# Software Requirements Specification

**for**

# Student Details

**Version 1.0**

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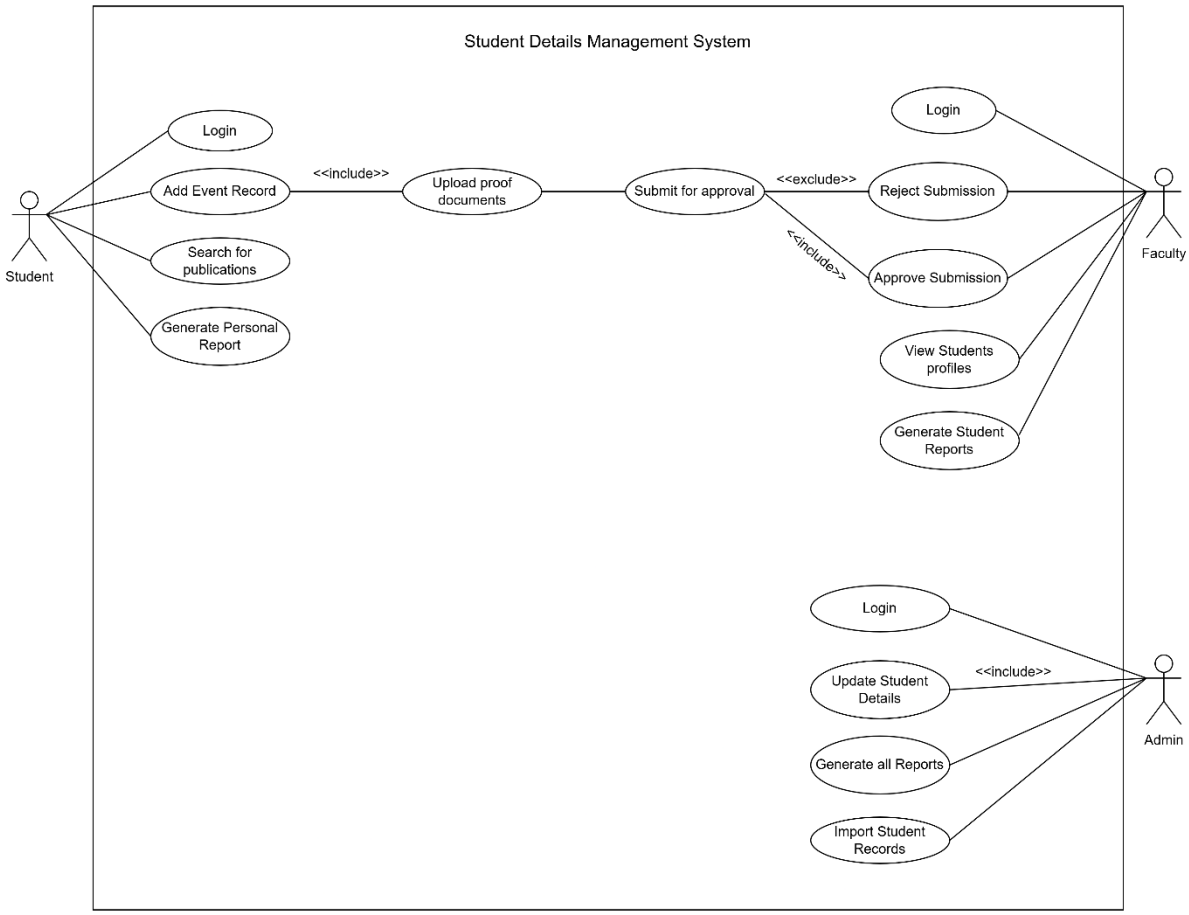
# 1. Use Case Diagram:



# 2. Functional Requirements:

## 1. User Login

- Students, faculty, and administrators should be able to login to their accounts via institute Gmail on the platform.
- Different roles should be assigned based on user type (Student, Faculty, Admin).

## 2. User Profile Management

- Students cannot manually create or edit their profiles.
- Admin will upload an Excel sheet containing student data, which will be used to automatically create and update student profiles.
- Once imported, students should be able to view their profiles but not edit them.
- Faculty should have read access to student profiles for verification purposes.

## 3. Student Participation Records

- Students should be able to add and update their participation in technical events, cultural events, clubs, and sports events.
- The system should allow uploading of certificates and related documents.
- Faculty should be able to verify and approve participation records.

## 4. Placement & Internship Management

- Students should be able to add details of placements and internships.
- Uploading offer letters and other relevant documents should be supported.
- Faculty should have the ability to validate and approve placement records.

## 5. Student Publications Management

- The system should suggest titles from an existing faculty publications database when a student starts typing.
- If a matching paper is found, the student can select it, and details should be auto-filled.
- Faculty should be able to verify and approve publication details.

## 6. Data Import from External Databases

- Admin should be able to import student details from other existing databases.
- The system should allow proper data mapping and validation before importing.

## 7. Role-Based Access Control

- Students: Can manage their own profiles and participation records.
- Faculty: Can view, verify, and approve student records of students under them.

- Admin: Has full control over data management, user access, and system settings.

## 8. Search & Filter Functionality

- Users should be able to search for students, events, placements, internships, professional societies, and publications.
- Filters should be available based on academic year, department, event type, etc.

## 9. Notifications

- Students should receive notifications when:
  - Their event participation, placement, internship, or publication entry is approved or rejected.
- Faculty should receive notifications when:
  - A student uploads new details (e.g., event participation, placement, internship, publication).
  - A student requests verification or approval of their records.
- Admin should receive notifications when:
  - There is an error in profile data that needs correction.
  - A faculty member reports incorrect student details.
- Notifications will be delivered through in-platform alerts displayed on the dashboard.

## 10. Report Generation and Export

- Student, faculty and admin should be able to generate reports for accreditation purposes, student achievements, and placements.
- Faculty and Admin should be able to generate and download comprehensive reports of all students, including their event participation, placements, internships, publications, and professional society memberships.

## 11. Document Management

- Students should be able to upload certificates, offer letters and other documents of proof .
- Faculty and Admin should be able to view and verify uploaded documents.

## 12. Record Management

- Faculty can approve or reject records (event participation, placements, internships, publications) but cannot delete them directly.
- If a record is incorrect, faculty can reject it with comments, allowing the student to correct and resubmit.
- Only the Admin has the authority to delete records to maintain data integrity.
- Faculty can request deletion by flagging a record for admin review.

# 3. Non-Functional Requirements

## 1. Performance Requirements

- The system should be able to handle simultaneous access by a large number of users without performance degradation.

## 2. Security Requirements

- **Authentication**:
  - Only authorized users (students, faculty, and admin) should be able to log in using secure authentication mechanisms.
- **Authorization:**
  - Role-based access control (RBAC) should be implemented to ensure that:
    - Students can view their own profiles and submit participation records.
    - Faculty can verify and approve/reject student records.
    - Admin has full control over user management and data imports.
  - Sensitive documents (offer letters, certificates) should be accessible only to authorized faculty and admin.

## 3. Usability Requirements

- **User Interface Design:**
  - The system should have a clean and intuitive UI to allow easy navigation for students, faculty, and admin.
  - Forms for submitting participation records should be simple, well-structured, and provide validation messages.
- **Accessibility:**
  - Keyboard navigation and screen reader compatibility should be supported.

## 4. Reliability & Availability

- The system should be available 99.5% of the time, ensuring minimal downtime.
- Automatic database backups should be taken daily to prevent data loss.

## 5. Scalability

- The system should be able to scale to support more students, faculty, and event records as the institution grows.
- The database should be optimized to handle an increasing number of records efficiently.

## 6. Data Storage & Integrity

- Data should be stored in a relational database with proper indexing to allow fast retrieval.
- Imported student profiles should be validated to avoid duplicate or incorrect entries.

## 7. Maintainability & Support

- The system should be modular and well-documented to allow easy future updates and maintenance.
- Admin should have an interface to update system settings, manage users, and import new student data.