



INFORMATION SYSTEMS ANALYSIS AND DESIGN PROJECT

Smart Internship and Job Application Tracking System (SIJATS)

Instructor:

Asst. Prof. Dr. Vildan ATEŞ

Prepared by:

- Mervenur GÜLER (22030411057)
- Salih Eren ÇAKAR (21030411036)
- Fatma USLU (22030411053)
- Kardelen DOBRUCALI (23030411023)
- Elif Nur AYGÜN (22030411041)
- Hasan Feyzi KERTMEN (22030411047)
- Efe Güz ERSOY (22030411060)

1- Our project focuses on analyzing and designing an information system that helps with internship and job application processes. The Smart Internship and Job Application Tracking System (SIJATS), created for this project, is designed to help students organize their internship and job applications in a structured way using one platform. Additionally, the system offers a decision-support feature that compares user profiles to job requirements, giving a match score to show how well the applications fit.

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Smart Internship and Job Application Tracking System (SIJATS)

Project sponsor: University Career Development Center, Fatih Uysal (CEO of kariyer.net)

Business Need: Internship and job seekers currently manage these processes manually. This process causes feedback and deadlines to be missed. It is very difficult for internship and job seekers to easily follow the postings that are exactly suitable for them from a single place.

Business Requirements:

- That users log in securely to the system.
- Create user profiles and add CV information to the system.
- View job and internship postings.
- Keep track of job and internship applications.
- The system creates a match score between the user profile and the Description requirements.
- The system shows the application status and updates.

Business Value:

- Efficient management of internship and job applications.
- Better and easier evaluation of students' eligibility for applications.
- Reduction of the workload of career centers.
- Higher placement rate for students.

Special Issues or Constraints:

- Limited project development time.
- Data confidentiality and security.
- Adaptation of users to the system.
- Limited access to real data of institutions.

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3.1- Project Summary:

SIJATS is an information system designed to improve the management of internship and job application processes. By using a central platform to handle applications, it minimizes manual tracking and helps save time and resources.

3.2- Financial Analysis:

Category	Detail	Amount (TL)
Expected Income		
Premium Subscription Revenue	Revenue from 2,000 users with annual premium subscription	1.280.000
Career Match Analysis Revenue	Income from match score and CV analysis services	800.000
Company Access Fees	Fees paid by companies to access student profiles	640.000
Total Expected Income		2.720.000
Estimated Costs		
System Development Cost	System analysis, design, development, AI-based match score module	1.440.000
Infrastructure Cost	Cloud services, server hosting, database management	480.000
Operation and Support Cost	Maintenance, updates, and technical support (annual)	320.000
Total Cost		2.240.000
Benefit–Cost Ratio	Total Expected Income / Total Cost	1,21

3.3- Strategic Benefit Analysis

Use	Detail
Application Process Improvement	Making internship and job application tracking more organized and efficient through a centralized system.
Better Decision Making	Supporting users with match score and analytical insights to apply for more suitable positions.
Time and Effort Saving	Reducing manual tracking of applications and minimizing repetitive tasks for students.
Increased User Engagement	Encouraging continuous system usage through personalized recommendations and feedback.
Competitive Advantage	Differentiating the system from similar platforms by integrating decision-support and match analysis features.

3.4- Risk Analysis and Recommendations:

Risk	Possibility	The Effect	Suggestion
Technical Complexity	Middle	High	Using modular system design and allocating sufficient time for testing and debugging.
Data Security and Privacy Issues	Middle	High	Implementing secure authentication, data encryption, and access control mechanisms.
User Adoption Resistance	Low	Middle	Providing a simple user interface and basic user training materials.
Inaccurate Match Score Results	Middle	Middle	Continuously improving algorithms based on user feedback and real usage data.

3.5- Conclusion and Recommendation:

This analysis indicates that SIJATS is practical. The anticipated benefits of the system exceed the estimated costs. Investment Recommendation: Investing in this project is advisable.

Priority Actions: Finish developing the system and enhance the match score feature.

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Project Initiation Step

4.1 Defining the Business Case

This section outlines the reasons for starting the project and the issue it intends to address. The SIJATS project was created to assist students in managing and monitoring their internship and job applications more efficiently. Many students struggle to keep track of their application statuses, deadlines, and available positions. This system seeks to offer a central platform that streamlines the application process and enhances decision-making through match score analysis.

4.2 Identification of Project Stakeholders

This section identifies all individuals and groups who impact or are impacted by the project. The key stakeholders for the SIJATS project include:

- Sponsor: University Career Development Center, Fatih Uysal (CEO of kariyer.net)
- Users: University students seeking internships and jobs
- Project Team: Members of the MIS 307 project group
- Technical Stakeholders: System analysts and designers from the project team

4.3 Determining the Scope:

This section outlines the project's boundaries and the tasks involved. The scope includes:

- Monitoring internship and job applications through a single system
- Managing user profiles, resumes, and application statuses
- Offering match score analysis comparing user profiles to job requirements
- Generating reports and reminders related to applications
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4.4 Establishing the Project Team:

This section identifies the individuals involved in the project and defines their roles. The main roles in the SIJATS project include:

- Project Manager: Oversees project activities and ensures that deadlines are met.
- System Analysts: Analyze user requirements and business processes.
- Designers: Create system models, diagrams, and interface designs.
- Documentation Team: Responsible for writing and editing the project report.

4.5 Identifying Risks and Restrictions:

This section analyzes the risks and current limitations that could impact the project. Key risks include:

- Time Constraints: Limited time available during the academic term
- Technical Challenges: Issues with designing the match score logic

- Resource Limitations: Constraints on technical tools and experience

4.6 Project Kick-off Meeting:

At the project's start, all stakeholders come together to discuss:

- Project objectives and scope
- Distribution of tasks and responsibilities
- Project timeline
- Communication methods within the team

4.7 Transition to Project Planning Process:

A comprehensive project plan is created based on the documents and agreements established during the initiation phase. The initiation process is finalized, and the project planning stage begins.

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Project Planning Phase: A Detailed Discussion

5.1 Project Management Steps in the Planning Phase:

5.1.1- Work Plan:

This work plan outlines the primary tasks and deliverables for the SIJATS project.

- Tasks: Include system analysis, system design, development of the AI-based match score, testing, and deployment.
- Milestones: Completion of requirements analysis, development of the prototype, and system testing.
- Deliverables: Functional system modules, match score reports, and user documentation.

5.1.2- Personnel Plan:

A personnel plan guarantees that the appropriate team members with the necessary skills are assigned to the project. Key aspects include:

- Roles: Project Manager, Software Developers, AI/Data Analysis Specialist, UI/UX Designers.
- Responsibilities: Each team member is accountable for completing their assigned tasks on schedule.
- Resource Allocation: To avoid delays, team members are assigned tasks efficiently.

5.1.3- Project Charter:

The project charter officially defines the project and its objectives. Key elements include:

- Objectives: To enhance internship and job application processes and provide AI-based matching analysis.
- Scope: Development of a smart internship and job application tracking system.
- Stakeholders: Project sponsor, development team, students, CEO, and career platforms.
- Constraints: Limited budget, project timeline, and technical limitations.

5.2 Estimation of Time Required for Planning:

A detailed estimation of the time needed for the planning phase will be identified, considering activities such as requirements gathering, stakeholder meetings, and documentation. Specific durations for each task will help ensure that the planning process stays on track.

5.2.1- Planning Phase Duration:

The planning phase involves the following activities:

- Requirement Analysis: 2 weeks
- Risk Analysis: 1 week
- Resource Planning: 1 week
- Schedule Development: 1 week

Estimated Time for Planning Phase: 5 weeks

5.2.2- Time Estimates for Remaining Project Phases:

Based on industry standards and benchmarks from previous projects, the estimated time for the remaining phases is as follows:

- System Design: 4 weeks
- Development: 8 weeks
- Testing: 4 weeks
- Deployment: 2 weeks
- Support and Improvements: 2 weeks

Total Estimated Project Duration: 25 weeks

5.3 Comparing Estimated vs Actual Time:

5.3.1- Benefits of Time Tracking:

Tracking time helps to:

- Improve task efficiency
- Identify delays early
- Manage resources better

5.3.2- Industry Standard Metrics:

Based on similar projects:

- Design & Development: 50% of the project duration.
- Testing: 20% of the project duration.
- Deployment & Support: 10–15% of the project duration.

5.3.3- Tracking Methods:

Project progress will be monitored using:

- Task Lists
- Weekly Progress Checks
- Basic Project Management Tools

5.3.4- Conclusion:

Accurate time estimation and effective planning are crucial for project success. By creating a clear work plan, outlining project phases, and regularly monitoring progress, the project can be completed within the planned schedule and budget. This approach helps identify potential delays by comparing actual progress with the estimated duration, allowing for timely adjustments to be made.

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Project Name	Smart Internship and Job Application Tracking System (SIJATS)
Project Sponsor	Kariyer.net (Corporate Sponsor) University Career Center (Institutional Sponsor)
Business Need	Students have difficulty tracking internship and job applications across different platforms. This project aims to provide a single system to manage applications and improve career planning efficiency.
Business Requirements	<ul style="list-style-type: none">• Students can create profiles and upload CVs• Internship and job applications can be tracked in one system• Match score analysis between student profiles and job postings• Companies can access student profiles• Basic reporting and application status tracking
Business Value	<ul style="list-style-type: none">• Faster and more organized application process• Improved student–company matching• Increased platform usage by students and companies• Potential revenue from premium services and company access
Special Issues or Constraints	<ul style="list-style-type: none">• Data privacy and security must be ensured• System performance should support high user numbers• Continuous updates may be required based on user feedback

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Use Case Name: User Registration & Login	ID: UC-1	Priority: High
Actor: Student		
Description: This use case explains how a student signs up for the SIJATS system or logs in with their existing account. By creating an account or logging in, the student can securely access the platform and easily manage their internship and job applications. Once logged in, they can track, update, and organize all their applications in one place.		
Trigger: Student selects the “Login / Register” option on the SIJATS platform.		
Type: External		
Preconditions:		
1. System is online. 2. Internet connection is available.		
Normal Course:		
1. Student opens the SIJATS system 2. System displays login and registration options 3. Student enters login credentials or chooses to register 4. System validates the entered information 5. System grants access to the dashboard		
Alternative Course:		
1.1 Student forgets password (branch at step 4): a. The system shows a “Forgot Password” option on the login screen. b. The student enters their registered email address. c. The system sends a password reset link to the student’s email. d. The student creates a new password and then logs into the system successfully.		
1.2 Student chooses to register instead of logging in (branch at step 3): a. The system provides a “Register” option on the login screen. b. The student enters the required registration details (name, email, password). c. The system creates a new student account. d. The system automatically logs the student into SIJATS and redirects them to the dashboard.		
Postconditions:		
1. Student is logged into the system. 2. Student can access profile and applications.		
Exceptions:		
1. Incorrect login credentials entered by the student: a. If the email or password is wrong, the system shows an “Invalid login credentials” error message. b. The student is asked to try again by re-entering their details or use the “Forgot Password” option to reset the password.		
2. Internet connection or system access issue: a. If the system cannot reach the server because of a network problem, a “Connection error” message is displayed. b. The student is asked to check their internet connection and attempt to log in again later.		
3. Student account does not exist: a. If the email entered is not linked to any existing account, the system shows a “User not found” message. b. The student is directed to create a new account by selecting the “Register” option.		

Input:
- Email / password
- Registration information
Source:
- Student
Output:
- Login success or error message
Destination:
- Student dashboard

Use Case Name: Profile Creation / Update	ID: UC-2	Priority: High
Actor: Student		
Description: This use case explains how a student creates or edits their profile by adding personal details, academic background, and skills. By completing their profile, the student enables the SIJATS system to match them with suitable job and internship opportunities.		
Trigger: The student selects the “Create Profile” or “Edit Profile” option from the dashboard. Type: Interactive		
<p>Preconditions:</p> <ol style="list-style-type: none"> 1. The student is logged into the SIJATS system. 2. The system is available and online. 		
<p>Normal Course:</p> <ol style="list-style-type: none"> 1.The student goes to the profile section from the dashboard. 2.The system shows the profile creation or update form. 3.The student fills in or updates their information (education, skills, experience, preferences). 4.The student submits the profile form. 5.The system checks and validates the entered data. 6.The system saves the profile information. 7.The system confirms that the profile has been created or updated successfully. 		
<p>Alternative Course:</p> <ol style="list-style-type: none"> 1.1 Incomplete profile information (branch at step 5): <ol style="list-style-type: none"> a. If any required profile fields are left empty, the system shows a warning message. b. The student is asked to fill in the missing information. c. After completing the required fields, the system saves the updated profile. 1.2 Student updates an existing profile (branch at step 2): <ol style="list-style-type: none"> a. The system displays the student’s previously saved profile details. b. The student edits the selected profile fields. c. The system saves the changes to the profile. 		

Postconditions:

The student profile is successfully created or updated.

Profile data is stored in the system database.

The profile becomes available for match score calculation.

Exceptions:

1. System fails to save profile information:

a. If a system or database error occurs, the system shows an error message.

b. The student is asked to try again later.

2. Invalid data format entered:

a. If the student enters data in an invalid format (e.g., wrong file type for CV upload), the system displays a validation error.

b. The student is prompted to fix the incorrect information and resubmit.

Input:

-Personal information

-Academic details

-Skills and preferences

Source:

-Student

Output:

-Saved or updated profile confirmation

Destination:

-SIJATS database

-Student dashboard

Use Case Name: View Internship & Job Postings**ID:** UC-3**Priority:** High**Actor:** Student**Description:**

This use case explains how a student browses available internship and job postings, views their details, and reviews opportunities that match their profile within the SIJATS system.

Trigger: The student selects the “View Job / Internship Postings” option from the dashboard.**Type:** Interactive**Preconditions:**

1. The student is logged into the SIJATS system.
2. Internship and job postings exist in the system database.

Normal Course:

1. The student opens the job and internship postings page.
2. The system shows a list of available postings.
3. The student filters or searches the postings based on criteria (field, location, type).
4. The student selects a posting to view its details.
5. The system displays the selected posting's details (requirements, deadlines, description).
6. The student reviews the posting and decides whether to continue with an application or check the match score

Alternative Course:

- 1.1 No postings match search criteria (branch at step 3):
 - a. If no postings match the selected filters, the system shows a "No results found" message.
 - b. The student is prompted to change or broaden the search criteria.
- 1.2 Student views posting without applying (branch at step 6):
 - a. The student goes back to the postings list without taking any further action.
 - b. The system continues to display the available postings list.

Postconditions:

Job and internship postings are displayed to the student.

The student is able to select a posting for application or match score calculation.

Exceptions:

1. System fails to retrieve postings:
 - a. If a system or database error occurs, the system displays an error message.
 - b. The student is advised to try again later.
2. Internet connection issue:
 - a. If the system cannot load postings due to connectivity problems, an error message is displayed.
 - b. The student is prompted to check their connection and try again.

Input:

-Search or filter criteria

Source:

-Student

Output:

-List of internship and job postings

-Posting details

Destination:

-Student interface

Use Case Name: Apply for Job / Internship	ID: UC-4	Priority: High
Actor: Student		
Description: This use case explains how a student applies for a chosen job or internship posting by submitting the required application information through the SIJATS system.		
Trigger: The student selects the “Apply” option on a job or internship posting. Type: Interactive		
Preconditions: 1. The student is logged into the SIJATS system. 2. The student profile is created and available. 3. A job or internship posting is selected.		
Normal Course: 1. The student selects a job or internship posting. 2. The student clicks the “Apply” button. 3. The system displays the application form and required details. 4. The student confirms and submits the application. 5. The system validates the application data. 6. The system saves the application in the database. 7. The system shows a confirmation message that the application has been submitted successfully.		
Alternative Course: 1.1 Incomplete profile information (branch at step 5): a. If required profile details are missing, the system displays a warning message. b. The student is prompted to complete their profile before submitting the application. c. After the profile is completed, the application process continues. 1.2 Student cancels application (branch at step 4): a. The student chooses not to submit the application. b. The system cancels the application process and returns the student to the postings page.		
Postconditions: The application is successfully submitted and stored in the system. The application status is updated to “Applied”. The student can view and track the status of the application.		
Exceptions: 1. Application submission fails: a. If a system or database error occurs, the system displays an error message. b. The student is advised to try submitting the application again later. 2. Duplicate application detected: a. If the student has already applied for the same posting, the system shows a warning message. b. The system blocks the submission to prevent a duplicate application.		
Input: -Application confirmation -Student profile data		
Source: -Student		

Output:

- Application submission confirmation
- Application record

Destination:

- SIJATS database
- Student dashboard

Use Case Name: Track Application Status	ID: UC-5	Priority: Medium
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Actor: Student

Description:

This use case explains how a student views and monitors the status of their submitted job and internship applications within the SIJATS system.

Trigger: The student selects the “My Applications” option from the dashboard.

Type: Interactive

Preconditions:

The student is logged into the SIJATS system.

At least one application has been submitted by the student.

Normal Course:

1. The student opens the application tracking page.
2. The system shows a list of the student’s submitted applications.
3. Each application is displayed with its current status (e.g., Applied, Under Review, Accepted, Rejected).
4. The student selects an application to see more details.
5. The system displays the detailed status and update history of the selected application.

Alternative Course:**1.1 No applications found (branch at step 2):**

- a. If the student has not submitted any applications, the system shows a “No applications found” message.

- b. The student is prompted to go to the job and internship postings page.

1.2 Student returns without viewing details (branch at step 4):

- a. The student goes back to the dashboard without selecting any application.
- b. The system stays active and available for further actions.

Postconditions:

The application status information is displayed to the student.

The student is informed about the progress of their applications.

Exceptions:

1. System fails to retrieve application data:
 - a. If a system or database error occurs, the system shows an error message.
 - b. The student is advised to try again later.
2. Internet connection issue.
 - a. If the system cannot load application data due to connectivity problems, an error message is displayed.
 - b. The student is prompted to check their connection and try again.

Input:

-Application selection

Source:

-Student

Output:

-Application status list
-Application details

Destination:

-Student dashboard

Use Case Name: Generate Match Score**ID:** UC-6**Priority:** High**Actor:** Student**Description:**

This use case explains how the SIJATS system calculates a match score by comparing a student's profile with the requirements of a selected job or internship posting, helping the student make informed application decisions.

Trigger: The student selects the "View Match Score" option for a job or internship posting.**Type:** Interactive**Preconditions:**

The student is logged into the SIJATS system.

The student profile is complete and available.

A job or internship posting is selected.

Normal Course:

1. The student selects a job or internship posting.
2. The student requests to generate a match score.
3. The system retrieves the student's profile information.
4. The system retrieves the requirements of the selected posting.
5. The system compares the profile data with the posting requirements.
6. The system calculates a match score based on predefined criteria.
7. The system shows the match score and suitability level to the student.

Alternative Course:

1.1 Incomplete profile data (branch at step 3):

- a. If the student's profile is incomplete, the system displays a warning message.
- b. The student is prompted to update and complete their profile.
- c. After the profile is completed, the system continues with match score generation.

1.2 Student views score without applying (branch at step 7):

- a. The student reviews the generated match score.
- b. The student goes back to the postings page without submitting an application.

Postconditions:

- The match score is successfully generated and displayed to the student.
- The match score data is stored in the system.
- The student gains clearer insight into how suitable the posting is for them.

Exceptions:

1. System fails to calculate match score:

- a. If a system or calculation error occurs, the system displays an error message.
- b. The student is advised to try again later.

2. Required data not available:

- a. If necessary profile or posting data is missing, the system shows an error message.
- b. The match score calculation process is stopped.

Input:

- Student profile data
- Job or internship requirements

Source:

- SIJATS database

Output:

- Match score
- Suitability information

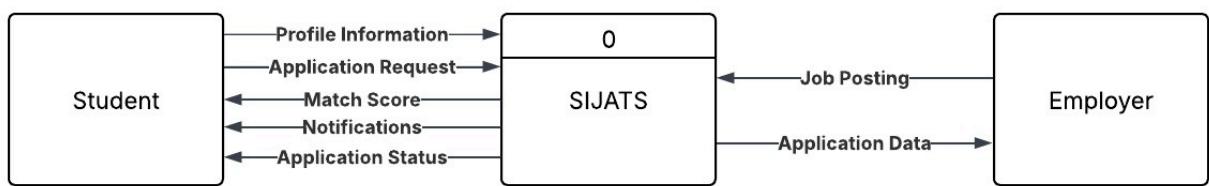
Destination:

- Student interface
- Match score records

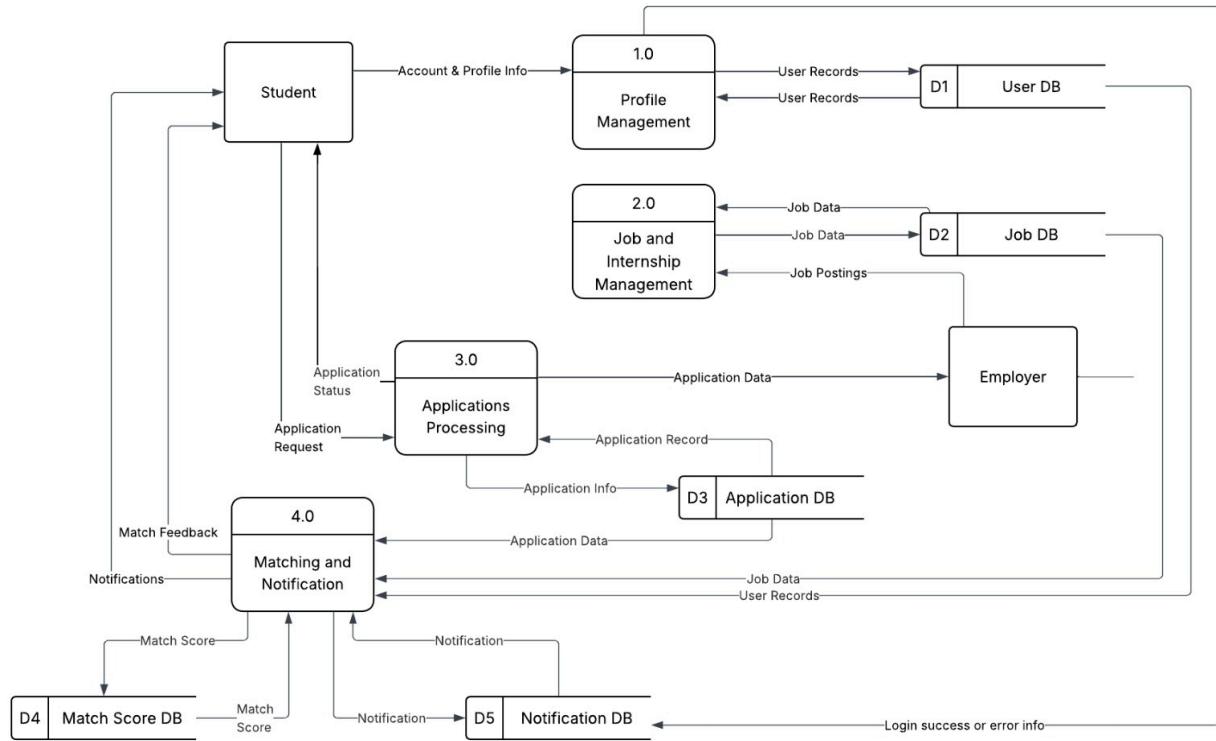
Use Case Name: Receive Notifications	ID: UC-7	Priority: Medium
Actor: Student		
Description: This use case explains how the SIJATS system sends notifications to students about important events, such as updates to their application status and the availability of new match scores.		
Trigger: An application status is updated. A match score is generated. Type: Automatic		
Preconditions: The student is registered in the SIJATS system. Notification settings are enabled.		
Normal Course: 1. A system event occurs (application status update or match score generation). 2. The system creates a notification message. 3. The system sends the notification to the student. 4. The student views the notification from the dashboard.		
Alternative Course: 1.1 Student does not view the notification immediately (branch at step 4): a. The notification stays marked as unread in the system. b. The student can open and view the notification at a later time.		
Postconditions: The notification is successfully delivered. The student is informed about system updates.		
Exceptions: Notification delivery fails: a. If the system fails to send the notification, an error is logged. b. The system retries notification delivery later.		
Input: -System event		
Source: -SIJATS system		
Output: -Notification message		
Destination: -Student dashboard		

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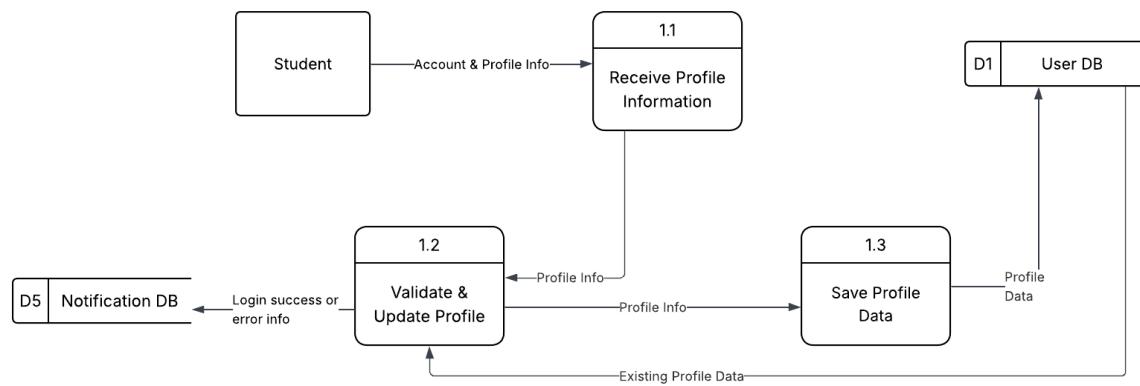
8.1- Context Diagram:



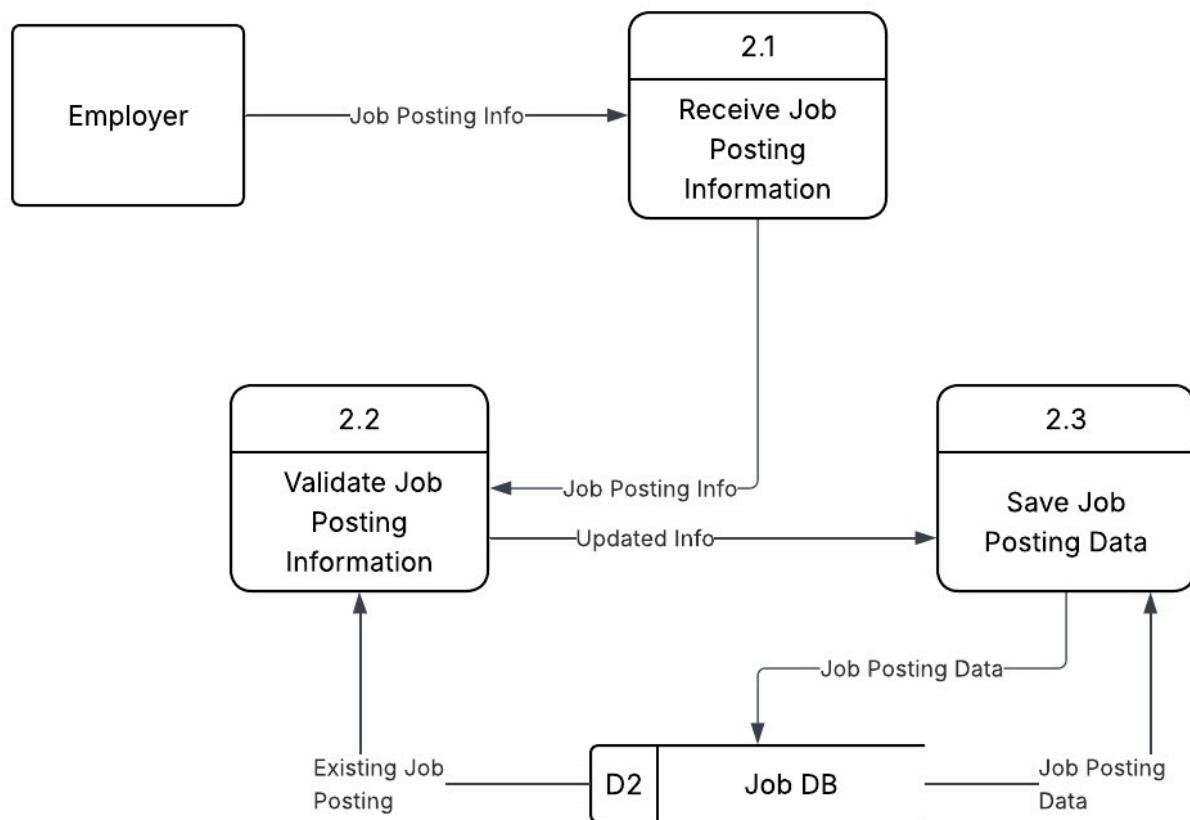
8.2- Level 0 DFD:



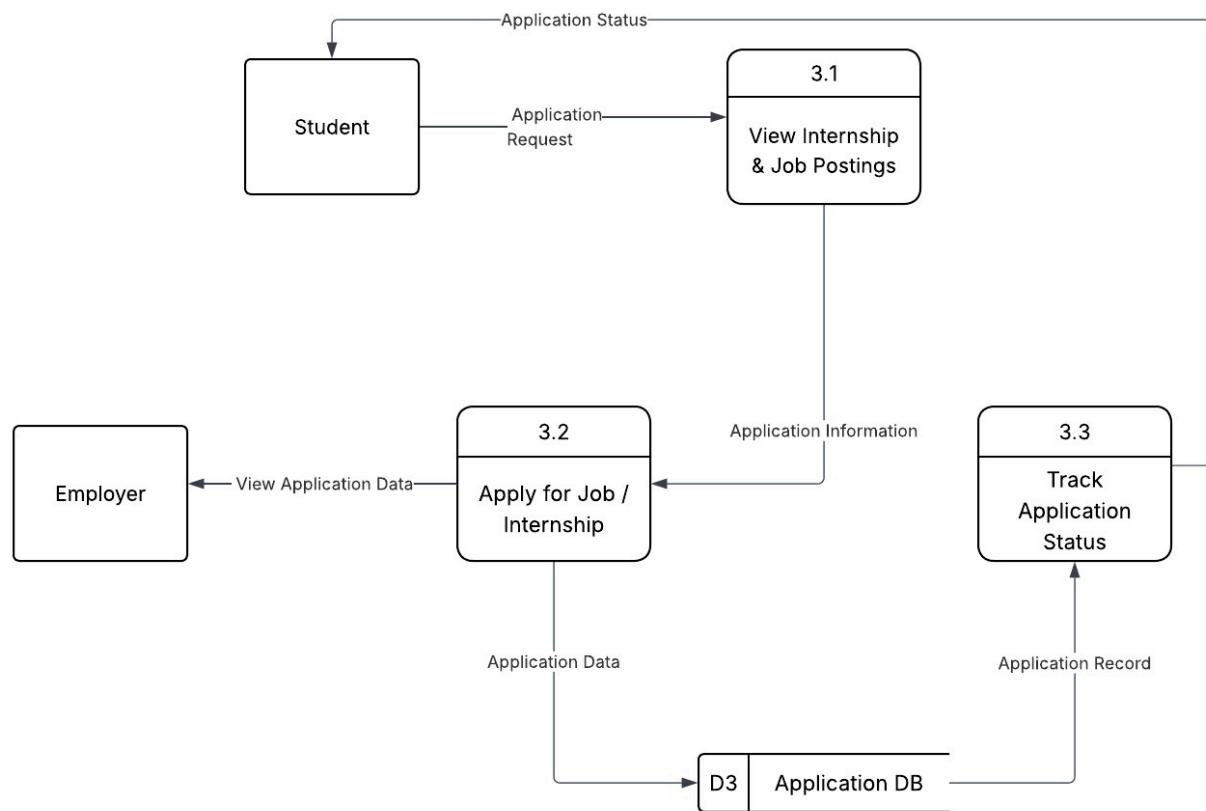
8.3-Level 1 DFD Profile Management:



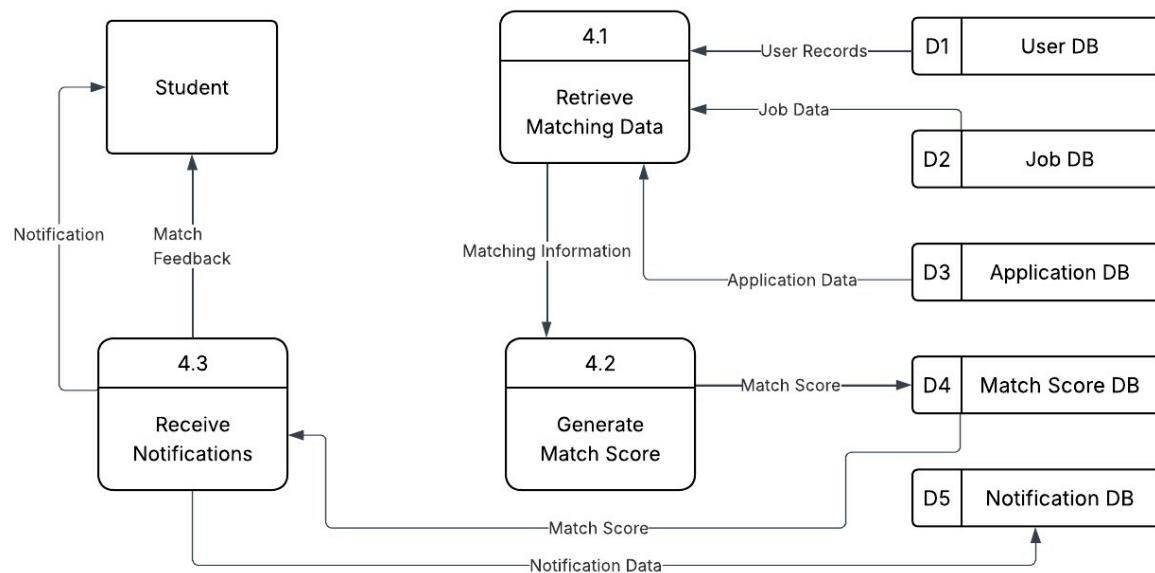
8.4-Level 1 DFD Job and Internship Management:



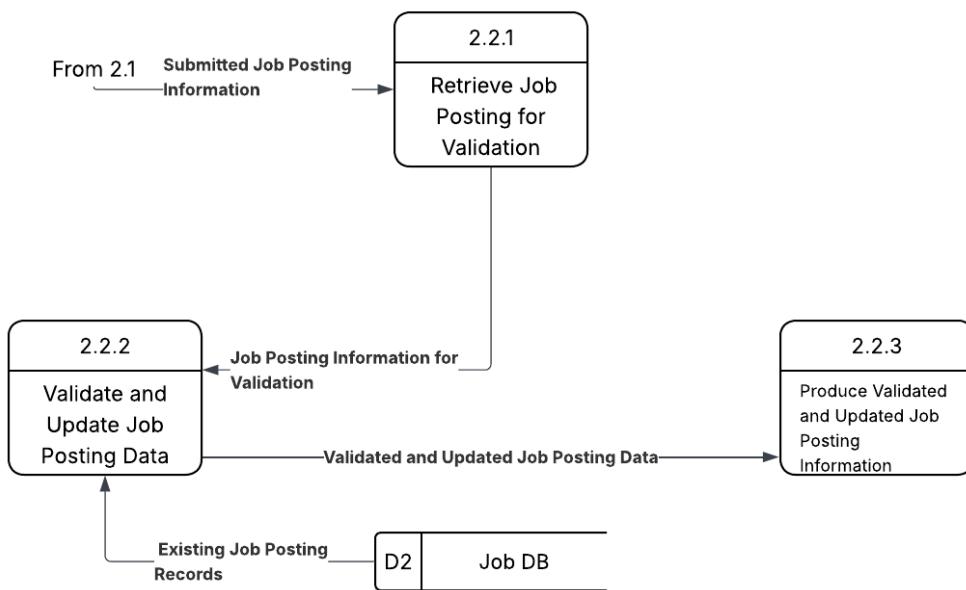
8.5- Level 1 DFD Applications Processing:



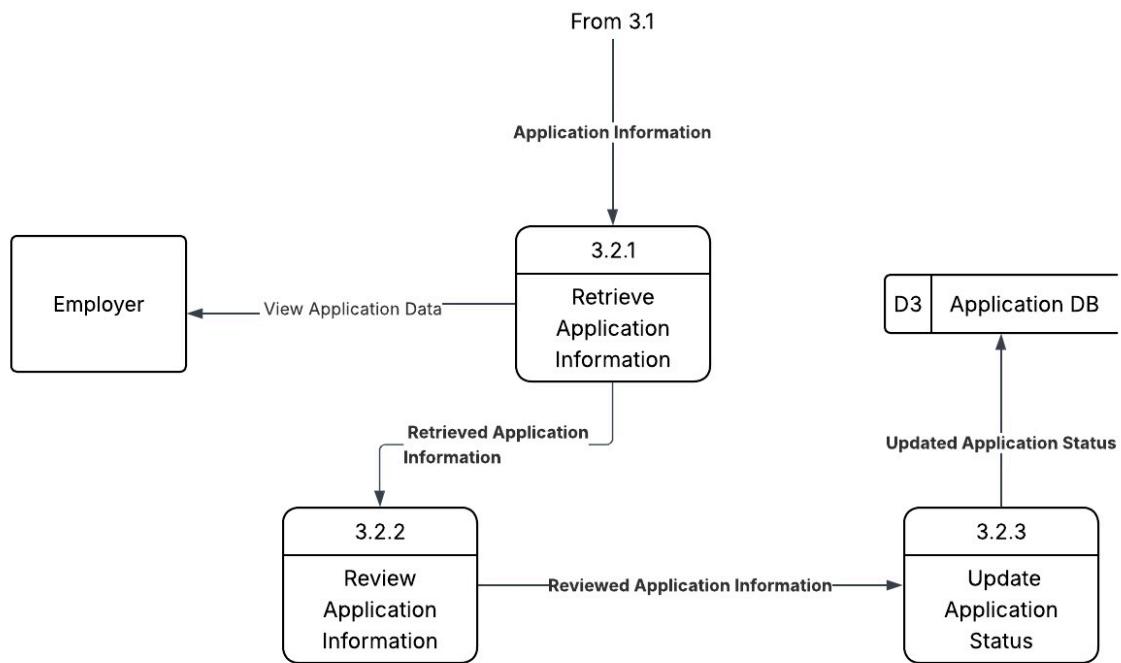
8.6- Level 1 DFD Matching and Notification:



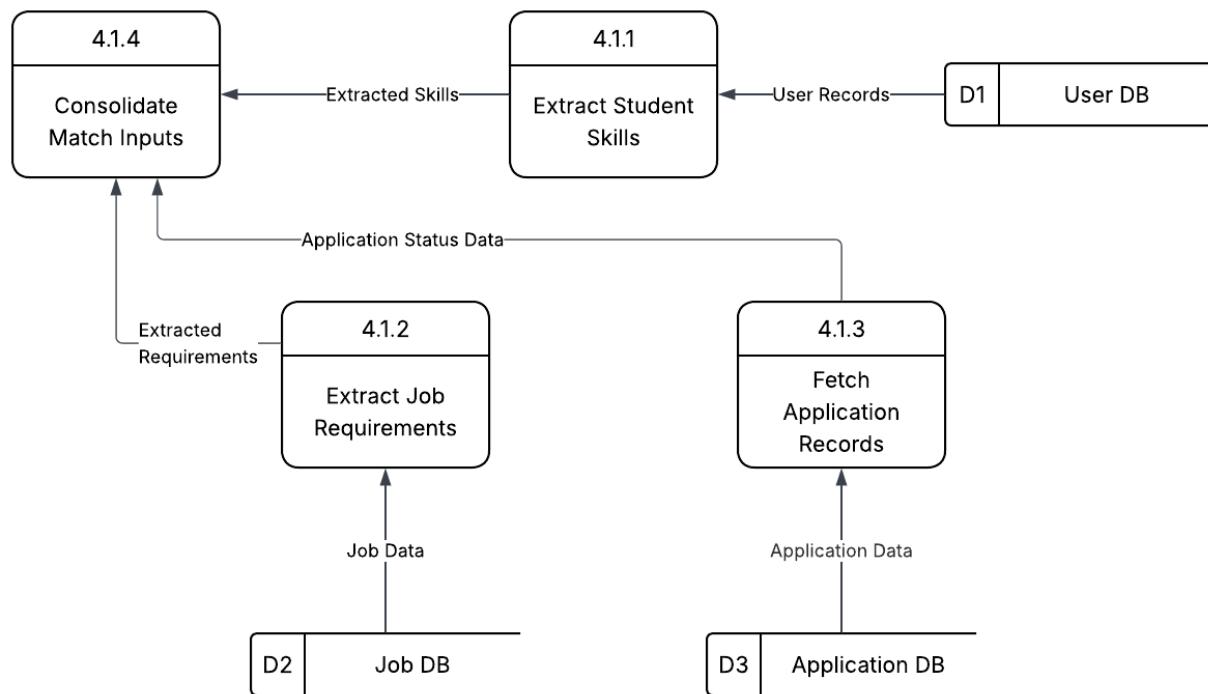
8.7- Level 2 DFD Process 2.2:



8.8- Level 2 DFD Process 3.2:

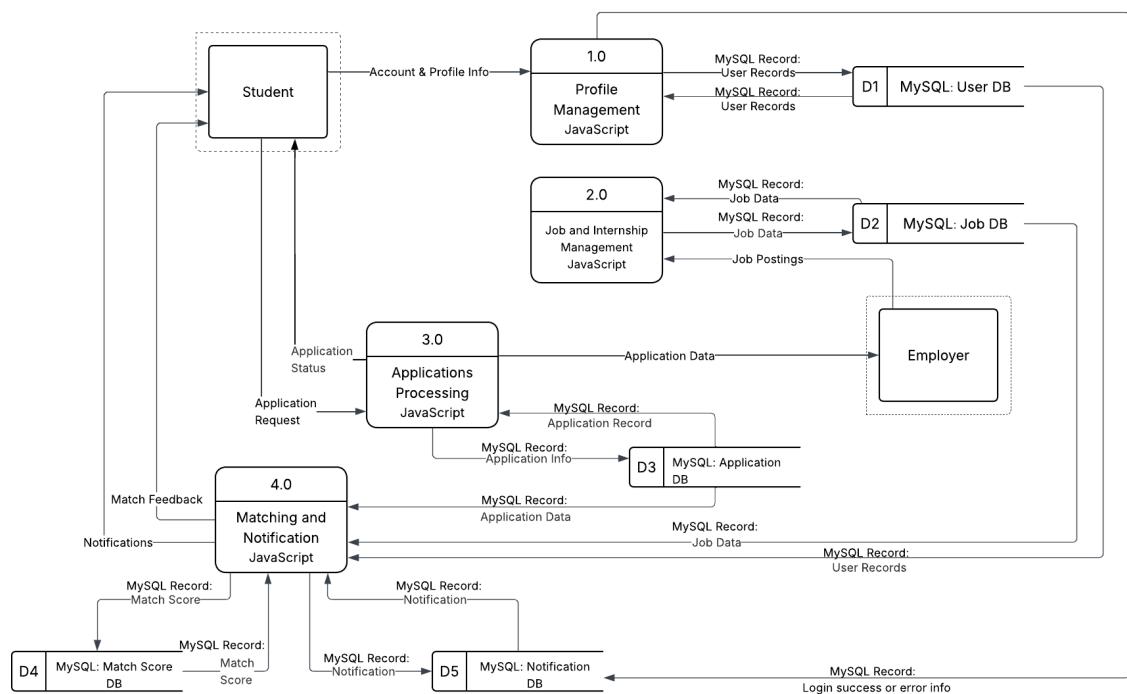


8.9- Level 2 DFD Process 4.1:

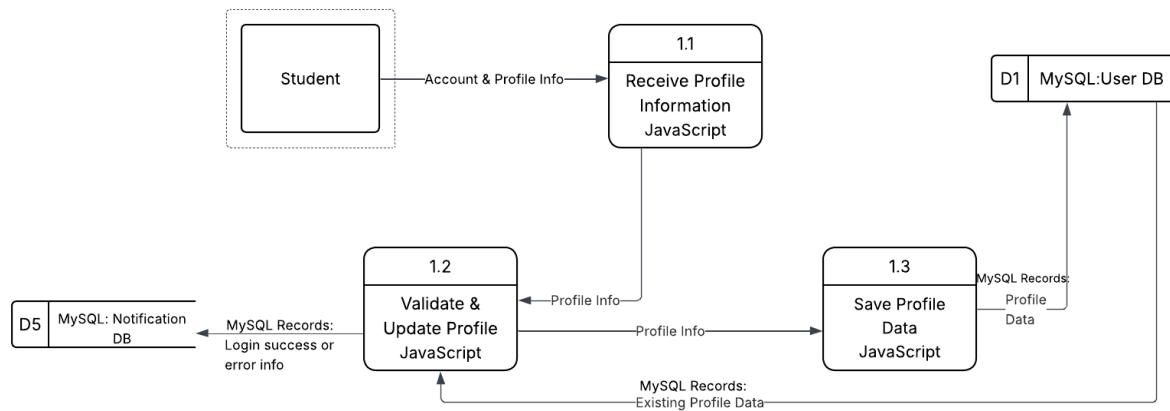


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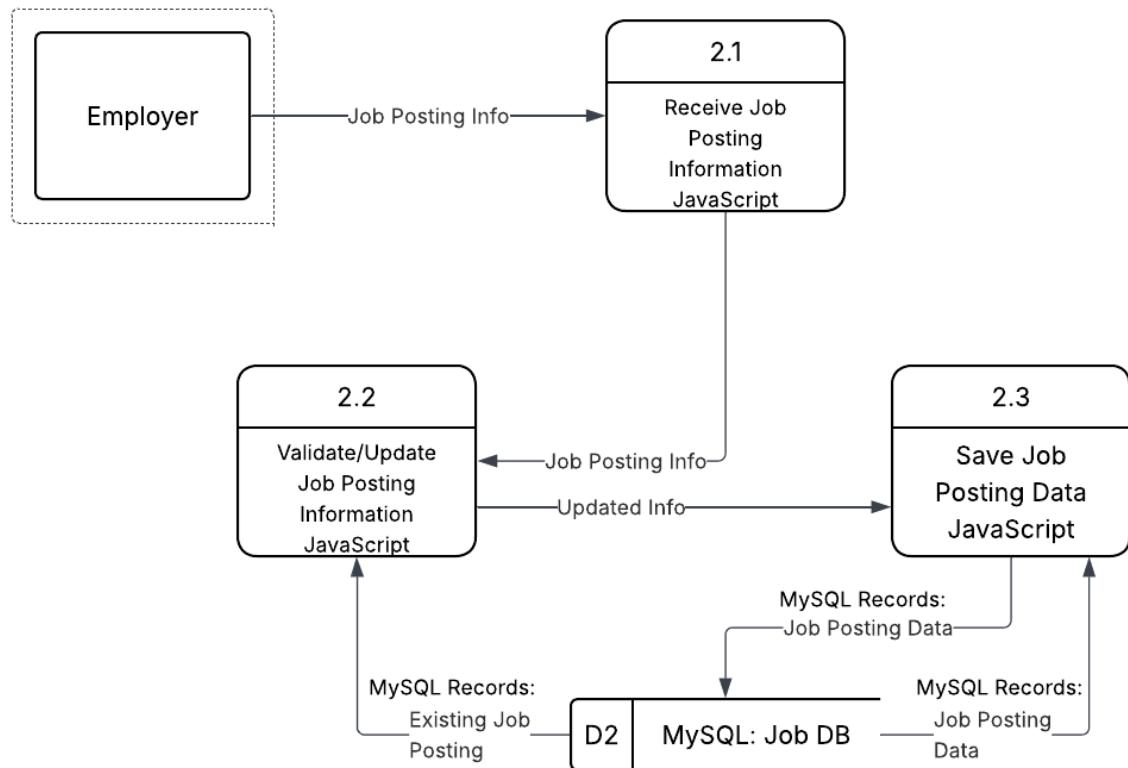
9.1- Level 0 Physical Data Flow Diagram (DFD):



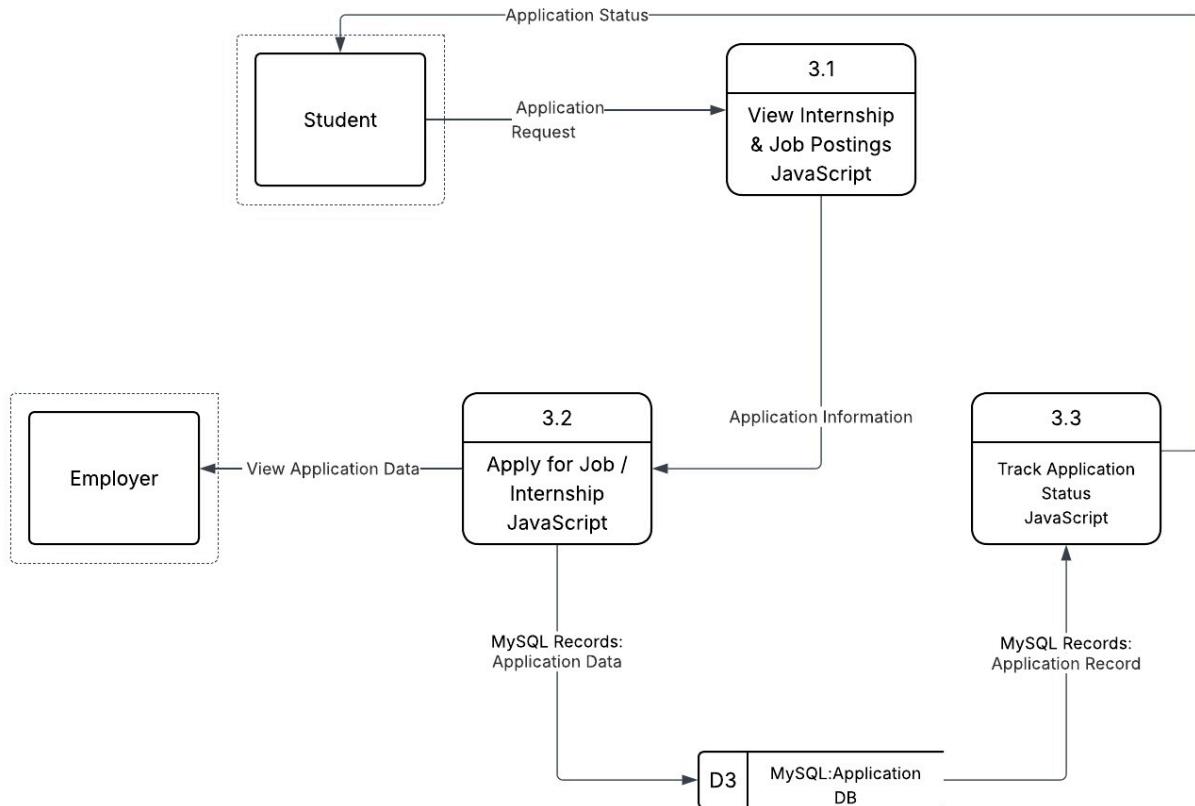
9.2- Level 1 Physical DFD Process 1:



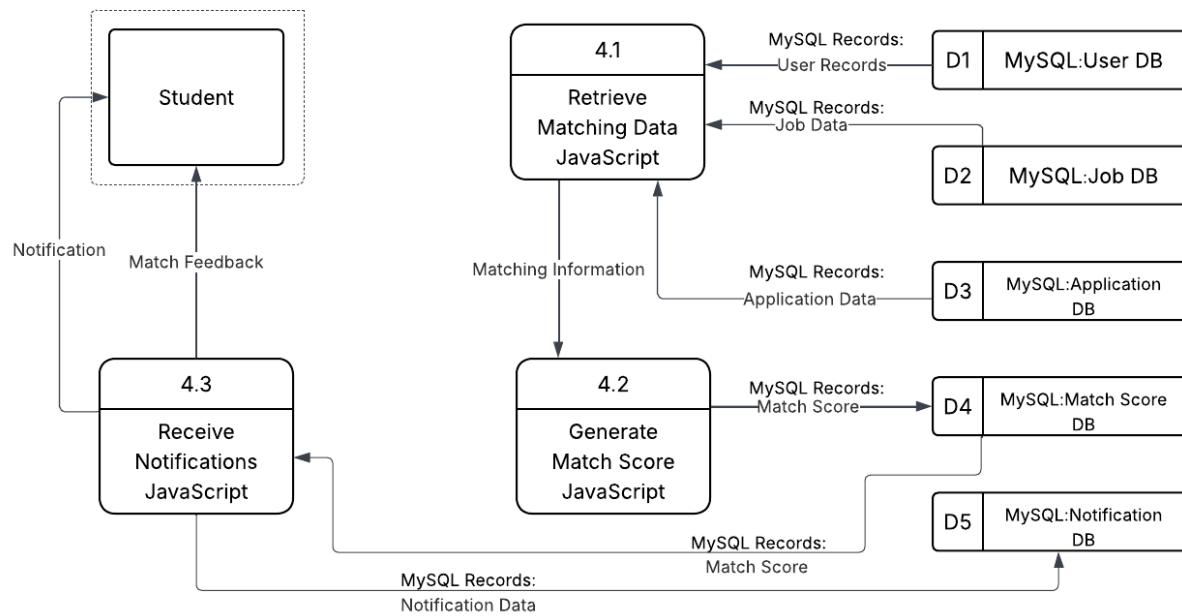
9.3- Level 1 Physical DFD Process 2:



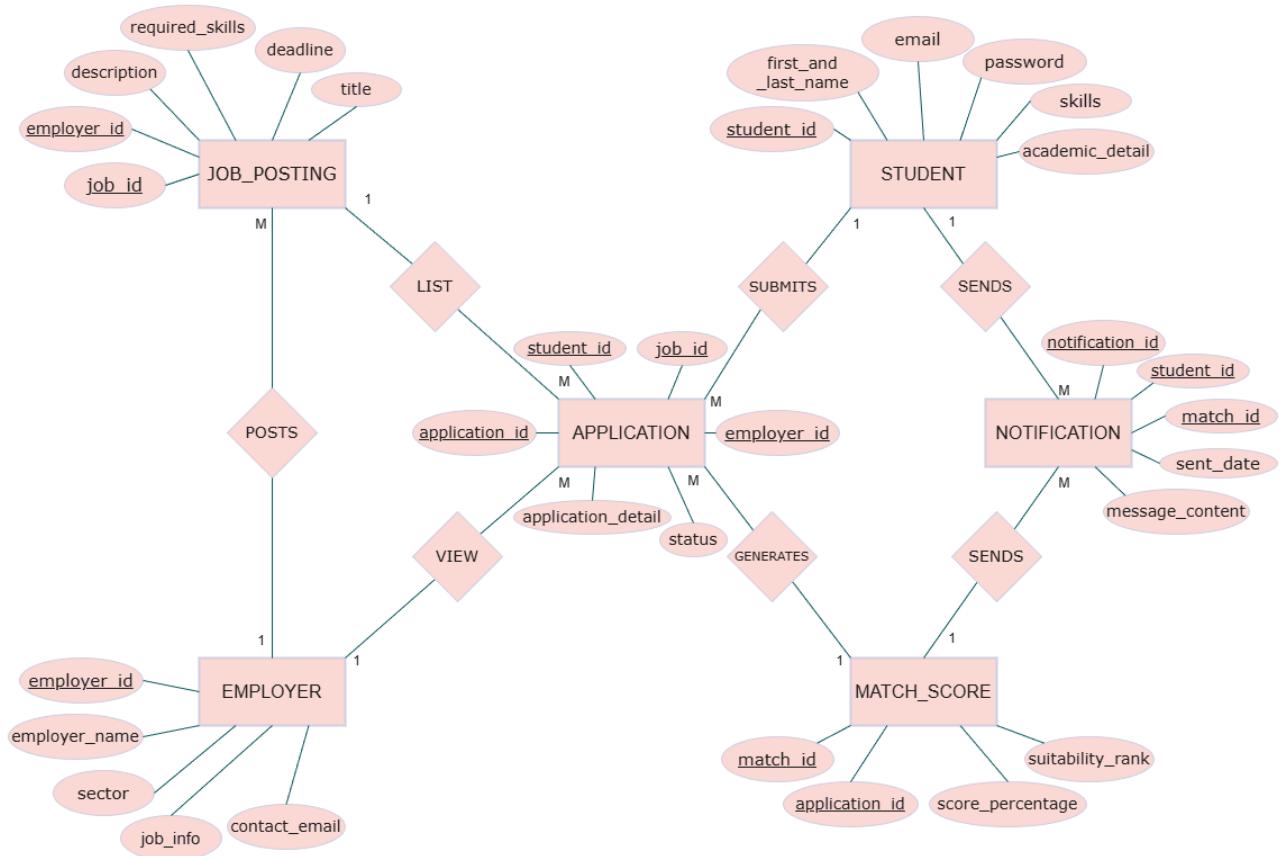
9.4- Level 1 Physical DFD Process 3:



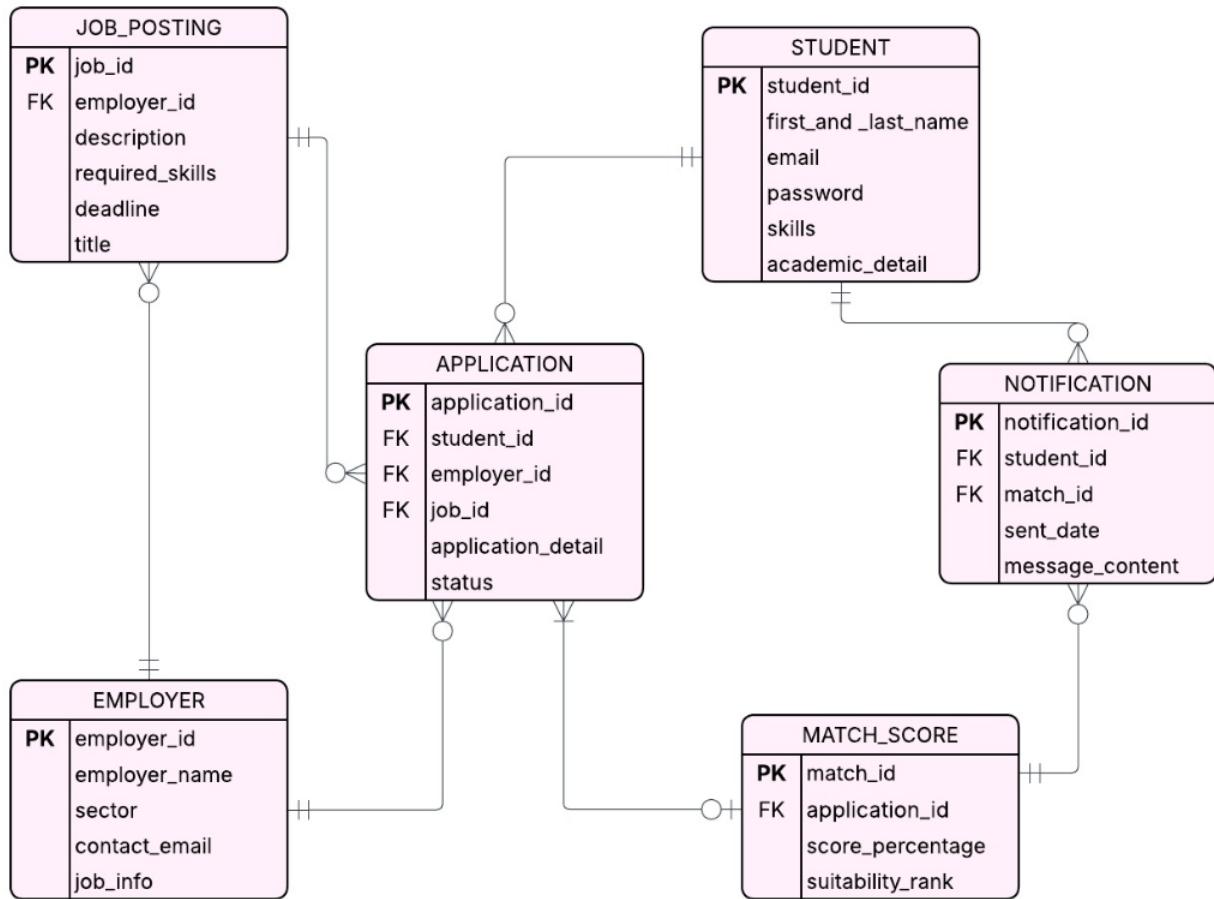
9.5- Level 1 Physical DFD Process 4:



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Requirements	Server-Based	Client-Based	Thin Client-Server	Thick Client-Server
Operational Requirements				
System Integration Requirements	✓		✓	✓
Portability Requirements		✓	✓	
Maintainability Requirements	✓			✓
Performance Requirements				
Speed Requirements			✓	✓
Capacity Requirements			✓	✓
Availability/ Reliability Requirements	✓		✓	✓
Security Requirements				
High System Value	✓			✓
Access Control Requirements	✓	✓	✓	
Encryption/ Authentication Requirements	✓			
Virus Control Requirements	✓			

Cultural/Political Requirements			
Multilingual Requirements	✓		
Customization Requirements	✓	✓	✓
Making Unstated Norms Explicit			
Legal Requirements	✓	✓	✓

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We made our choices based on the balance of cost, performance and scalability. We designed the software and hardware to support hybrid access (mobile + web) and match scoring. We ensured operating system selections, server sizing, and optimization of key components.

Hardware Specifications:

Mobile Devices:

Android	Snapdragon 8 Gen 1 or equivalent, ≥6 GB RAM, ≥128 GB storage
iOS	iPhone 12 or newer (A14 Bionic or later), ≥64 GB storage

These core elements provide a smooth user experience, secure authentication, and reliable caching. As disadvantages, stronger hardware requirements may reduce accessibility for old devices.

Software Specifications

Operating System:

Android	Android 12 or later
iOS	iOS 16 or later

Android is selected for device population and flexible tooling; iOS is selected for performance and strong security. Together, they cover the most of mobile users.

Backend Development Frameworks:

Node.js (v18+) with Express.js / NestJS

Java (17+) with Spring Boot (enterprise alternative)

Node.js supports fast API development and real-time processing. Spring Boot is a strong option for maintainable, safety enterprise services.

Frontend Development Frameworks:

React (web admin portal)

Flutter (cross-platform mobile app)

React provides a responsive admin dashboard; Flutter enables a consistent mobile UI for both iOS and Android.

Database Management Systems:

PostgreSQL (relational, ACID)

Redis (cache + session/token blacklist)

Elasticsearch (optional job search indexing)

PostgreSQL provides data integrity for applications and profiles. Redis improves performance for frequent reads. Elasticsearch makes faster searching for keywords.

Server & User Devices:

Server	Linux (Ubuntu 22.04+), 4 vCPU, 16 GB RAM baseline, SSD storage
User Devices	Modern browsers (Chrome/Edge/Safari), Android/iOS smartphones

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GUI Design (Color Mockups – Blue Theme)

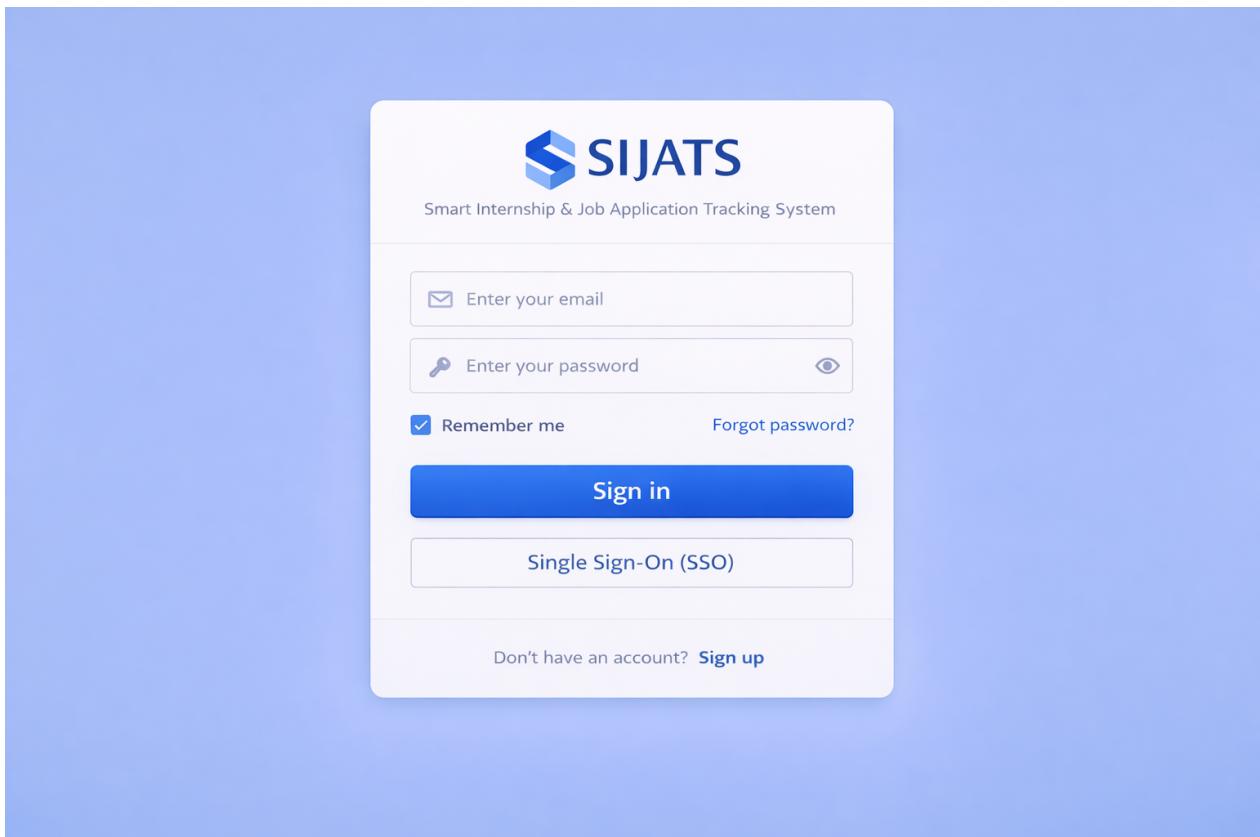


Figure 14.1 – SIJATS Login Screen

Hybrid Overview

 Active Applications

12

 Interviews Scheduled

4

 Matches Found

8

 System Status Online

Recent Applications

DeviceSoft

 In ReviewSoftware Engineer
San Francisco, CA

Creative Solutions

 In ReviewSoftware Engineer
Austin, TX

SphereTech

 In ReviewSoftware Engineer
Seattle, WA

Recent Applications

DeviceSoft

 In ReviewSoftware Engineer
San Francisco, CA

Creative Solutions

 Interview ScheduledSoftware Engineer
Austin, TX

SphereTech

 Interview ScheduledSoftware Engineer
Seattle, WA

Match Insights



Job List

 Search jobs...

Search

Filters

Keywords

 Search jobs...

Location

 City, state, or zip

Category

- Software Engineering
- Product Management
- Data Science
- Marketing
- Design

[More categories](#)

Distance

25 miles

 5 5 25 50[Clear All](#)

234 jobs

Sort by:  Most Relevant

Software Engineer Intern

CheckerSoft · San Francisco, CA

 Full-time  High  Match Apply >

Software Engineer Intern

NexaTech · Seattle, WA

 Full-time  High  Match Apply >

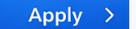
Software Engineer Intern

DigiWorks · Austin, TX

 Full-time  High  Match Apply >

Software Engineer Intern

BrightByte Solutions

 Full-time  High  Match Apply >

Software Engineer Intern

BrightByte Solutions

 Full-time  High  Match Apply >

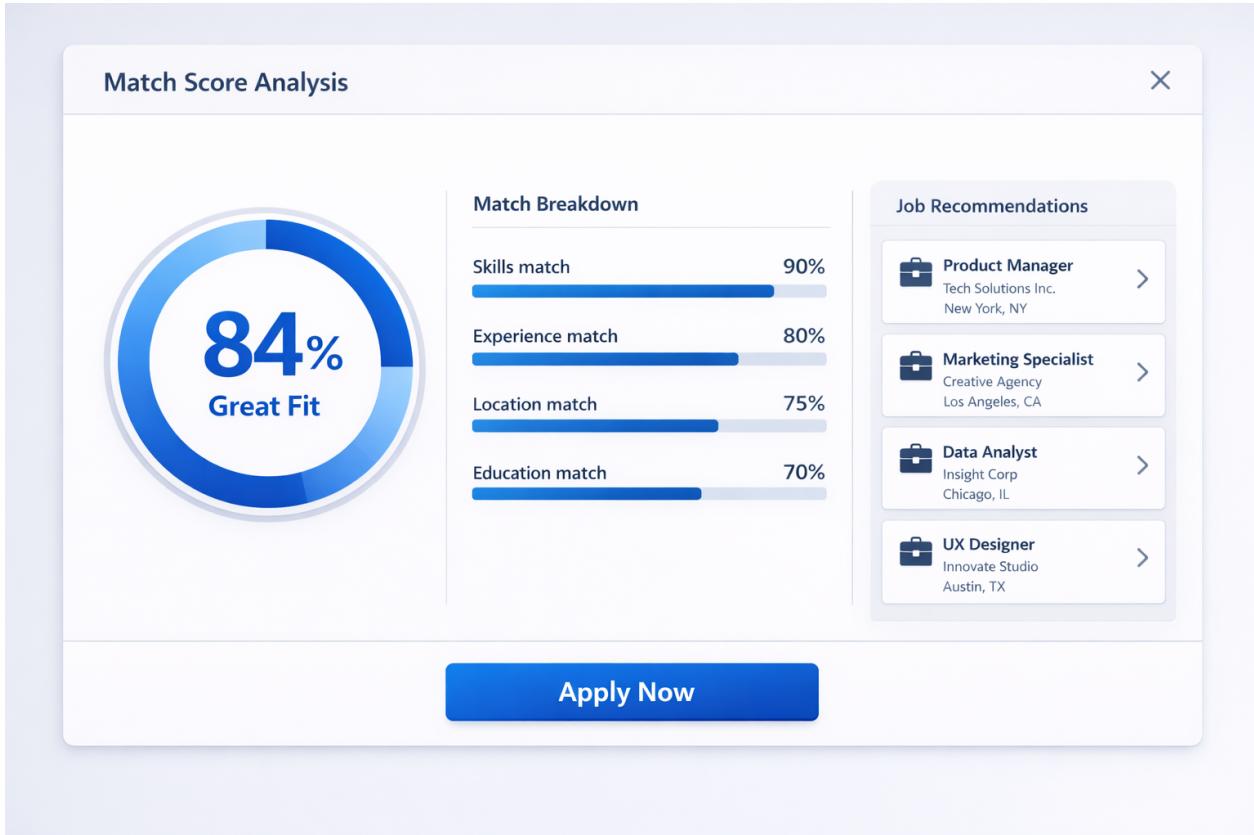
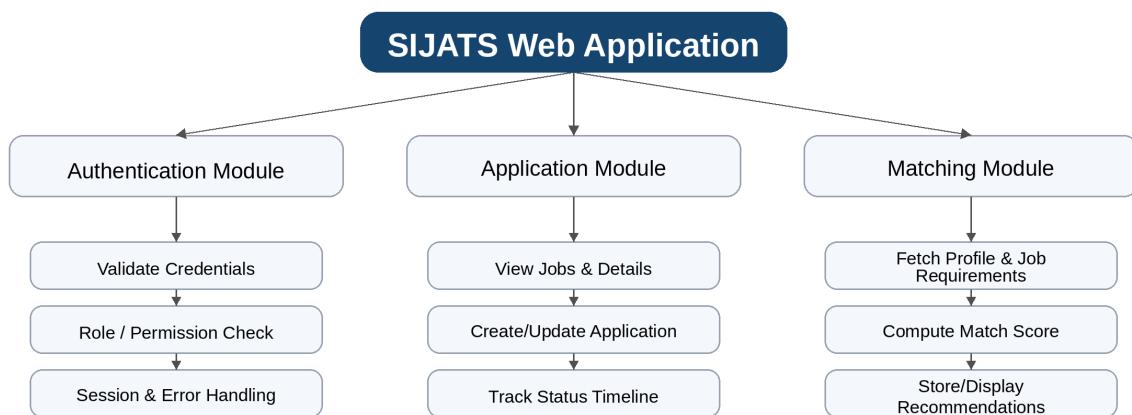


Figure 14.2 – Dashboard (Hybrid Overview)

Figure 14.3 – Job List (Search + Filters + Apply)

Figure 14.4 – Match Score (Breakdown + Recommendation)

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Program Specifications (Summary):

Module	Key Functions	Outputs
Authentication module	Login, token/session management, role checks	JWT token, session state, error messages
Application module	Create/update applications, status timeline, notifications	Application records, status updates
Matching module	Score computation, ranking, recommendations	Match score, breakdown, ranked job list

The modular structure ensures maintainability and clarifies responsibilities. Authentication controls access; Application manages the lifecycle of submissions; Matching provides decision support by computing and presenting compatibility results.

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Implementation

16.1 Implementation Strategy

A phased implementation strategy is intended for the SIJATS system.

To lower risks and guarantee system stability, system functionalities are intended to be introduced gradually rather than all at once.

Core system functions like user registration and login are the first steps in the implementation process. These are followed by profile creation, job and internship postings, application management, and the match score decision support feature.

Employers use the system interface to post job openings, making sure that all job-related data is manually entered, accurate, and under control.

The match score feature is intended to serve as a recommendation and decision support system, helping students assess their suitability for internship and employment opportunities.

Applications' qualifies or automatic settlement are not made by the system. It verifies students by allowing informed directions according to biographical outline and task demand balancing.

16.2 Migration Plan

The thing about SIJATS is that it is a system so it is different from the old trial management system that we have been using. We need to move data from the existing platform to SIJATS. This is what we mean by data migration from the existing platform to SIJATS. The data migration, to SIJATS is a step.

The system was made from the start with things like student records and job postings and applications all put into the system right from the beginning. The system had all of these things the student records and the job postings and the applications in it, from day one the system did.

The system got some sample job and internship postings added to it when it was first set up. This was done to see if the system works properly and how users would interact with the system. The sample job and internship postings were used to test the system and make sure it was working as it should.

The student users can then sign up for the system they can create their profiles and they can start using the system right away without any problems, with the student system working together.

16.3 Training

The user training was supposed to be easy and not take a lot of time because the system interface is simple to use and it feels natural to work with the system interface.

A concise manual with instructions to students on how to:

- Create and update profiles
- View job and internship postings
- Apply for positions
- Interpret match score results

16.4 Testing

The system was tried out a lot in tests to show that the system works correctly and the system is reliable.

To check that they did the testing we need to see if they actually did it in the following situations:

- People can now sign up and login to the system without any problems the registration and login process is working fine for users.
- The user profiles can be restored properly when they are needed again. The profiles are saved so that the user can restore them at a time. This means that the profiles can be saved and then restored properly.
- They did everything they were supposed to do when they applied and they followed all the steps, in the application process correctly

The matching scores were figured out based on the profile and the job description. The profile and the job description were used to compute the matching scores. This means the profile and the job description were matched up properly to get the scores.

We did some error checking and made sure the system was easy to use. This was done to find and fix any problems, with the system before it was released. We wanted to make sure the system worked well and people could use it without any issues. The error checking and usability work was a step to debug the system before deployment.

16.5 Deployment

The SIJATS system was made so that it works on the web. This means people can use the SIJATS system with a web browser. They do not need to install any software to use the SIJATS system.

The main thing about this architecture is that it makes all users equal when it comes to performance and server roundtrips. This architecture became available to students after it was deployed and people have been looking at it to see how the architecture can be improved in the future. The architecture is still being looked at to make it better, for the students who use the architecture.

16.6 Implementation Timeline

The implementation process followed a timeline. We did things in an orderly way and that is what the implementation process was like. The implementation process had a plan and the implementation process was done step, by step.

- Week 1: System analysis and requirement finalization
- Week 2: Core system development and module integration
- Week 3: System testing and deployment

The timeline was really important because it helped get the system up and running smoothly. This way the system was implemented on time. It was good. It worked well. The timeline made sure that the system had quality and the system was reliable.

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Support and Maintenance

17.1 Technical Support

The SIJATS system needs assistance to work properly and smoothly. After we install the SIJATS system users can have problems like log in issues with the SIJATS system app errors, with the SIJATS system or they may not be able to access the SIJATS system.

So when problems come up we have a backup plan in place at the factory. Students can tell us about any issues they have through our support email and the system support team at the factory looks at these problems and fixes them in a short amount of time. The system support team at the factory is, in charge of making sure these problems get solved so students can keep working with the system support team at the factory.

17.2 System Maintenance

System Maintenances are scheduled to keep system stable and performance gains. This will include monitoring the system performance, identifying potential problems and reacting accordingly with fixes. Small improvements or fixes can be installed without any impact on system availability.

The people who use the system do not have a lot to do so maintenance is done at times that're convenient for the users. This means that the maintenance is planned and executed when it is a time, for the users of the system.

17.3 Backup and Recovery

We use backup methods to keep our data safe and make sure the system works properly. This includes making copies of information, like student profiles, job applications, matching results and notification logs. If the system fails or we have data we have a way to fix it. This means we can get the system working again quickly and make sure everything is okay. We do this to guarantee that our system keeps working without any problems.

17.4 Security and User Roles

Security is one of the most important issues in the maintenance of the SIJATS system. The system is set up so that people can only do things that're part of their job. This is done by giving each user a role that says what they are allowed to do. The system functions are controlled through these user roles so users can only get to the features that are related to their job. This way users can only access the system functions that they need to do their work. The user roles make sure that people can only use the system in a way that is related to their responsibilities.

The school keeps student information safe by using codes and only letting certain people look at it. Student data is really important so they make sure to protect student data with these codes and limits, on who can see student data.

We do security checks all the time to find out if there are any problems that bad people can use to get to our information. We want to keep our information safe. Security checks are very important to protect our personal information and the security checks help us do that.

17.5 System Improvements and Updates

When the system is up and running we can look at what the usersre saying to make it better. The SIJATS system can be improved in ways like making the match score more accurate or listening to what the users are complaining about. This means the SIJATS system is always being worked on and will be a tool that does what the users need it to do. Bhatia said this is how the SIJATS system stays useful and relevant, to the users.

18-

Conclusion

18.1 What Went Right For Us

We should look at the things that worked well for the project. The project had some things that happened. We were able to do some things that were successful.The things that worked well for the project are important to think about.We can learn from the things that worked well for the project so we can do them again.What worked well for the project is something we should think about so we

can be successful again. The main goal of the SIJATS project was achieved. A system was put in place for handling internship and job applications.

The system has parts that work well together like managing users and processing applications. It also helps with making decisions. One of the things about the SIJATS project is the match score feature. The SIJATS system helps students make choices when they apply for jobs. It does this by showing how well their skills match the requirements of the job. The SIJATS project is really good, at helping students find jobs that're a good fit for them.

18.2 Challenges

Negotiating system requirements, at the start of the pilot project was really tough. We had to make sure everything was clear and consistent. This meant we had to coordinate all the parts of the project carefully. We needed to make sure that every component followed these requirements.

The match score was another problem. We had to make some tough design decisions to get the match score right. The pilot project needed a match score that was not too simple or too hard to understand. We wanted the match score to be meaningful and not trivial. The system requirements and the match score of the pilot project were the issues we faced.

18.3 Lesson Learned

The people working on the SIJATS system learned a lot from it. They got to know how to analyze and design systems well. The SIJATS system was a help to the project team, in this way. They gained experience from working on the SIJATS system.

The project really showed us that we need to have requirements and a good plan in place. User experience is very important. We learned that user-centered design is the way to go. The project also taught us that decision support systems play a role in making the system work well and that user-centered design and decision support systems are crucial for the system to be effective. We saw that defined requirements and structured planning are essential for a successful project and that user-centered design is key, to a good user experience.

18.4 Future Improvements

While SIJATS has reached its current state, several potential areas for improvement exist. These include enhancing the peer-to-peer fee structure with advanced techniques, adding an employer management unit, and developing a mobile-compatible system. System modifications could also integrate improved analytics to provide more detailed information about application processes and user interactions.

Overall, the SIJATS project demonstrates how the internship and job application process can be improved by certifying a well-known information system. By integrating application tracking with decision options, the system offers rates and output values comparable to traditional job platforms. The project reflects a practical application of system analysis and design concepts and provides a strong foundation for further development and real-world implementation.