

BANGLADESH ARMY UNIVERSITY OF ENGINEERING & TECHNOLOGY (BAUET)

COURSE CODE: CSE-3102

COURSE TITLE: SOFTWARE ENGINEERING AND INFORMATION SYSTEM DESIGN LABORATORY

ALUMNI MANAGEMENT PORTAL

(Project Name: Alumni Association)

Introduction

A comprehensive Alumni Management Portal developed for Bangladesh Army University of Engineering & Technology

Designed to streamline:

- Networking
- Alumni Engagement
- Institutional Collaboration

Objectives

- To design a secure and user-friendly alumni management portal
- To centralize alumni data and streamline communication between alumni and the institution
- To facilitate event organization, mentorship, and job-sharing through an integrated platform
- To automate administrative processes and enhance engagement analytics for better decision-making
- To ensure scalability, accessibility, and data protection across all devices

Analysis

Information was gathered through:

- Structured Interviews
- Questionnaires
- Direct Observation

The Dean of ECE Faculty (Prof. Mohammad Golam Sarwar Bhuyan) was interviewed to identify institutional needs and security requirements

A questionnaire survey was conducted among BAUET alumni to collect feedback on usability and feature preferences

Observation of existing alumni communication methods, such as social media and manual records, was carried out by the development team to identify current limitations and workflow gaps

Feasibility

The project is technically and operationally feasible within a **BDT 500,000** budget

Economic evaluation predicts gradual cost recovery through efficiency gains, reduced administrative workload, and increased fundraising and sponsorships

Estimated Payback Period : 6 years
Cumulative Benefit by Year 6 : ≈670,000 BDT
Net Positive Return : ≈260,000 BDT

Advantages

- Centralized and easily searchable alumni database
- Automated event management and mentorship matching
- Strong authentication and data encryption
- Cost-effective long-term maintenance with modular upgrades
- Enhanced alumni participation and institutional branding

Limitations

- Initial user onboarding and adoption may take time
- High dependency on consistent internet connectivity

System Design

The system design was represented using Data Flow Diagrams (DFD), Use Case Diagrams, and Class Diagrams.

These methods were used to visualize data movement, user interactions, and system structure

Conclusion

The Alumni Management Portal was found to be feasible, effective, and aligned with institutional goals

It successfully addressed communication gaps, improved data management, and enhanced alumni engagement through automation and centralized access

Overall, the system proved technically sound, economically viable, and valuable for long-term institutional growth

Use Case Diagram

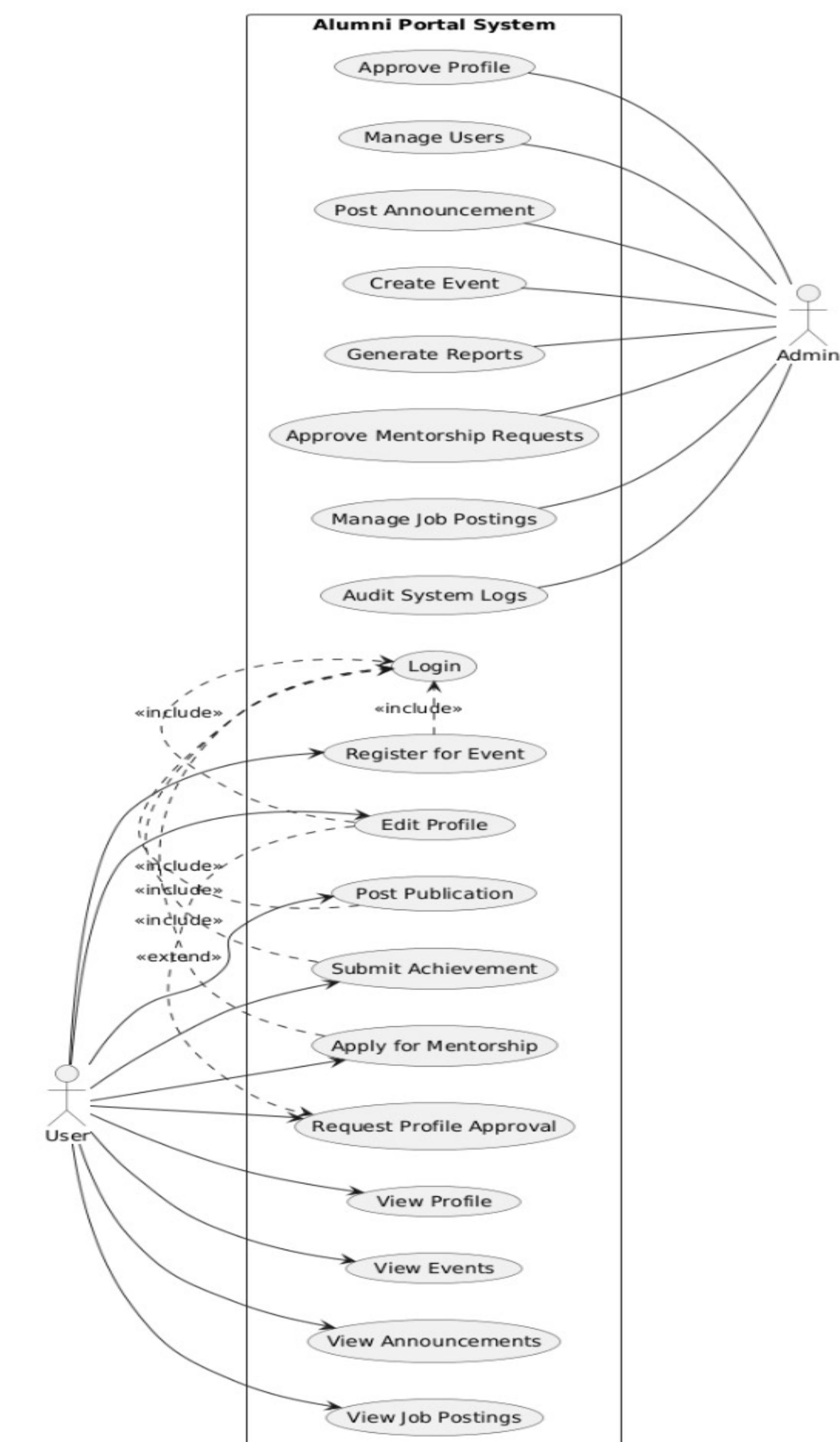


Fig.2: Use Case Diagram

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