
Software Requirements Specification

for

Studental

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20.05.2024

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● **Introduction**

○ **Purpose**

The product specified in the document is "Studental" website, which aims to develop a centralized platform using WordPress to connect students in Albania with internship, scholarship, employment, and training opportunities. This document outlines the software requirements for the development of the Studental platform.

The scope of the product covered by this Software Requirements Specification (SRS) includes the entire Studental platform. This includes features such as user registration/profiles, opportunity listings, search/functionality, user dashboard, accessibility features, community engagement.

○ **Document Conventions**

In this Software Requirements Specification (SRS) document for "Studental," the following standards and typographical conventions were followed:

- Convention 1 (Font and Formatting): The document uses a consistent font style and size to ensure readability and uniformity, while user input and program output will be presented using a monospaced font. Headings and subheadings are formatted using a bold font to distinguish different sections and topics.
- Convention 2 (Highlighting) Key terms, such as roles and tasks, problem identification, solution proposal, project scope, boundaries and limitations, key features and functionalities, aim and objectives, website description, intended users, and addressing user needs, may be highlighted or emphasized to draw attention to critical information.

○ **Intended Audience and Reading Suggestions**

The intended audience for this Software Requirements Specification (SRS) document for "Studental" includes various stakeholders involved in the development and implementation of the platform. These include:

1. Developers: The administrator responsible for designing and implementing the technical aspects of the Studental platform and the professionals who want to contribute in its improvement.
2. Project Investors/Donors: Professionals contributing monetary to the project's planning, execution, and coordination to ensure it meets objectives and deadlines.
3. Users: Students in Albania who will use the Studental platform to access internship, scholarship, employment, and training opportunities.

It is not mandatory for the readers to have extensive knowledge regarding websites of the same type or in general. For a comprehensive understanding of the program, readers are encouraged to review the entire document with the specific sections.

○ **Product Scope**

The software "Studental" platform, designed to connect students in Albania with internship, scholarship, employment, and training opportunities. Its purpose is to address the challenges faced by students in accessing relevant opportunities and bridging the gap between theoretical knowledge and practical skills. The software aims to provide a centralized hub for students to explore, apply for, and manage various opportunities related to their academic pursuits and career aspirations.

The relevant benefits, objectives, and goals of the Studental platform include:

1. **Facilitate Access:** Providing students with easy access to diverse opportunities related to their academic and career interests, reducing time and effort in searching for relevant options.
2. **Bridge Knowledge Gap:** Allowing students to apply and enhance their skills in real-world settings, bridging the gap between theoretical knowledge and practical experience.
3. **Empower Decision-Making:** Empowering students to make informed decisions about their career paths by offering a comprehensive platform to explore various opportunities.
4. **Streamline Process:** Streamlining the process of searching for and applying to opportunities through robust search functionality, user profiles, and a user-friendly interface.
5. **Foster Community Engagement:** Creating a community-driven platform where students can share experiences, insights, and tips related to various opportunities, fostering career development and networking.

The software's objectives align with the goals of contributing to the development of a skilled and empowered workforce. It supports educational and career advancement, which can benefit businesses by attracting qualified talent and fostering innovation and growth within the workforce. The platform's ability to streamline processes and enhance decision-making also aligns with business strategies focused on efficiency, productivity, and talent development.

● Overall Description

○ Product Perspective

The product specified in this Software Requirements Specification (SRS) for "Studental" is a new platform designed to address the challenges faced by students in Albania regarding accessing internship, scholarship, employment, and training opportunities. It is a solution focused on providing a centralized hub for students to explore and apply for various opportunities related to their academic and career interests.

○ Product Functions

- User Registration and Profiles: It allows students to create accounts and edit their profiles.
- Opportunity Listings: It provides a comprehensive list of internship, scholarship, employment, and training opportunities categorized and searchable based on various criteria.
- Search and Filtering: It contains search and filtering functionalities to enable students to narrow down opportunities based on their preferences and requirements.
- User Dashboard: It offers a user-friendly dashboard where students can manage their saved opportunities.
- Accessibility Features: It ensures accessibility features are integrated into the platform, such as keyboard navigation, screen reader compatibility, and alternative text for images.
- Community Engagement: It facilitates community engagement through features such as sharing opportunities and user reviews/ ratings.
- Responsiveness: The platform is mobile-responsive, allowing users to access it seamlessly across different devices and screen sizes.

○ User Classes and Characteristics

● Students

- *Frequency of Use*: Regular users accessing the platform frequently to explore opportunities.
- *Subset of Product Functions Used*: Engage with all core functionalities such as user registration, opportunity listings, search/filtering, and community engagement.
- *Technical Expertise*: Varied levels of technical proficiency, from basic to intermediate.
- *Security or Privilege Levels*: Standard user privileges with access to general features.
- *Educational Level/Experience*: Students pursuing various educational levels, from undergraduate to postgraduate (including high schoolers also)
- *Importance*: Most important user class as they are the primary target audience and drive platform usage.

● Employers/Organizations:

- Frequency of Use: Periodic use to check the posted opportunities (made by admin).
- Subset of Product Functions Used: Cannot access employer dashboard, post opportunities or review student profiles, because these features can be implemented later after the platform has gone into production/use.

- Technical Expertise: -

- Security or Privilege Levels: -

- Educational Level/Experience: Varied, typically professionals or representatives from organizations.

- Importance: Important for providing opportunities and engagement on the platform.

- **Administrators:**

- Frequency of Use: Regular use for platform management, monitoring, and maintenance.

- Subset of Product Functions Used: Access administrative dashboard, manage user accounts, monitor platform activity, and ensure data integrity. (responsible for everything)

- Technical Expertise: High technical proficiency for system administration tasks.

- Security or Privilege Levels: Highest privileges with full access to system controls and settings.

- Educational Level/Experience: Technical professional or platform administrator.

- Importance: Crucial for maintaining platform functionality and security.

- **Guest Users**

- Frequency of Use: Infrequent or one-time use to explore the platform without creating an account.

- Subset of Product Functions Used: Limited access for a limited time to public information.

- Technical Expertise:-

- Security or Privilege Levels: Restricted privileges as they do not have user accounts.

- Educational Level/Experience: -

- Importance: Less important compared to registered users but can contribute to platform visibility as they can become future/potential users with accounts.

○ **Operating Environment**

The operating environment for the Studental software platform encompasses various components to ensure smooth operation:

- **Hardware Platform**

Studental is designed to operate on standard computing hardware commonly used by students and professionals, this includes desktop computers, laptops, tablets, and smartphones with adequate processing power, memory, and storage.

- **Operating System and Versions:**

- The platform is compatible with a range of operating systems:

- Windows 10, Windows 8, Windows 7

- macOS Catalina, macOS Mojave, macOS High Sierra

- Linux distributions like Ubuntu, Fedora, CentOS

- Mobile platforms: Android (version 7 and above), iOS (version 11 and above)

- **Web Browsers**

- Studental is accessed through web browsers, ensuring compatibility with major browsers like:

- Google Chrome (latest version)
- Mozilla Firefox (latest version)
- Microsoft Edge (latest version)
- Safari (latest version)

- **Internet Connectivity**

- Reliable internet connectivity is essential for users to access and interact with the Studental platform seamlessly. The platform should accommodate various internet connection speeds and network conditions.

- **Security Software**

- It should also implement HTTPS encryption for secure data transmission over the internet.

○ **Design and Implementation Constraints**

Certainly, here are the design and implementation constraints for the Studental platform:

1.Interfaces to other applications:

Studental may require integration with external systems or APIs in the future for data exchange, such as university databases. Interfacing with existing educational platforms or databases to fetch relevant information may be necessary.

2.Specific technologies, tools, and databases:

Integration with third-party plugins may be limited by compatibility and licensing considerations.

3.Parallel Operations:

Scalability considerations for handling increasing user loads are essential.

4.Language Requirements:

User interface language support may be constrained by the need to accommodate multiple languages, particularly Albanian and English.

5.Communications Protocols:

- Compliance with standard communication protocols (e.g., HTTP, HTTPS) for secure data transmission over networks is mandatory.

- Compatibility with mobile communication protocols for seamless mobile responsiveness and functionality.

6.Security Considerations:

- Implementation of robust security measures, including encryption, authentication, and access controls, to protect user data and prevent unauthorized access or data breaches.

- Regular security audits and updates to mitigate vulnerabilities and ensure platform integrity.

These constraints guide the development process and ensure that the Studental platform meets quality, security, and compliance standards while delivering a user-friendly and reliable experience for its users.

○ User Documentation

The user documentation components that will be delivered along with the Studental software platform include:

- FAQs (Frequently Asked Questions):
 - Compiled list of common user queries along with their answers, addressing typical issues and queries users may encounter.
- Delivery Formats and Standards:
 - The user documentation will be delivered in various formats such as PDFs for manuals, HTML-based online help. Adherence to standard formatting, clear organization, and user-friendly writing style will ensure accessibility and ease of understanding for users.

○ Assumptions and Dependencies

Assumptions:

- Third-Party Components: Third-party plugins will integrate seamlessly with the platform without compatibility issues.
- Development Environment Stability: The development environment (software tools, libraries, IDEs) will remain stable throughout the project duration, minimizing disruptions and compatibility issues.
- Data Availability: The relevant data sources, such as internship listings and scholarship opportunities, will be consistently available and accessible for integration into the platform.
- User Engagement: Users will actively engage with the platform and provide feedback for continuous improvement, enhancing the platform's usability and relevance.
- Compliance with Regulations: The platform's design and functionality will comply with legal and regulatory requirements related to data privacy, accessibility, and user rights.
- Timely Feedback and Collaboration: Stakeholders, including users, developers, and administrators, will provide timely feedback and collaborate effectively to address issues and implement enhancements.

Dependencies:

- Third-Party Integrations: Dependency on successful integration of third-party components (e.g. social media APIs) for enhanced platform functionality and user experience.
- Data Sources and APIs: Dependency on external data sources and APIs for real-time information updates and accuracy in opportunity listings, requiring stable connections and reliable data retrieval.
- Development Tools and Libraries: Dependency on specific development tools, libraries, and frameworks (e.g., WordPress) for building and maintaining the platform's architecture and functionalities.
- User Engagement and Feedback: Dependency on user engagement and feedback for iterative improvements, feature prioritization, and addressing usability issues effectively.
- Regulatory Compliance: Dependency on ongoing monitoring and updates to ensure continuous compliance with evolving regulatory standards and industry best practices.

● External Interface Requirements

○ User Interfaces

● User Registration and Profile Interface:

Purpose: Allows users to create accounts and edit their profiles.

Components:

Input fields for user information (name, email, password, education, etc).

Profile picture upload option.

Buttons for account creation, profile editing, and saving changes.

Constraints: Password strength requirements, email verification for account activation.

Standard Functions: "Create Account" button, "Edit Profile" button, "Save Changes" button.

● Opportunity Listings Interface:

Purpose: Displays a comprehensive list of internship, scholarship, employment, and training opportunities.

Components:

Search bar with autocomplete suggestions.

Opportunity cards displaying key information (title, organization, deadline).

Details page for each opportunity with description, requirements, and application link.

Constraints: Pagination for large result sets, responsive layout for different screen sizes.

Standard Functions: Search bar, filter options, "Apply Now" button, "Save Opportunity" button.

● User Dashboard Interface:

Purpose: Provides a personalized dashboard for users to manage saved opportunities and view recommendations.

Components:

Saved opportunities section with options to remove or apply.

Notifications or alerts for new opportunities or application updates.

Constraints: Secure access to user-specific data, real-time updates for application status.

Standard Functions: "Remove from Saved" button, "View Recommendations" section.

● Community Engagement Interface:

Purpose: Facilitates user interaction, sharing opportunities, reviews, and ratings.

Components:

User-generated content sharing options (e.g., share on social media, email).

Comment sections for users to share experiences and insights.

Rating system for opportunities based on user feedback.

Constraints: Moderation for user-generated content, privacy settings for comments and reviews.

Standard Functions: "Share Opportunity" button, "Add Comment" section, "Rate Opportunity" feature.

○ Hardware Interfaces

It does not have specific hardware requirements and users can access it using any device with a web browser and internet connection, including desktop computers, laptops, etc.

Supported Device Types:

The Studental platform is designed to be accessible across various device types, including:

- Desktop computers (Windows, macOS, Linux)
- Laptops (Windows, macOS, Linux)
- Tablets (iOS, Android)
- Smartphones (iOS, Android)

Data and Control Interactions:

Data Interactions:

The software communicates with hardware components to receive user inputs (e.g., keyboard input, touch input) for navigating the platform, filling forms, and interacting with elements.

Control Interactions:

User actions on hardware devices (clicks, taps, swipes) control the navigation flow within the platform, such as moving between pages, opening dialog boxes, and submitting forms.

Communication Protocols:

The platform utilizes standard communication protocols for data transmission and interaction with hardware components:

- HTTP/HTTPS protocols for secure communication between the user's device and the Studental server.
- TCP/IP protocols for reliable data transmission over networks..

○ **Software Interfaces**

Web Browsers

- Studental is accessed through web browsers, ensuring compatibility with major browsers like:
- Google Chrome (latest version)
- Mozilla Firefox (latest version)
- Microsoft Edge (latest version)
- Safari (latest version)

○ **Communications Interfaces**

The Studental platform requires a stable internet connection for users to access and utilize its features.

Web Browser Communication:

Requirements: Support for web browser interactions to access the platform's user interface and functionalities.

Communication Standard: HTTP/HTTPS protocols for client-server communication over the internet.

Security Measures: HTTPS with TLS encryption for secure data transmission, ensuring confidentiality and integrity of user interactions.

Network Server Communications Protocols:

Requirements: Establishing connections and data exchange between client devices and the Studental server.

Communication Standard: TCP/IP (Transmission Control Protocol/Internet Protocol) for reliable data transmission over networks.

Security Measures: SSL/TLS encryption for secure network communication, preventing unauthorized access and data interception.

● System Features

System Feature: User Account Creation

○ 4.1.1 Description and Priority:

Allow users to create new accounts on the Studental platform to access features and opportunities. Priority: High.

4.1.2 Stimulus/Response Sequences:

- User navigates to the registration page.
- User fills in required fields (name, email, password, etc.).
- System validates input data (email format, password strength).
- User submits the registration form.
- System creates a new user account.

○ 4.1.3 Functional Requirements:

- REQ-1: Provide input fields for user information: name, email, password, education background, interests.
- REQ-2: Validate email format and password strength during registration.
- REQ-3: Display error messages for invalid inputs or registration failures.
- REQ-4: Send notifications to the user upon successful account activation.
- REQ-5: Store user account data securely in the database.
- REQ-6: Provide a "Forgot Password" feature with email-based password reset functionality.

System Feature: Opportunity Listing

4.2.1 Description and Priority:

Display a comprehensive list of internship, scholarship, employment, and training opportunities available on the Studental platform. Priority: High.

4.2.2 Stimulus/Response Sequences:

- User navigates to the opportunities section.
- System fetches and displays a paginated list of opportunities.
- User clicks on an opportunity for detailed information.
- System retrieves and presents detailed opportunity information (title, organization, description, requirements, application link).

4.2.3 Functional Requirements:

- REQ-1: Retrieve and display opportunities from the database.
- REQ-2: Paginate opportunity listings for better navigation.
- REQ-3: Provide search and filter options.
- REQ-4: Display detailed information for each opportunity (title, organization, description, requirements, application link).
- REQ-5: Allow users to apply for opportunities through the link provided in the platform.
- REQ-8: Implement error handling for failed opportunity retrieval or application submissions.
- REQ-9: Ensure data accuracy and validity in opportunity listings.

● Other Nonfunctional Requirements

○ Performance Requirements

Page Load Time:

Requirement: The platform should load within 3 seconds on average, with a maximum acceptable load time of 5 seconds.

Rationale: Quick page load times improve user experience, reduce bounce rates, and increase user engagement.

Search Response Time:

Requirement: Search queries should return results within 1 second for optimal user experience.

Rationale: Fast search response times enhance usability and encourage users to explore more opportunities.

Mobile Responsiveness:

Requirement: The mobile version of the platform should load and operate smoothly on devices with 3G/4G connections.

Rationale: Mobile responsiveness ensures accessibility and usability across different devices and network conditions.

Error Handling Response Time:

Requirement: Error messages and alerts should be displayed to users within 2 seconds of encountering an issue.

Rationale: Prompt error handling improves user satisfaction and helps users understand and resolve issues quickly.

○ **Safety Requirements**

Privacy Protection:

Requirement: Compliance with data protection regulations regarding user data collection, storage, and usage.

Safeguard: Obtaining explicit user consent for data processing and providing transparent privacy policies.

Prevention: Avoid sharing user data with third parties without user consent, except for legal obligations.

Regulatory Compliance:

Requirement: Compliance with relevant laws and regulations related to safety and security (e.g., data protection laws, cybersecurity standards).

Safeguard: Stay updated with regulatory changes and adapt the platform accordingly.

Prevention: Avoid activities or functionalities that may violate regulatory requirements or pose safety risks.

○ **Security Requirements**

User Identity Authentication:

Requirement: Implementation of strong user authentication mechanisms, such as password-based authentication with minimum complexity requirements.

Security Measures: Usage of secure protocols (e.g., HTTPS) for data transmission during authentication processes to prevent unauthorized access.

Prevention: Implementation of account lockout mechanisms after multiple failed login attempts to mitigate brute-force attacks.

Data Encryption:

Requirement: Encryption of sensitive data at rest and in transit using industry-standard encryption.

Prevention: Regularly update of encryption protocols and algorithms to address emerging security threats.

Access Control:

Requirement: Implementation role-based access control (RBAC) to restrict access to sensitive functionalities and data based on user roles.

Security Measures: Regularly review and update access permissions to ensure least privilege principles are followed.

Prevention: Audit access logs regularly to detect and respond to unauthorized access

○ **Software Quality Attributes**

Usability:

Requirement: The platform should achieve a usability score of at least 80% in user satisfaction surveys conducted quarterly.

Importance: High, as user experience directly impacts user engagement and retention.

Reliability:

Requirement: The platform should have an uptime of 99.9% over a period of one year, with no more than 30 minutes of downtime per month for maintenance.

Importance: Critical, as users rely on the platform for accessing opportunities and information.

Scalability:

Requirement: The platform should support a minimum of 10,000 concurrent users without performance degradation during peak usage periods.

Importance: High, to accommodate growing user base and traffic demands.

Portability:

Requirement: The platform should be compatible with major web browsers (Chrome, Firefox, Safari, Edge) and mobile devices (iOS, Android).

Importance: Moderate, to ensure accessibility across different devices and platforms.

○ Business Rules

User Roles and Permissions:

Only registered users with verified accounts can access and interact with the platform.

Administrators have the authority to manage user accounts, approve opportunities, and moderate content.

Regular users can browse opportunities, apply for them.

Content Moderation:

User-generated content, such as comments, reviews is subject to moderation to ensure compliance with community guidelines.

Data Privacy and Security:

User data is protected according to privacy regulations and policies. User consent is required for data processing activities.

Feedback and Improvement:

Users can provide feedback and suggestions for platform improvement through designated channels.

Feedback is reviewed and considered for implementing enhancements and addressing user concerns.

Usage Policies:

Users are expected to abide by platform usage policies, including respectful communication, ethical behavior, and legal compliance.

Violations of usage policies may result in account suspension or termination.

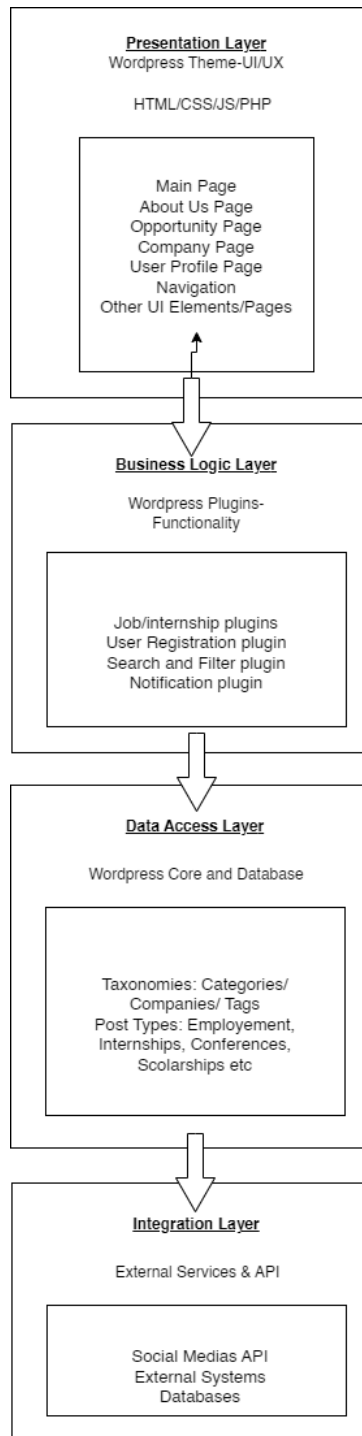
Appendix A: Glossary

1. **SRS** - Software Requirements Specification: A document that describes the software product to be developed, including functional and non-functional requirements.
2. **UI/UX** - User Interface/User Experience: Refers to the design and interaction aspects of the software that users experience.
3. **API** - Application Programming Interface: Defines methods for software components to communicate and interact with each other.
4. **RBAC** - Role-Based Access Control: Security model where access permissions are based on user roles within the system.

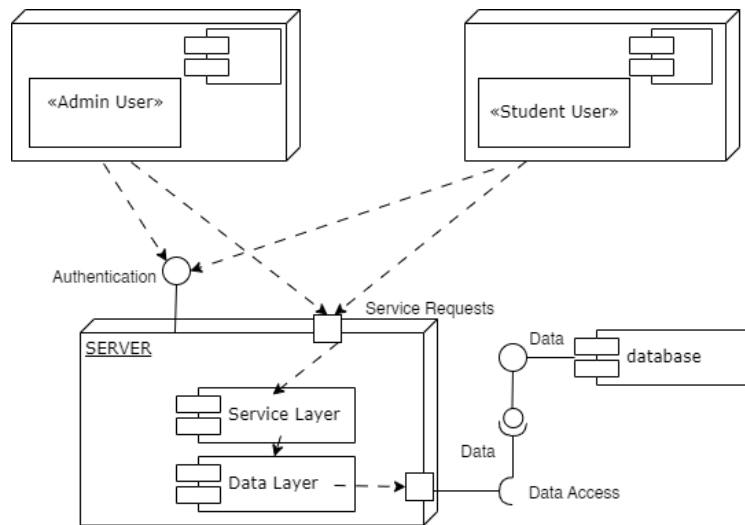
5. **HTTPS** - Hypertext Transfer Protocol Secure: Protocol for secure communication over a computer network, commonly used for web browsing.

Appendix B: Analysis Models

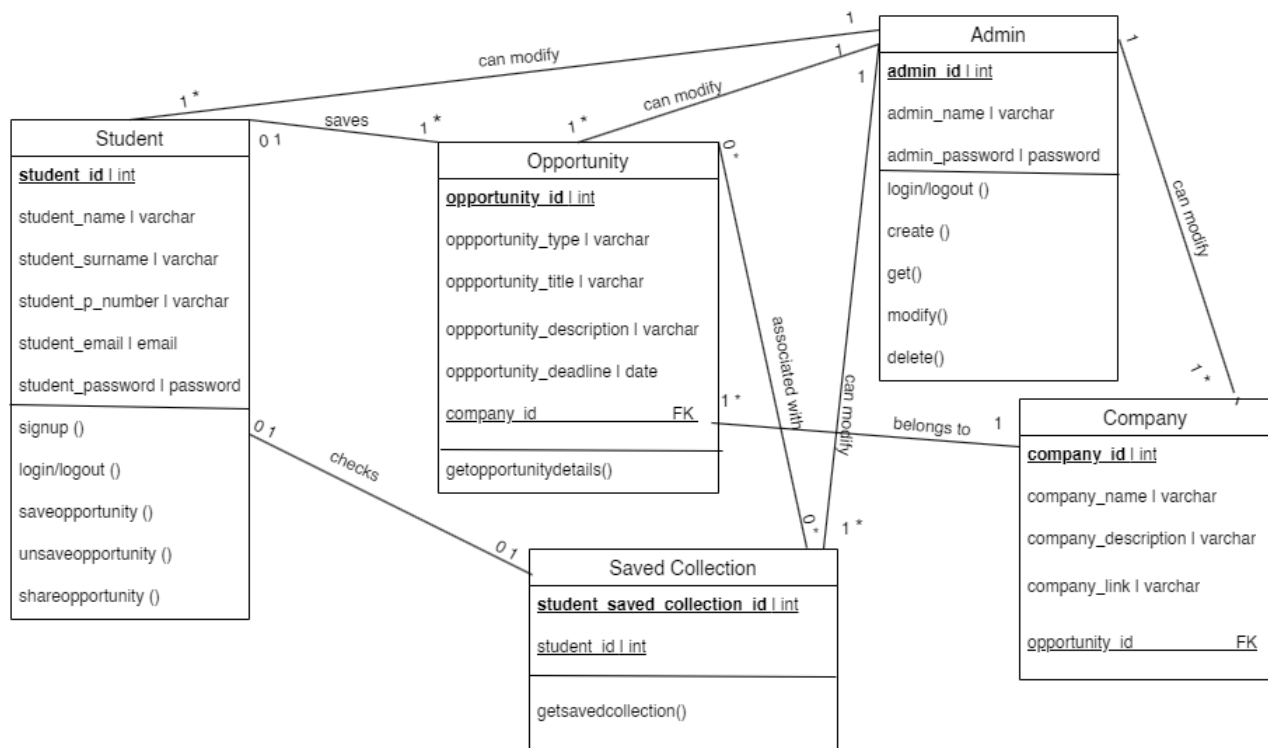
- **System Architecture:**



- **Component Diagram:**



- **Class Diagram:**



- **Sequence Diagrams:**

