Assignment # 02

Business Requirement Document

For

InfoTech Classroom (ITC)

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Submitted To:

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1. Introduction:

1.1. Purpose:

This Business Requirement Document (BRD) outlines the requirements for the InfoTech Classroom (ITC) system designed for the Institute of Information Technology. The document serves as a formal agreement between stakeholders and the development team, ensuring a shared understanding of the project's objectives and functionalities.

1.2. Project Scope:

The ITC system aims to enhance academic and administrative efficiency by providing a comprehensive web platform that includes:

- User Management: Secure creation and management of user accounts for students and teachers.
- Course Management: Tools for creating, managing, and assigning courses, including unique class codes for registration.
- Attendance Tracking: Features for teachers to take attendance and generate reports.
- File Sharing: Capability for teachers to upload and share course-related documents.
- Reporting and Analytics: Comprehensive reporting features to monitor performance.
- Auto Question Paper Generator Module: An AI-driven feature that allows teachers to automatically generate question papers based on uploaded course materials.

2. Stakeholders:

- **Administrators:** Manage user accounts and oversee course offerings.
- **Teachers:** Utilize the system to manage courses, track attendance, and share materials.
- **Students:** Access course materials, register for classes, and view their attendance records.

3. Functional Requirements:

Requirement ID	Description	Priority
FR1	User Authentication and Authorization	High
FR2	Course Registration using unique class codes	High
FR3	Attendance Management tools for teachers	High
FR4	File Hosting for course materials	Medium
FR5	Question Paper Generation based on shared materials	High

4. Non-Functional Requirements:

- **Performance:** The system should support at least 500 concurrent users without degradation of performance.
- **Security:** All user data must be encrypted, and secure access protocols must be implemented.
- **Usability:** The interface must be intuitive, enabling users with minimal technical skills to navigate effectively.

5. System Overview:

The InfoTech Classroom (ITC) will utilize an Object-Oriented Programming (OOP) approach alongside Agile methodologies to ensure flexibility and responsiveness to stakeholder feedback. The system will cater to three primary user roles:

- **Administrators**
- **Teachers**
- **Students**

6. Design Methodology:

The ITC system will be developed using an Object-Oriented Programming (OOP) approach. This methodology is chosen for its ability to create modular, reusable, and maintainable code, which is essential for a project of this scale. OOP principles such as encapsulation, inheritance, and polymorphism will be utilized.

The Agile software process model will be employed for this project. This iterative approach allows for continuous feedback from stakeholders, enabling adaptation to changing requirements while delivering functional software in increments.

7. User Roles & Responsibilities:

7.1. Administrators:

- Manage user accounts (create, update, delete).
- Approve course creation requests from teachers.
- Generate reports on attendance and performance metrics.

7.2. Teachers:

- Create courses with unique class codes.

- Take attendance during classes.

- Upload course materials such as presentations and documents.

- Utilize the Auto Question Paper Generator module to create assessments based on uploaded materials.

7.3. Students:

- Register for courses using class codes provided by teachers.

- Access uploaded course materials.

- View their attendance records.

8. Key Features

8.1. User Management:

A comprehensive system allowing administrators to create and manage user accounts securely.

8.2. Course Management:

Tools enabling teachers to create courses while administrators oversee approvals.

8.3. Attendance Tracking:

Features allowing teachers to efficiently manage student attendance records.

8.4. File Sharing:

Functionality enabling teachers to upload documents relevant to their courses.

8.5. Auto Question Paper Generator Module:

This AI-driven module allows teachers to generate question papers automatically based on the content of shared PowerPoint presentations or other instructional materials uploaded by

them. The module will analyze the content structure and generate questions that align with the curriculum standards.

8.6. Reporting & Analytics:

Robust reporting capabilities that allow monitoring of academic performance metrics.

9. Conclusion:

This Business Requirement Document provides a comprehensive overview of the requirements for the InfoTech Classroom (ITC) system, including the newly added Auto Question Paper Generator Module powered by AI technology. It establishes a clear framework that aligns with stakeholders' expectations while detailing both functional and non-functional requirements essential for successful project execution.

The next steps involve stakeholder review and approval of this document to proceed with the development phase, ensuring that all functionalities meet educational needs effectively while enhancing the overall learning experience at the Institute of Information