3.3 Design Goals

The design of the internship management system aims to achieve the following objectives:

Maximize System Usability: Ensure that the platform is user-friendly and intuitive for students, faculty, and company representatives.

Ensure Data Security: Implement robust security measures to protect sensitive internship-related data and ensure compliance with privacy regulations.

Optimize System Performance: Ensure that the system can handle a large number of concurrent users and data transactions efficiently.

Enhance Scalability: Design the system to accommodate future growth in the number of users and functionalities.

Improve Reliability: Ensure the system operates consistently and accurately, with minimal downtime and errors.

Maintainability: Develop the system with a modular architecture to facilitate easy updates, bug fixes, and feature enhancements.

Facilitate Seamless Communication: Enable effective communication and collaboration between students, universities, and host companies through integrated messaging and notification systems.

Streamline Administrative Tasks: Automate and simplify internship management tasks to reduce manual work and improve efficiency.

3.4 Current Software Architecture

Currently, St. Mary's University’s internship management operates through a manual and disparate system, characterized by the following components and interactions:

Orientation Sessions: Conducted manually to provide students with information about the internship process.

Student Internship Search: Students independently search for internships, often leading to mismatches and delays.

Host Company Assignment: The Career Office assigns companies to students if they fail to secure one within a set timeframe.

Internship Documentation and Communication: Communication and documentation are handled through physical letters and manual transmission of records.

Oversight and Monitoring: The university relies on manual check-ins and progress reports to monitor internships.

Evaluation and Assessment: Manual submission and evaluation of internship reports by faculty members.

Limitations of the Current Architecture

Fragmented Processes: The lack of a centralized system leads to inefficiencies and potential errors in communication and documentation.

Manual Workload: Significant manual effort is required for managing internships, leading to delays and administrative burden.

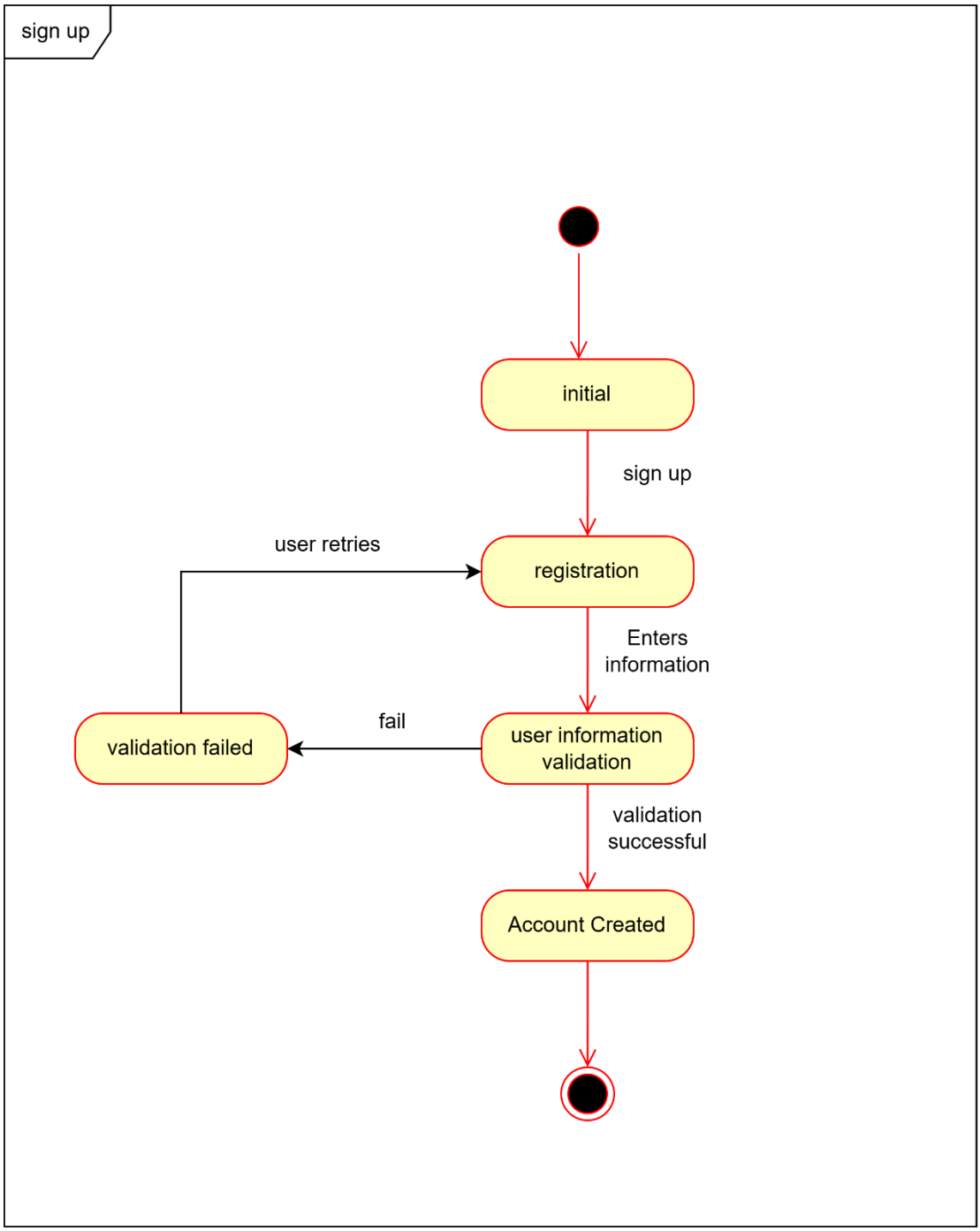
Random Assignments: Students are sometimes placed in internships that do not align with their interests or career goals.

Data Inconsistencies: Manual transmission of records increases the risk of data loss, errors, and inconsistencies.

Limited Oversight: Difficulties in monitoring and tracking student progress during internships.

Need for a New Architecture

A new, integrated software architecture is needed to address these limitations and provide a more efficient, scalable, and user-friendly platform for managing internships. The proposed system will leverage modern web technologies and design patterns to ensure robust performance, data security, and seamless interaction between all stakeholders.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sign up
registration
user retries
Enters
information
user information
validation
fail
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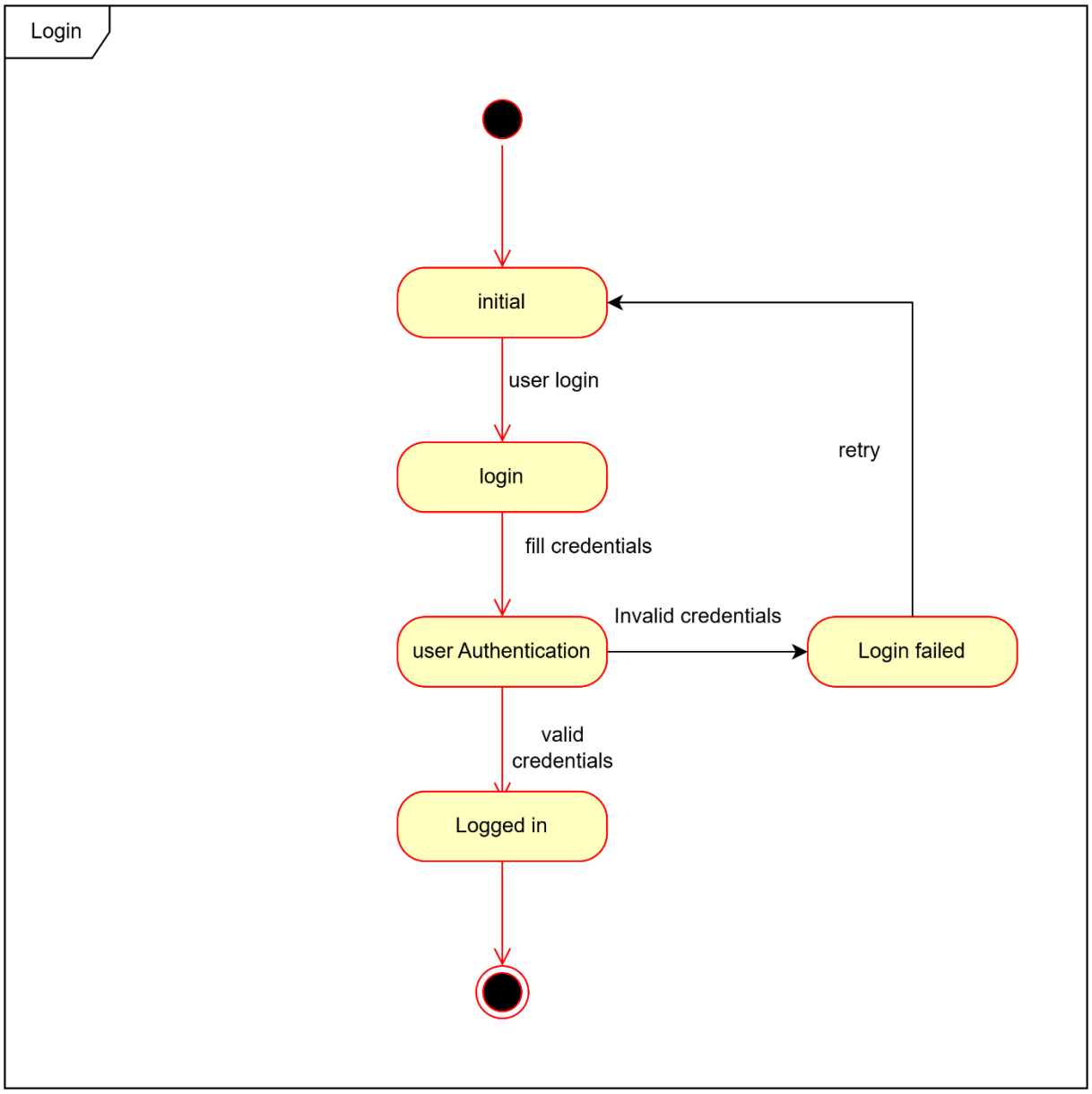
validation
successful
Account Created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login
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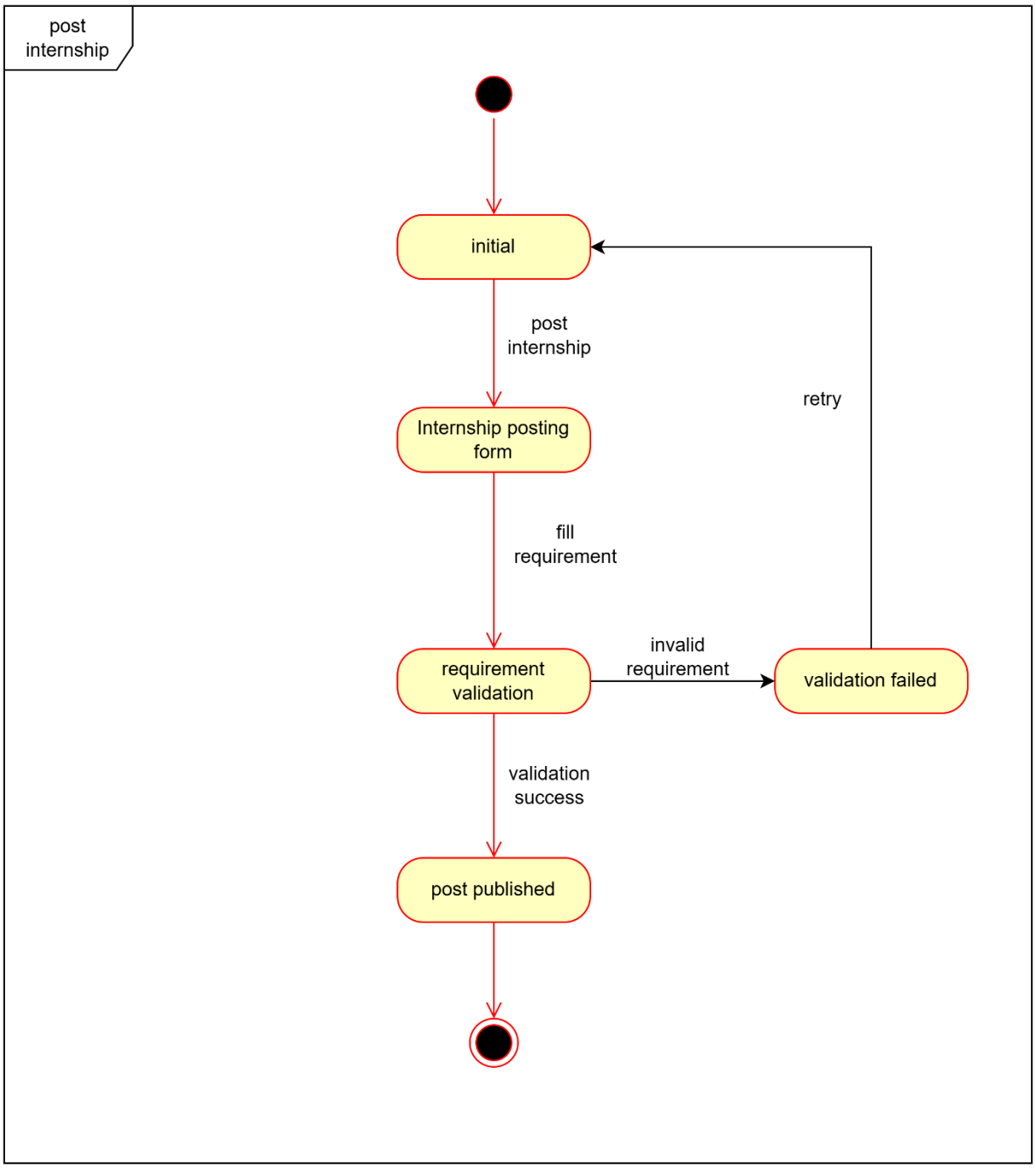
Login failed
retry
valid
credentials
Logged in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Internship posting
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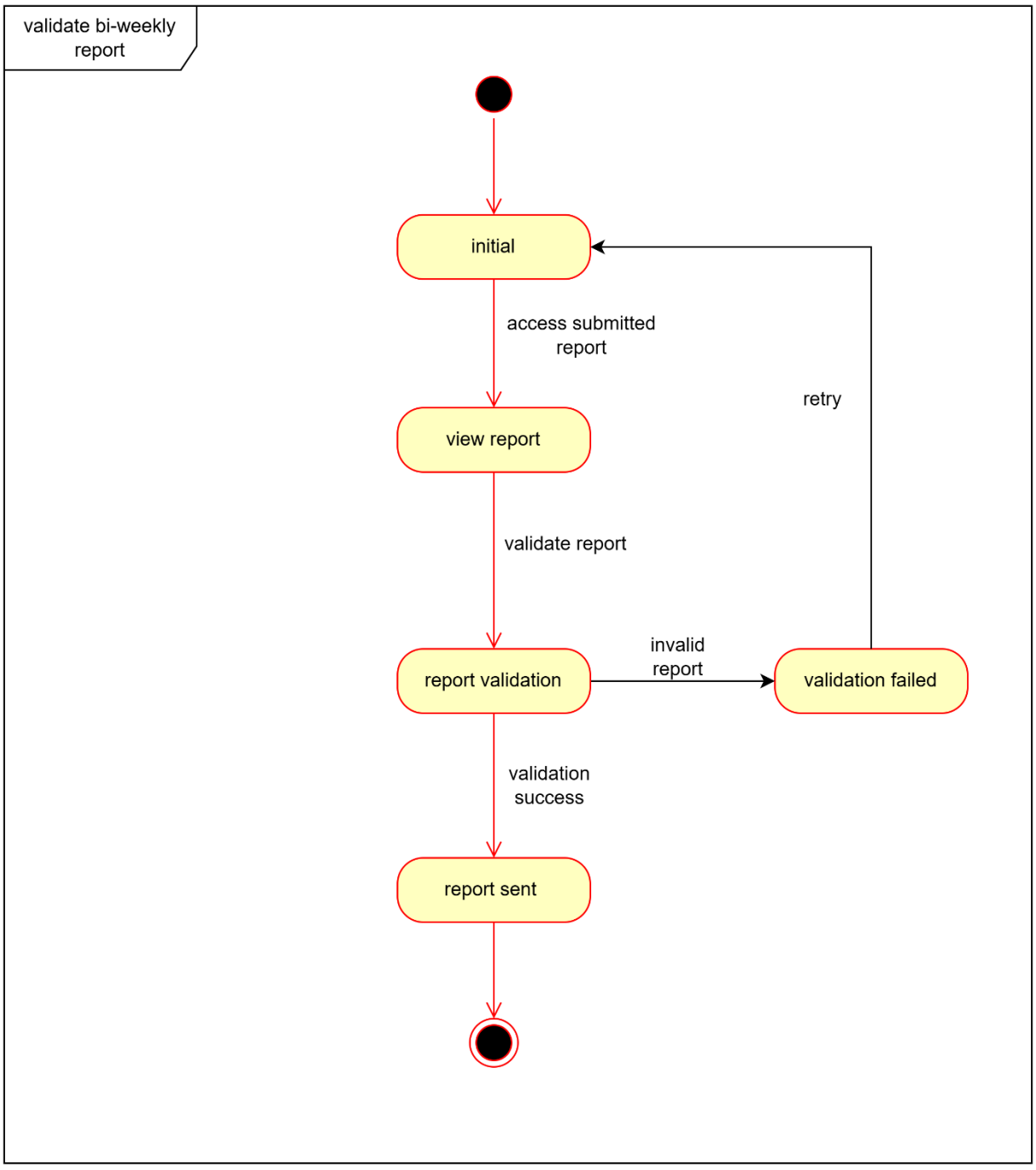
requirement
validation
invalid
requirement
validation failed
retry
validation
success
post published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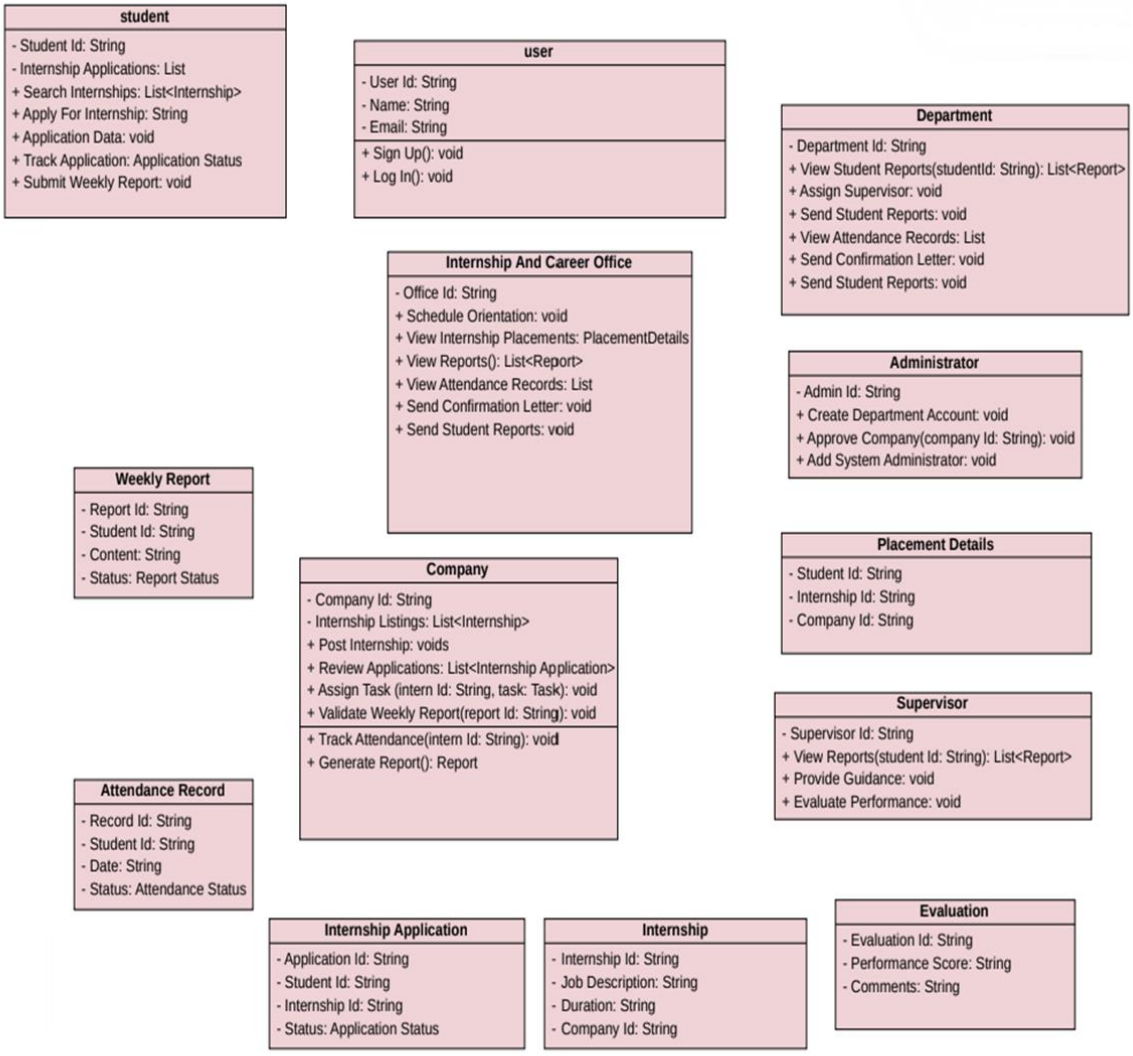
access submitted report
view report
validate report
report validation
invalid report
validation failed
retry
validation success
report sent


student
- Student Id: String
- Internship Applications: List
+ Search Internships: List<Internship>
+ Apply For Internship: String
+ Application Data: void
+ Track Application: Application Status
+ Submit Weekly Report: void
user
- User Id: String
- Name: String
- Email: String
+ Sign Up(): void
+ Log In(): void
Department
- Department Id: String
+ View Student Reports(studentId: String): List<Report>
+ Assign Supervisor: void
+ Send Student Reports: void
+ View Attendance Records: List
+ Send Confirmation Letter: void
+ Send Student Reports: void
Internship And Career Office
- Office Id: String
+ Schedule Orientation: void
+ View Internship Placements: PlacementDetails
+ View Reports(): List<Report>
+ View Attendance Records: List
+ Send Confirmation Letter: void
+ Send Student Reports: void
Administrator
- Admin Id: String
+ Create Department Account: void
+ Approve Company(company Id: String): void
+ Add System Administrator: void
Weekly Report
- Report Id: String
- Student Id: String
- Content: String
- Status: Report Status
Company
- Company Id: String
- Internship Listings: List<Internship>
+ Post Internship: voids
+ Review Applications: List<Internship Application>
+ Assign Task (intern Id: String, task: Task): void
+ Validate Weekly Report(report Id: String): void
+ Track Attendance(intern Id: String): void
+ Generate Report(): Report
Placement Details
- Student Id: String
- Internship Id: String
- Company Id: String
Supervisor
- Supervisor Id: String
+ View Reports(student Id: String): List<Report>
+ Provide Guidance: void
+ Evaluate Performance: void
Attendance Record
- Record Id: String
- Student Id: String
- Date: String
- Status: Attendance Status
Internship Application
- Application Id: String
- Student Id: String
- Internship Id: String
- Status: Application Status
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- Internship Id: String
- Job Description: String
- Duration: String
- Company Id: String
Evaluation
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- Performance Score: String
- Comments: String