Question bank

1. Workflow for Paper Creation:

Step 1: Select Department

- **Dropdown Menu:**
  - Options:

1. Department of Computer Science

BS-CS (Computer Science):

1. Data Structures and Algorithms
2. Object-Oriented Programming
3. Database Management Systems
4. Operating Systems
5. Artificial Intelligence
6. Computer Networks

BS-AI (Artificial Intelligence):

1. Introduction to Artificial Intelligence
2. Machine Learning
3. Deep Learning
4. Natural Language Processing
5. Robotics and Automation
6. Knowledge Representation and Reasoning

BS-CST (Cyber Security):

1. Introduction to Cybersecurity
2. Network Security
3. Ethical Hacking
4. Cryptography
5. Cybersecurity Risk Management
6. Security in Software Development

BS-DS (Data Science):

1. Introduction to Data Science
2. Statistical Methods and Data Analysis
3. Machine Learning for Data Science
4. Big Data Analytics
5. Data Visualization
6. Database Systems for Data Science

MS-CS (Computer Science):

1. Advanced Algorithms
2. Advanced Database Systems

3. Distributed Systems
4. Software Testing and Quality Assurance
5. Research Methodologies in CS
6. Advanced Topics in Artificial Intelligence

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2. Department of Software Engineering

BS-IT (Information Technology):

1. Web Development
2. Information Systems Management
3. Network Administration
4. Cybersecurity Principles
5. Mobile Application Development
6. Cloud Computing Fundamentals

BS-SE (Software Engineering):

1. Software Engineering Principles
2. Requirements Engineering
3. Software Architecture and Design
4. Agile Software Development
5. Software Project Management
6. Software Quality Assurance and Testing

MS-SE (Software Engineering):

1. Advanced Software Development Techniques
2. Software Metrics and Measurement
3. Software Process Improvement
4. Advanced Topics in Software Architecture
5. Secure Software Design
6. Research in Software Engineering

Step 2: Select Program

- Based on the department selection, show the relevant programs.

Step 3: Select Courses

- Display only the **courses assigned to the teacher for the current semester.**
- Use backend logic to pull this data dynamically.

Step 4: Select Semester Name

- Dropdown Options:
  - Fall 2025
  - Summer 2025
  - Spring 2025

o   (Future options can be dynamically added).

Step 5: Select Exam Type

- Dropdown Options:
    o   Quiz
    o   Midterm
    o   Final Term
    o   Assignment
    o   Class Participation

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2. Exam Type Customization:

If Quiz is Selected:

- **Additional Options:**
    o   Dropdown for Quiz 1 or Quiz 2.
    o   Set **maximum marks (5)** for each quiz.
    o   Show an error if the paper's total marks exceed or fall short of 5.

If Other Exam Types are Selected:

- Set predefined maximum marks as follows:
    o   Midterm: 20
    o   Final Term: 45
    o   Assignment: 15
    o   Class Participation: 10
- Show an error if the paper's total marks exceed or fall short of the set maximum.

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3. Paper Type Selection:

- **Option 1: MCQ-Based Paper**
    o   Form Options:
        1. **Question Text:** Input field for the question.
        2. **Answer Options:** Four text fields (a, b, c, d).
        3. **Correct Answer Selection:** Dropdown to choose the correct option (a, b, c, d).
        4. **CLO Mapping:** Dropdown to select a **CLO** (CLO1, CLO2, CLO3, CLO4).
        5. **PLO Mapping:** Dropdown to select a **PLO** (PLO1 to PLO12).
        6. **Domain Selection:** Dropdown with options:
            ▪ Cognitive
            ▪ Affective
            ▪ Psychomotor
        7. **Marks for Question:** Input field with validation to ensure the marks don't exceed the exam type's limit.
- **Option 2: Theoretical Paper**
    o   Form Options:
        1. **Question Text:** Input field for the question.

2. **CLO Mapping:** Dropdown to select a **CLO** (CLO1, CLO2, CLO3, CLO4).
3. **PLO Mapping:** Dropdown to select a **PLO** (PLO1 to PLO12).
4. **Domain Selection:** Dropdown with options:
    - Cognitive
    - Affective
    - Psychomotor
5. **Marks for Question:** Input field with validation to ensure the marks don't exceed the exam type's limit.

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4. Validation Rules:

1. **Mark Limits:**
    o Ensure total marks for the paper do not exceed the predefined maximum for the selected exam type.
    o Display an error message if the total is invalid.
2. **Course-Teacher Assignment Validation:**
    o Ensure the teacher can only create papers for courses assigned to them.
3. **Dropdown Validation:**
    o Ensure selections for CLO, PLO, and domain are mandatory for each question.

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5. User Interface (UI) Enhancements:

- **Dynamic Fields:** Show/hide fields based on previous selections (e.g., show "Quiz 1/Quiz 2" only if the quiz is selected).
- **Real-Time Validation:** Automatically calculate and display the total marks as the teacher adds questions.
- **Responsive Design:** Ensure the interface is mobile-friendly for ease of use.

At the end include paper print option