Exam Design System Requirements

Objective:

The objective of the system is to facilitate the design of exams by specifying questions, assigning them to chapters, and recommending an optimal exam based on specified criteria.

Functional Requirements:

1. **Course Specification:**

   - Allow users to specify the name of the course.

   - Users should also specify the number of chapters in the course.

2. **Question Specification:**

   - Users should be able to specify questions for each chapter.

   - Each question should have three choices, one of which is the correct answer.

   - Questions must have two parameters: difficulty (simple or difficult) and objective (reminding, understanding, creativity).

3. **Exam Design:**

   - Allow teachers to design an exam.

   - Teachers should specify:

       - The number of questions per chapter.

       - The total number of questions for each difficulty level (simple and difficult).

       - The total number of questions for each objective (reminding, understanding, creativity).

   - Based on the specified criteria, the system should recommend the optimal exam by selecting questions that meet the criteria.

Non-Functional Requirements:

1. **User Interface:**

   - The user interface should be user-friendly to facilitate easy navigation and interaction.

   - Forms for specifying course details, questions, and exam criteria should be clear and well-organized.

2. **Performance:**

   - The system should handle a large number of questions and chapters efficiently.

   - Response times for loading questions, assigning them to chapters, and recommending exams should be reasonable.

3. **Security:**

   - User authentication and authorization mechanisms should be implemented to ensure that only authorized users can access and modify course and exam data.

4. **Scalability:**

   - The system should be designed to scale with increasing numbers of courses, chapters, and questions.