**Requirements for an Employee Technical Certifications Module**

1. Core Functionalities:
   1. Certification Tracking:
      1. Ability to add, edit, and delete certifications for each employee.
      2. Tracking of certification expiration dates and renewal reminders.
      3. Integration with HR systems to automatically update employee profiles.
   2. Certification Library:
      1. A centralized repository of certifications, including:
         1. Certification name
         2. Issuing authority
         3. Required skills and knowledge
         4. Expiration date
         5. Renewal requirements
   3. Skill Gap Analysis:
      1. Identification of skill gaps based on current certifications and future organizational needs.
      2. Recommendations for relevant certifications to bridge skill gaps.
   4. Training and Development:
      1. Integration with Learning Management Systems (LMS) to track training courses related to certifications.
      2. Recommendations for training courses to prepare for certifications.
   5. Reporting and Analytics:
      1. Generate reports on certification status, expiration dates, and skill gaps.
      2. Analyze trends and identify opportunities for improvement.
2. Technical Requirements:
   1. Database:
      1. A robust database to store employee information, certification details, and training records.
      2. Consider using a relational database (MySQL, PostgreSQL) or a NoSQL database (MongoDB) depending on specific requirements.
   2. User Interface:
      1. A user-friendly web interface for employees to view and update their certifications.
      2. An administrative interface for HR and IT to manage certifications and generate reports.
   3. Integration:
      1. Integration with HR systems to synchronize employee data.
      2. Integration with learning management systems to track training progress.
   4. Security:
      1. Strong authentication and authorization mechanisms to protect sensitive employee data.
      2. Data encryption to ensure data confidentiality.
      3. Regular security audits and vulnerability assessments.
3. Non-Functional Requirements:
   1. Performance:
      1. The system should be able to handle a large number of users and data.
      2. Fast response times and efficient data retrieval.
   2. Scalability:
      1. The system should be able to scale to accommodate future growth.
   3. Reliability:
      1. High availability and fault tolerance.
      2. Regular backups and disaster recovery plans.
   4. Usability:
      1. A user-friendly interface for both employees and administrators.
      2. Clear and concise information.
   5. Maintainability:
      1. Easy to update and maintain.
      2. Well-documented code and configuration.