activities to support data-driven decision-making.
* **Alumni and Placement Support**: Build a strong alumni network to support placements, conduct expert lectures, and foster industry connections for students.
* **Real-Time Monitoring**: Implement tracking features for lab inventory, events, and deadlines to ensure better resource utilization and timely updates.
* **User-Friendly Interface**: Design an intuitive interface accessible to all users, ensuring ease of use for students, faculty, and administrative staff.

#### 4.3. Business Rules

* **Data Confidentiality: Only authorized users can access sensitive student, staff, and financial records.**
* **Alumni Collaboration: Alumni must be provided access only for mentoring, expert lectures, and placement-related activities.**
* **Placement Data Updates: Placement records must be updated after every placement cycle, ensuring accurate reporting for stakeholders.**
* **Timetable Submission: Departments must submit and approve timetables a week before each semester begins.**

#### 4.4. Background

#### The business challenges faced by a college include fragmented systems for student management, staff information, inventory control, and event planning, leading to operational inefficiencies. Time-intensive administrative tasks, manual record-keeping, and lack of a dedicated platform limit alumni engagement and hinder effective reporting. The project aims to automate essential processes, provide a centralized data management system, and introduce an alumni module for better collaboration. The system will also improve communication through timely notifications for students, faculty, and staff. The initiative is designed for scalability, ensuring readiness for future needs and technological advancements.

#### 4.5. Project Objective

* Develop a centralized platform to manage all college operations efficiently.
* Automate core administrative tasks, including fee collection, attendance, and inventory management.
* Enable seamless communication between students, staff, and alumni through notifications and alerts.
* Provide real-time tracking for events, deadlines, and inventory updates.
* Facilitate alumni engagement for placements, mentorship, and expert lectures.
* Integrate reporting tools for data-driven decision-making and performance tracking.
* Ensure secure and role-based access to sensitive data and system features.
* Design the system for compatibility with future upgrades and integrations.

#### 4.6. Project Scope

##### 4.6.1. In Scope Functionality

* **Centralized management of student, staff, and faculty records.**
* **Automation of fee collection, attendance tracking, and timetable management.**
* **Real-time tracking of lab inventory, events, and departmental activities.**
* **Dedicated alumni portal for placements, mentorship, and expert lectures.**
* **Comprehensive placement record management for all departments.**
* **Reporting and analytics for performance, activities, and resource utilization.**
* **Role-based access control and secure data storage.**
* **Notification and alert system for students, staff, and administration.**

##### 4.6.2. Out of Scope Functionality

* **Integration with third-party Learning Management Systems (LMS).**
* **Development of a mobile application version of the system.**
* **Integration of AI-based personalized learning features.**
* **Advanced predictive analytics for academic performance.**

### **5. Assumptions**

* The college will provide all necessary data for students, staff, and inventory in a timely manner.
* Stakeholders will actively participate in requirement elicitation, feedback, and approval processes.
* The system will be used by authorized personnel only, with access based on predefined roles.
* Adequate hardware and network infrastructure will be available to support the system.
* Alumni participation in the platform will be voluntary and encouraged by the college.
* The system will adhere to existing data protection and regulatory compliance standards.
* Training sessions will be conducted for users to ensure smooth adoption of the system.

### **6. Constraints**

* **Budget Limitation**: The project must be completed within the allocated budget of ₹2 crores.
* **Time Constraint**: The system development and implementation must be completed within 18 months.
* **Resource Availability**: Limited availability of human resources, including developers, QA testers, and system administrators.
* **Technical Infrastructure**: The project relies on existing college IT infrastructure, which may require upgrades to support the new system.

### **7. Risks**

#### Technological Risks

#### **The project faces technological risks, including compatibility challenges with the college's existing infrastructure, which may result in deployment delays and additional costs for necessary upgrades. Another concern is the potential for system performance issues during peak usage, which could lead to operational inefficiencies and user dissatisfaction. These risks will be mitigated through early infrastructure assessments and rigorous stress testing of the system**

#### Skills Risks

* A significant skills risk is the potential shortage of experienced developers and QA testers, which could delay the project or compromise its quality. Additionally, there is a risk that end-users may lack adequate training, leading to resistance in adopting the new system. To address these, the project will consider outsourcing critical tasks and conducting comprehensive user training programs.

#### Political Risks

* The project might encounter political resistance from various college departments reluctant to transition to the new system. This could delay implementation and reduce the system’s effectiveness. Furthermore, any changes in college administration during the project timeline may shift priorities or alter the project scope. Stakeholder engagement and contingency planning will be used to manage these risks.

#### Business Risks

* Business risks include potential budget overruns due to unforeseen requirements, which could result in compromises on the project's scope or quality. Additionally, if the project is canceled, it could lead to wasted resources and a loss of stakeholder trust. To mitigate these risks, contingency funds will be set aside, and alignment with college goals will be ensured.

#### Requirements Risks

* Inaccurate or incomplete capture of user requirements poses a risk, potentially causing rework and project delays. Additionally, evolving requirements during the development phase could lead to increased costs and scope creep. To minimize these risks, iterative validations and stakeholder reviews will be conducted, along with the establishment of a Change Control Board (CCB).

#### Other Risks

* Other risks include potential delays due to external approvals, such as regulatory compliance, which could extend the project timeline. Data migration from legacy systems is also a concern, as it could result in data loss or corruption. These risks will be mitigated by incorporating buffer time into the schedule and developing a thorough migration and backup plan.

### **8. Business Process Overview**

#### 8.1. Legacy System (AS-IS)

The existing college management system relies heavily on manual or semi-automated processes that involve disparate systems. These processes are inefficient, error-prone, and lack integration, leading to delays and inconsistencies.

Key Challenges in Legacy System:

* Manual record-keeping for students, staff, and inventory leads to inaccuracies and delays.
* Lack of real-time access to critical data hinders decision-making.
* Separate systems for fees, events, placements, and alumni, creating data silos.
* Poor tracking of industrial visits and expert lectures.
* Limited communication channels for updates and notifications.

#### 8.2. Proposed Recommendations (TO-BE)

The proposed **College Management system** addresses legacy system challenges by implementing a centralized and integrated platform that automates and optimizes critical business processes.

**Key Improvements in the Proposed System:**

* **Automation and Centralization**: All data (students, staff, inventory, placements, etc.) consolidated into a single platform for easy access and management.
* **Real-Time Access**: Real-time dashboards for administrative decisions, fee status tracking, and inventory updates.
* **Integrated Modules**: Seamless interaction between modules like student records, fees, placements, and events.
* **Enhanced Communication**: Notification system to keep students, staff, and alumni informed.
* **Data Accuracy and Security**: Role-based access control ensures secure and accurate data handling.

# **9. Business Requirements –**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No** | **Business Requirement** | **Functionality** | **Priority** |
| 1 | The system must efficiently create, store, and manage comprehensive student profiles, including personal details, academic records, and contact information. | Student Information Management | High |
| 2 | The system must maintain up-to-date staff profiles, including roles, qualifications, schedules, and department assignments. | Staff Information Management | High |
| 3 | The system should enable the recording, updating, and monitoring of fee transactions, including pending dues and payment history. | Fee Management | High |
| 4 | The system should provide a detailed and up-to-date inventory management solution for tracking lab equipment, consumables, and resources. | Inventory Management | Medium |
| 5 | The system should log and provide information about past, ongoing, and upcoming college events, including schedules and participants. | Event Management | Medium |
| 6 | The system must manage and maintain placement records for students, categorized by departments and placement year, to track employment statistics. | Placement Records Management | High |
| 7 | Alumni should be able to register, update their details, and participate in college activities like expert lectures or networking events. | Alumni Management | Medium |
| 8 | The system should allow scheduling and monitoring of expert lectures, including topics, speakers, and student attendance tracking. | Expert Lecture Management | Medium |
| 9 | The system must track and manage the scheduling, logistics, and reports of industrial and field visits for various departments. | Industrial Visit Management | Medium |
| 10 | Provide administrative users with real-time dashboards to view key metrics, generate reports, and access critical information for decision-making. | Administrative Dashboard | High |
| 11 | Ensure that users have access to the system based on their role, with appropriate permissions to protect sensitive data. | Role-Based Access Control | High |
| 12 | Implement a robust notification system to send alerts and reminders to users about important updates, deadlines, or announcements. | Notification Management | Medium |
| 13 | Provide analytical reports for decision-making. | Reporting and Analytics | Medium |
| 14 | Ensure data backup and recovery features. | Data Backup and Recovery | High |
| 15 | Allow for customization of system modules. | Customization | Low |
| 16 | Integrate with external systems for data sharing. | System Integration | Medium |
| 17 | Ensure mobile compatibility for student access. | Mobile Accessibility | Medium |
| 18 | Provide support for multiple languages to cater to a diverse user base, ensuring inclusivity and better usability. | Localization | Low |
| 19 | Allow students and staff to upload, store, and manage digital documents, such as certificates and reports, within their respective profiles. | Document Management | Medium |
| 20 | Implement tools to track the progress of ongoing projects and tasks, ensuring accountability and timely deliverables. | Project Management | Medium |