

King Saud University

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IS 498

Yusur

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Project Abstract:

This project develops a comprehensive web-based job portal designed to connect job seekers with employers while providing robust administrative oversight. Job seekers can create and manage profiles, upload certifications, receive personalized job recommendations, apply for positions, and track application statuses through real-time notifications. Employers are equipped with tools to post and edit job listings, access qualified candidate pools, and receive timely application notifications to streamline their hiring processes. Administrators maintain system integrity by accessing detailed reports on user activities, job listings, and applications, as well as managing system information. The platform emphasizes usability, security, and cross-device accessibility, aiming to foster an efficient and secure job market ecosystem that meets the diverse needs of all stakeholders.

Chapter 1 | INTRODUCTION

1.1 Introduction

Our project presents a user-friendly web-based job portal that effectively connects job seekers, employers, and administrators. **Job Seekers** can create profiles, upload certifications, receive personalized job recommendations, apply for positions, and track application statuses with real-time notifications. **Employers** can post and manage job listings, access qualified candidates, and receive application notifications to streamline their hiring process. **Administrators** oversee the platform by accessing comprehensive reports and managing system information to ensure smooth operation. The platform prioritizes usability, security, and high availability, making it accessible across all devices and safeguarding user data to foster an efficient and secure job market ecosystem.

1.2 Objectives

The primary objective of this project is to develop a comprehensive and user-centric web-based job portal that effectively bridges the gap between job seekers and employers while ensuring seamless administrative management. The platform aims to empower **job seekers** by providing an intuitive interface for creating and managing profiles, uploading professional certifications, receiving personalized job recommendations, applying for suitable positions, and tracking application statuses with real-time notifications. For **employers**, the objective is to offer robust tools for posting and editing job listings, accessing a pool of qualified candidates that match their specific requirements, and receiving timely notifications about applications to streamline the hiring process. Additionally, the project seeks to equip **administrators** with the ability to oversee the entire system through comprehensive reports on user activities, job listings, and applications, as well as manage and update system information to maintain optimal performance. Beyond these functional goals, the project prioritizes **usability** by designing an intuitive and easy-to-navigate interface, **security** by implementing strong authentication measures and data protection protocols, and **availability** by ensuring the platform is accessible across all devices. Ultimately, the project aims to create a secure, efficient, and accessible job market ecosystem that meets the diverse needs of all its users.

1.3 Motivations

The motivation behind this project stems from the growing challenges in the modern job market, where job seekers often struggle to find opportunities that match their skills and preferences, while employers face difficulties in identifying and attracting qualified candidates efficiently. Traditional recruitment methods can be time-consuming and ineffective, leading to prolonged vacancy periods and mismatched hires. Additionally, the increasing demand for digital solutions highlights the need for a centralized platform that simplifies the job search and hiring processes. By developing a comprehensive web-based job portal, this project aims to enhance connectivity between job seekers and employers, streamline application and recruitment workflows, and provide a secure and user-friendly environment for all stakeholders. Furthermore, the rise of remote work and diverse employment opportunities necessitates a versatile platform accessible across various devices, ensuring inclusivity and broad reach. Ultimately, the project aspires to contribute to a more dynamic and efficient job market ecosystem, fostering better employment outcomes and organizational growth.

1.4 Problem

In the modern job market, job seekers often face significant challenges in finding employment opportunities that align with their qualifications, skills, and preferences. Simultaneously, employers struggle to efficiently identify and connect with suitable candidates for their vacancies. Existing platforms, such as

LinkedIn and Wadhefa.com, provide basic functionality but fail to address critical needs such as automatic job matching based on verified qualifications or real-time certificate authentication.

Moreover, traditional recruitment methods and some digital solutions are plagued by inefficiencies, including mismatched hiring, prolonged vacancy periods, and a lack of user-specific functionalities. For administrators, monitoring and managing these systems often requires considerable manual effort, hindering their ability to maintain system integrity and optimize user experience. This gap highlights the need for a comprehensive, user-friendly, and secure web-based platform that effectively bridges job seekers and employers while enabling administrators to oversee and enhance system functionality seamlessly.

1.5 Proposed Solution

The proposed solution is a web-based job portal that bridges the gap between job seekers and employers while providing robust administrative tools. The platform allows job seekers to create profiles, upload verified certificates, receive personalized job recommendations, and apply for positions seamlessly. Employers can post and edit job listings, view candidate profiles that meet their requirements, and manage applications efficiently. Administrators are equipped with tools to oversee system performance, manage user data, and generate reports. The platform emphasizes user-friendliness, data security, and scalability. It features automated certificate verification using QR codes, real-time notifications, and cross-device accessibility. By combining these functionalities, the solution creates a streamlined, efficient, and secure ecosystem that enhances the hiring process for all stakeholders.

1.6 Literature review

In this part, we are going to talk about existing solutions, We looked at the market and looked at the existing solutions, and based on that we developed our own product with certain additions and maintaining the basic functions that are supposed to be in every system and as a result the system developed. With this, we can overview their basic and unique features to try to perfectly build our own system with the best of what we see There are only a few competitors on the market that produce similar services in the same market segment.

1.6.1 linked in

LinkedIn is a professional networking platform that connects individuals and businesses globally. It serves as a space for users to showcase their professional profiles, find job opportunities, connect with industry peers, and share content related to their careers. Companies use LinkedIn for recruitment, branding, and marketing, while professionals use it to network, explore job openings, and enhance their careers through learning and development resources. Similarities with our project include the ability for job seekers to upload their CVs, the requirement for job seekers to log in to access the system, and the option to develop personal pages to display achievements. However, our project differs in that job seekers cannot search for suitable jobs, the system lacks an automatic matching feature for job requirements.



Figure 1 - LinkedIn

1.6.2 Wadhefa.com

Wadhefa.com is a Saudi electronic platform that provides direct employment services by advertising available jobs in government sectors and major companies. It allows users to search and apply for various jobs and serves employers by enabling them to publish job advertisements and receive applications from job seekers. The platform covers a wide range of specializations and fields, such as engineering, accounting, and marketing, connecting job seekers with opportunities that suit them across different regions of the Kingdom. Similarities with our project include the ability to announce popular jobs and facilitate connections between job seekers and employers. However, our project differs as it does not allow job seekers to add detailed personal information and qualifications, upload their CVs, or log into the system.



Figure 2 - Wadhefa.com

1.6.3 Haraj Jobs

Haraj Jobs Company, part of the well-known “Haraj Site,” is an online platform that specializes in providing job advertisements within the Kingdom of Saudi Arabia. The platform offers a variety of opportunities in fields such as administrative, technical, educational, and others, allowing users to search for jobs or advertise job opportunities with ease. Similarities with our project include the ability to display advertisements along with certificates and qualifications and catering to various employment fields. However, our project differs as it allows job seekers to upload their certificates, and it includes a comprehensive profile creation feature, whereas Haraj focuses primarily on job posting.



Figure 3 - Haraj's jobs

1.7 Gantt Chart

A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time.

	⑩	Name	Duration	Start	Finish	Predecessors
1		Yusur	52.625 days	9/2/24 8:00 AM	11/13/24 2:00 PM	
2		Introduction	10.625 days	9/2/24 8:00 AM	9/16/24 2:00 PM	
3		Determine Project Idea	2 days	9/2/24 8:00 AM	9/3/24 5:00 PM	
4		Intoduction	1 day	9/4/24 8:00 AM	9/4/24 5:00 PM	3
5		Project Scope and Definition	1 day	9/5/24 8:00 AM	9/5/24 5:00 PM	4
6		Time Schedule	2 days	9/6/24 8:00 AM	9/9/24 5:00 PM	5
7		Related Works	2 days	9/10/24 8:00 AM	9/11/24 5:00 PM	6
8		Methodolgy	2 days	9/12/24 2:00 PM	9/16/24 2:00 PM	7
9		Requirements	4 days	9/16/24 2:00 PM	9/20/24 2:00 PM	2
10		Functional Requirements	3 days	9/16/24 2:00 PM	9/19/24 2:00 PM	8
11		Non-Functional Requirements	1 day	9/19/24 2:00 PM	9/20/24 2:00 PM	10
12		System Analysis	21 days	9/20/24 2:00 PM	10/21/24 2:00 PM	9
13		Use case Diagram	4 days	9/20/24 2:00 PM	9/26/24 2:00 PM	11
14		Use case Description	5 days	9/26/24 2:00 PM	10/3/24 2:00 PM	13
15		Activity Diagram	5 days	10/3/24 2:00 PM	10/10/24 2:00 PM	14
16		System Sequence Diagram	7 days	10/10/24 2:00 PM	10/21/24 2:00 PM	15
17		System Design	17 days	10/21/24 2:00 PM	11/13/24 2:00 PM	12
18		ER Diagram	7 days	10/21/24 2:00 PM	10/30/24 2:00 PM	16
19		Relational Schema	3 days	10/30/24 2:00 PM	11/4/24 2:00 PM	18
20		Class Diagram	3 days	11/4/24 2:00 PM	11/7/24 2:00 PM	19
21		User Interface Design	4 days	11/7/24 2:00 PM	11/13/24 2:00 PM	20

Figure 4 - Time scheduling

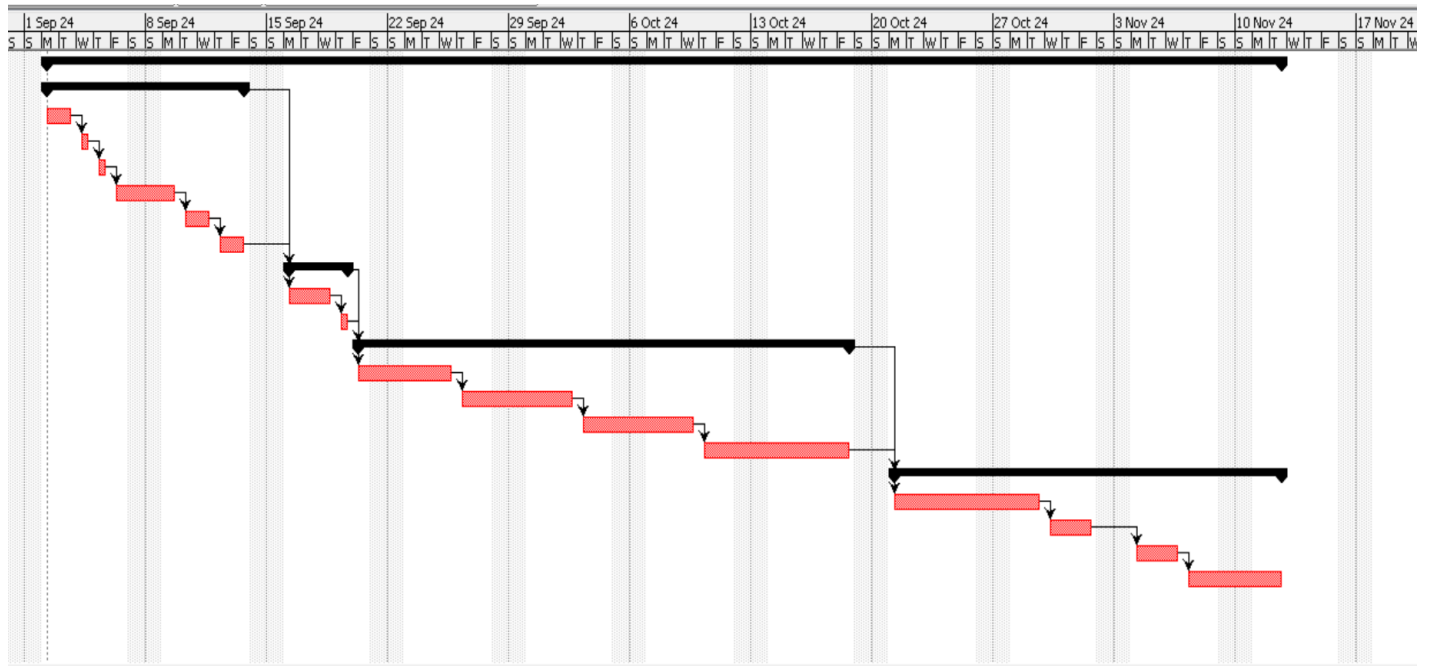


Figure 5 - Gantt chart

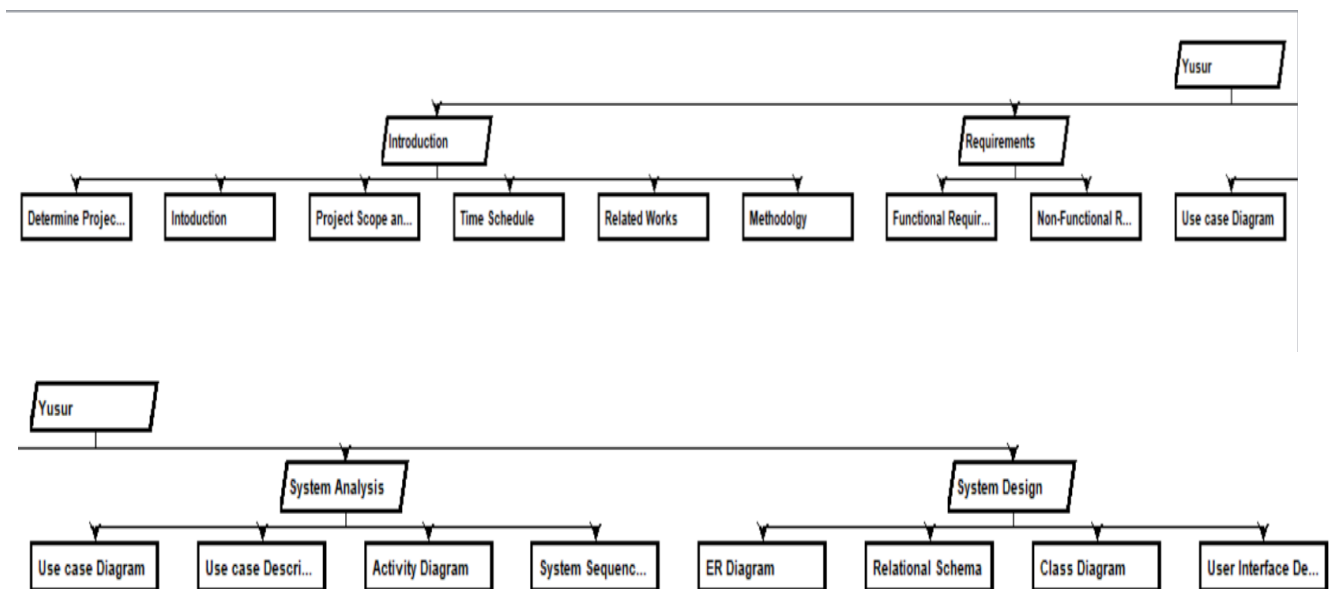


Figure 6 - Work breakdown structure (WBS)_____

1.7.1 Methodology

No project can be completed without adopting a proper methodology. Various system methodologies are used in the development. We have studied different methodologies such as Waterfall, Agile, etc. There are significant advantages and disadvantages to the various methodologies, and the best approach to solving a problem using software will often depend on the type of problem. The development methodology we used for our system is Agile development. One of the main reasons we chose this methodology is that our project requires constant updates and interaction with users and corporates, the Agile methodology allows us to work flexibly, quickly adapting to any changes in requirements or required features.



Figure 7 - Agile methodology

1.8 Challenges

1. Technical Challenges

- Data Security: Ensuring the protection of sensitive user data, such as personal information and certificates, from cyber threats.
- Scalability: Managing increased user and data volume without compromising system performance.

2. User-Centric Challenges

- Ease of Use: Designing an intuitive interface that accommodates users with varying technical skills.
- Personalization: Providing accurate job recommendations tailored to each user's qualifications and preferences.

3. Market Challenges

- Competitor Differentiation: Standing out in a market with established platforms by offering unique features like real-time certificate verification and automated job matching.
- User Engagement: Attracting and retaining users by ensuring the platform provides tangible benefits.

4. Administrative Challenges

- Content Moderation: Ensuring job postings and user profiles meet the platform's standards and comply with regulations.
- Compliance: Adhering to local and international data protection and employment laws.

1.9 Survey

نسخ الرسم البياني



المرحلة العمرية | Age group

57 ردًا

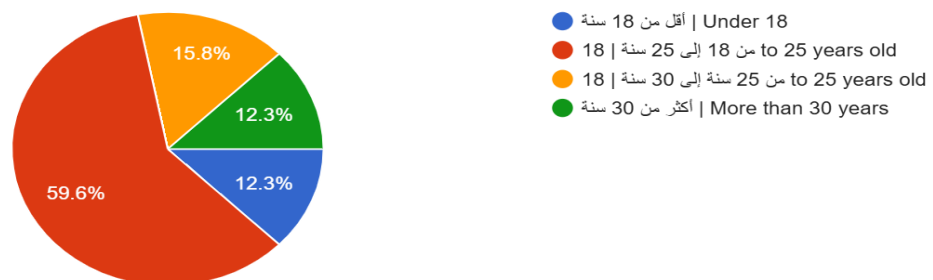


Figure 8 - Survey result

هل تعتقد بأن فكرة المشروع لها حاجة في المجتمع؟ | Do you think the project is needed?

57 ردًا

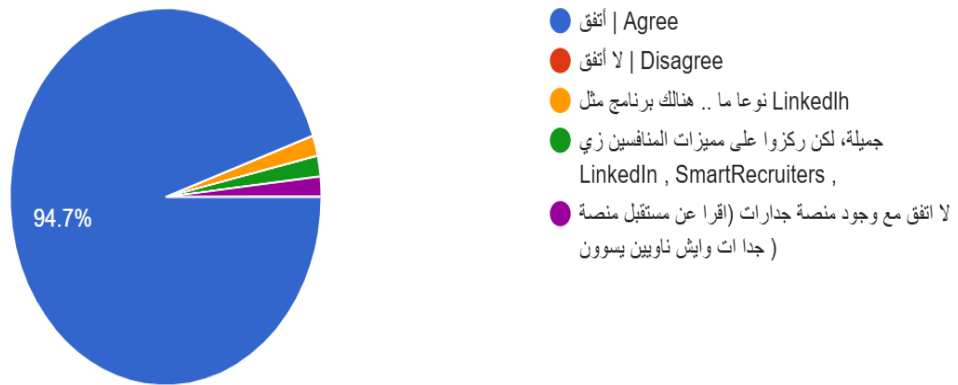


Figure 9 - Survey result

هل تعتقد أن المشروع سيحسن عملية التوظيف؟ | Do you think the project will improve the recruitment process?

57 ردًا

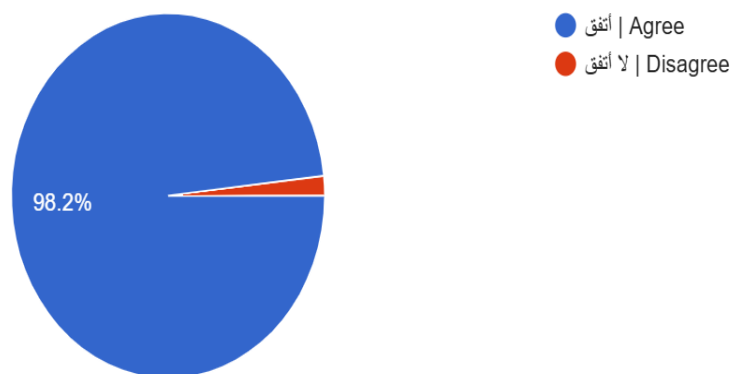


Figure 10 - Survey result

أسئلة للباحثين عن عمل* | *Question for Jobseekers

نسخ الرسم البياني

ماهي المشاكل التي تواجهها للبحث عن وظيفة؟ | What problems do you face in getting a job

53 ردًا

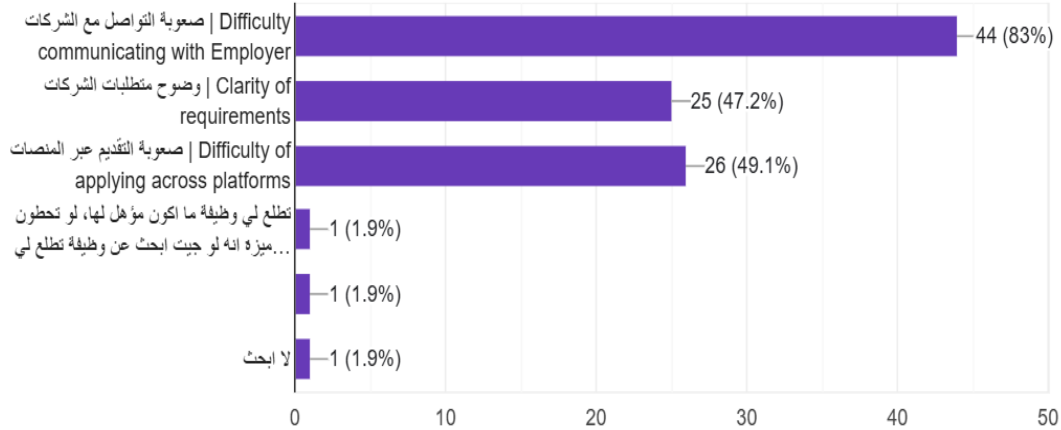


Figure 11 - Survey result

أسئلة للشركات وأصحاب العمل* | *Question for Employer

نسخ الرسم البياني

ماهي المشاكل التي تواجهها لإيجاد الموظف المناسب؟ | What problems do you in finding employee

34 ردًا

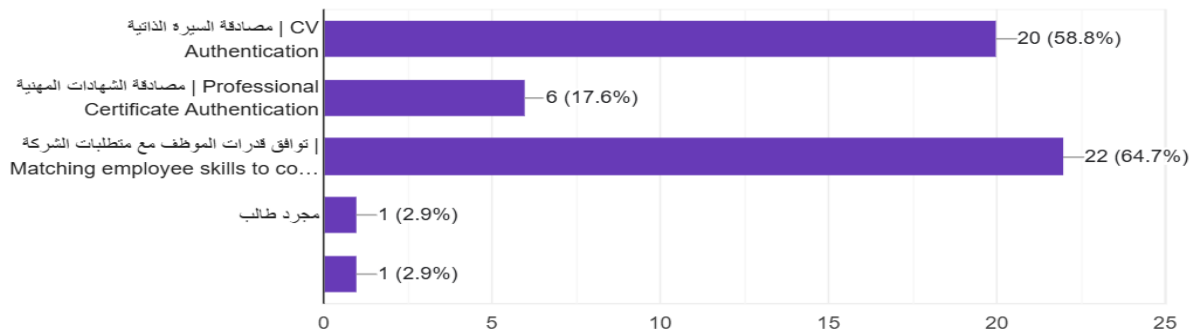


Figure 12 - Survey result

أسئلة للمشرفين (الإداريين) * | *Question for Admins

نسخ الرسم البياني

ماهي المشاكل التي تواجهها في منصات البحث الوظيفي؟ | What problems do you face in job search platforms

35 ردًا

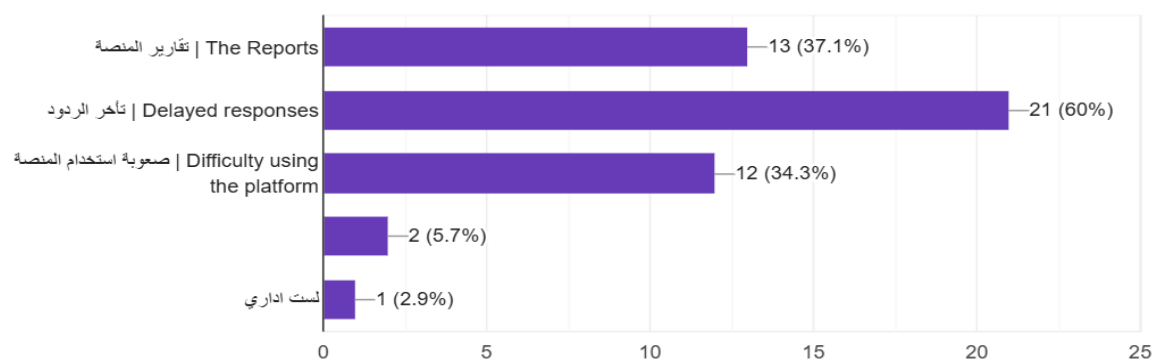


Figure 13 - Survey result

Chapter 2 | SYSTEM ANALYSIS

2.1 Definition of positional users

Job seekers: People who are looking for a job, their need for the system is to make their employment process faster and easier.

Employer: A person who takes authorization from corporates or organizations to hire job seekers in the available positions, their need for the system to efficiently post job listings, and manage the hiring process securely and effectively.

Admins: People who manage the platform or system and everyone on it, their need for the system is to manage the platform and take responsibility for every decision.

2.2 Detailed description of proposed project functional and non-functional requirements

2.2.1 Functional Requirements

The functional requirements for the system are as follows:

1- Job Seeker

- Ability to create and log into a profile.
- Ability to fill out employment forms and upload professional certificates.
- Ability to view recommended jobs based on preferences or qualifications.
- Option to apply for jobs.
- Ability to receive notifications.
- Ability to update profile information.

2- Employer

- Ability to create and log into a profile.
- Ability to post job listings.
- Option to edit job listings.
- Ability to view job seekers who meet the posted job requirements.
- Ability to receive notifications regarding job seeker applications.
- Ability to update profile information.

3- Admin

- Ability to create and log into a profile.
- Access to view all system reports, including user activity, job listings, and applications.
- Ability to update or manage system information

2.2.2 Non-Functional Requirements

- Usability:

The Website should be easy to use for all users with little effort to accomplish the task that the user wants and the system should have simple interfaces to make the system easy to use

- Security:

The website is protected by email and password with at least 8 characters The website sends a verification code to the email

- Availability:

The system will be available as a website for all devices.

2.3 Use Case Diagram

A use case is a methodology used in system analysis to identify and organize system requirements. The use case is made up of a set of possible sequences of interactions between the system and users in a particular environment and related to a particular goal.

In the following diagram, we will be showing the main actors using the system and the functions they can perform.

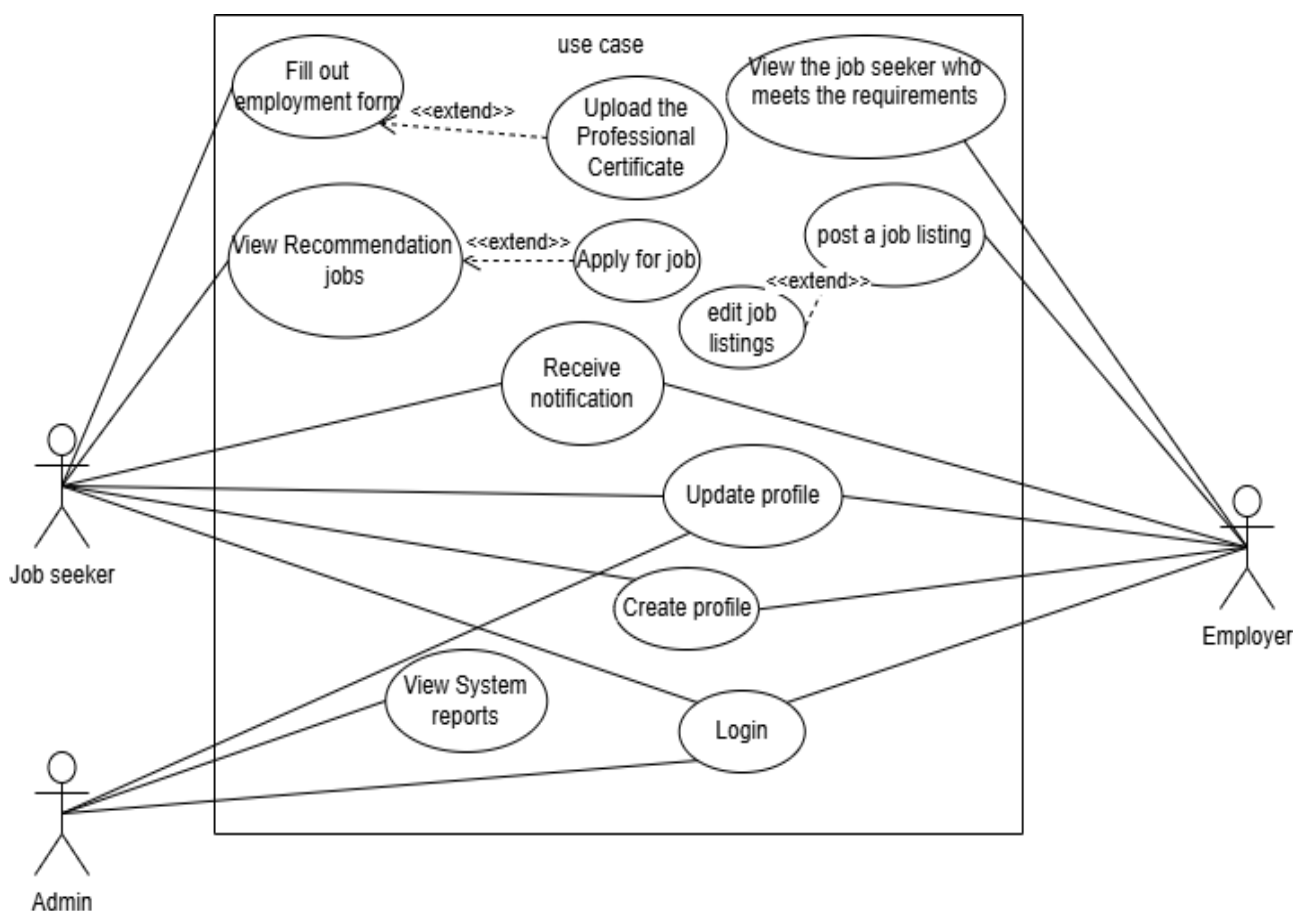


Figure 14 - Use Case Diagram

2.4 Use Case Description

Use case name	<i>Fill Out Employment Form</i>
Scenario	Job seeker fills out an employment form to provide their professional and personal details
Triggering Event	The job seeker selects the option to fill out the employment form from the system menu after logging in
Brief description of the event	The job seeker enters their information, such as personal details, education, and work experience, and uploads relevant documents, such as a professional certificate and CV. The system validates and stores the information for job-matching
Actor	Job Seeker
Related use cases	None
Stakeholders	Job Seeker Employer Admin
Preconditions	The job seeker is logged into the system
Postconditions	The employment form is stored in the system and linked to the job seeker's profile The form is accessible to employers as part of the job application The system uses the provided details for job recommendations and matching

Flow of activities	<ol style="list-style-type: none"> 1. Job seeker logs in to the system 2. Job seeker navigates to the "Fill out employment form" option 3. The system displays the employment form with fields for personal and professional details 4. The job seeker enters their details and uploads supporting documents 5. The job seeker submits the form 6. The system validates the entries 7. The system stores the information in the database and displays a confirmation message
Exception conditions	<p>If mandatory fields are incomplete, the system prompts the job seeker to complete the missing fields.</p> <p>If the uploaded files are invalid, the system rejects them and requests re-upload</p>

Table 1 - Fill out Employment form

Use case name	Upload <i>professional certificate</i>
Scenario	A job seeker wants to upload his/her professional certificate to the system to apply for jobs that require qualifications.
Triggering Event	The job seeker logs into the system and navigates to the section where they can upload their professional certificate.
Brief description of the event	The job seeker uploads their professional certificate as part of their profile.
Actor	Job seeker
Related use cases	"Fill out employment form" must be invoked first
Stakeholders	Job Seeker Employer
Preconditions	The job seeker must be logged in
Postconditions	The certificate is uploaded and marked as "Uploaded"
Flow of activities	<ol style="list-style-type: none"> 1. Job seeker logs in 2. The job seeker Navigates to the "Upload Professional Certificate" section 3. The system displays an upload interface 4. The job seeker selects the certificate file from their device and uploads it
Exception conditions	Failure to upload certificate due to be it is not in right place

Table 2 - Upload professional certificate

Use case name	<i>Apply for Job</i>
Scenario	A job seeker applies for a job listing that matches their qualifications and preferences
Triggering Event	The job seeker selects a job from the list of available opportunities and clicks the “Apply” button
Brief description of the event	The job seeker reviews the job details, confirms their intent to apply, and submits their application. The system processes the application and notifies the employer
Actor	Job Seeker
Related use cases	“View Recommendation Jobs” must be invoked first
Stakeholders	Job Seeker Employer
Preconditions	Job Seeker must be logged into the system The job selection must have been accepted by the employer
Postconditions	The application is successfully submitted to the employer The job seeker receives confirmation of the application. The employer is notified of the new application

Flow of Activities	<ol style="list-style-type: none"> 1. Job Seeker logs into the system 2. The job seeker navigates to the job listings section and selects a job. 3. The system displays the job details, including requirements, description, and employer information. 4. The job seeker clicks the “Apply” button 5. The system prompts the job seeker to confirm their application 6. Upon confirmation, the system submits the application and updates the database. 7. The system sends a notification to the employer about the application 8. The job seeker receives an email or system notification confirming the application submission
Exception conditions	<p>If the job seeker’s profile is incomplete, the system prompts them to update their information before applying.</p> <p>If the job listing is no longer available, the system notifies the job seeker and prevents the application.</p>

Table 3 - Apply for a job

Use case name	<i>View Recommendation Jobs</i>
Scenario	A job seeker views job recommendations provided by the system based on their profile and preferences
Triggering Event	Job Seeker selects the “View Recommendations Jobs” option from the menu
Brief description of the event	The employer analyzes the job seeker’s profile, including their CV, skills, and preferences, to suggest jobs that match their qualifications and interests. These recommendations are displayed for the job seeker to review and possibly apply
Actor	Job Seeker
Related use cases	None
Stakeholders	Job Seeker Employer
Preconditions	Job Seeker must be logged into the system There must be job listings available for viewing
Postconditions	The list of jobs is displayed to the job seeker
Flow of activities	<ol style="list-style-type: none"> 1. Job Seeker logs into the system 2. Job Seeker selects “View Recommendation Jobs” from the dashboard 3. The system retrieves the recommended job listings 4. The job seeker reviews the recommendations and can proceed to apply for any job of interest
Exception conditions	No recommended jobs are available to display

Table 4 - View recommendation jobs

Use case name	<i>Edit Job Listings</i>
Scenario	An employer modifies the details of a job listing they previously posted
Triggering Event	The employer selects the “Edit Posted List” option from their dashboard
Brief description of the event	The employer updates the details of a previously posted job listing, such as job title, description, requirements, or application deadline. The system saves the changes and updates the listing
Actor	Employer
Related use cases	"Post Job Listing" must be invoked first
Stakeholders	Employer Job Seeker Admin
Preconditions	The employer must be logged into the system The employer must have an existing job listing in the system
Postconditions	The job listing is updated with the new details Job seekers viewing the listing see the updated information

Flow of Activities	<ol style="list-style-type: none"> 1. Employer logs into the system 2. The employer navigates to the “Posted Jobs” section of their dashboard. 3. The employer selects the job they wish to edit. 4. The employer modifies the necessary fields. 5. The employer submits the changes. 6. The system validates the input and saves the updated details to the database. 7. The updated job listing is immediately reflected in the system and accessible to job seekers.
Exception conditions	<p>If required fields are left blank during editing, the system prompts the employer to complete them before submission.</p> <p>If the listing has expired or been removed, the system prevents further edits and notifies the employer</p>

Table 5 - Edit job listing

Use case name	<i>Post a job listing</i>
Scenario	Employers post job opportunities on the platform to attract job seekers
Triggering Event	An employer logs into the system and selects the “Post a Job Listing” option
Brief description of the event	The employer enters the job details, including title, description, requirements, and any additional information. Once submitted, the system saves the job listing and makes it available for job seekers to view and apply
Actor	Employer
Related use cases	None
Stakeholders	Employer Job Seeker Admin
Preconditions	The employer must be logged into the system
Postconditions	The job listing is visible to job seekers
Flow of activities	<ol style="list-style-type: none"> 1. Employer logs into the system 2. Employer navigates to the “Post a Job Listing” option 3. Employer fills out the job details 4. Employer submits the job listing for publication 5. The system confirms the job listing is posted
Exception conditions	Missing required fields in the job posting form System errors during submission n or saving the listing

Table 6 - Post a job listing

Use case name	<i>Update Profile</i>
Scenario	A job seeker employer or admin updates their profile information on the platform
Triggering Event	The user decides to modify their profile details to keep their information current
Brief description of the event	The user accesses their profile settings to update personal information
Actor	Job Seeker Employer Admin
Related use cases	None
Stakeholders	Job Seeker Employer Admin
Preconditions	The user is logged into the system
Postconditions	The profile information is updated and saved in the system The updated profile is accessible to relevant parties
Flow of activities	<ol style="list-style-type: none"> 1. The user logs in to the system 2. The user navigates to their profile section 3. The user selects the "Update Profile" option 4. The user modifies fields 5. The user saves the changes 6. The system confirms that the profile has been updated successfully

Exception conditions	<p>If mandatory fields are left blank, the system prompts the user to complete those fields before saving</p> <p>If there is a technical issue during the update, the system displays an error message, and the user may need to retry</p>
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Table 7 - Update profile

Use case name	<i>View Job Seeker Who Meets Requirements</i>
Scenario	An employer views a list of job seekers who match the requirements of a posted job list
Triggering Event	The employer posts a job listing and wants to identify suitable candidates who meet the specified job requirements
Brief description of the event	The employer accesses a filtered list of job seekers whose profiles and qualifications align with the requirements set in the job ad
Actor	Employer
Related use cases	None
Stakeholders	<p>Employer</p> <p>Job Seeker</p>
Preconditions	<p>The employer must be logged into the system</p> <p>A job listing with specific requirements has been posted by the employer</p>
Postconditions	<p>The employer can view the list of potential job seekers who meet the job requirements.</p> <p>The employer may select specific job seekers to contact or proceed to invite them for interviews.</p>

Flow of activities	<ol style="list-style-type: none"> 1. The employer logs into the system and navigates to the job listing they posted 2. The employer selects the option to view candidates who meet the job requirements 3. The system filters the job seeker database based on the requirements specified in the job listing 4. The system displays a list of job seekers who match the job criteria 5. The employer reviews the list and can click on individual profiles to view more details
Exception conditions	If no job seekers meet the requirements, the system displays a message informing the employer

Table 8 -- View job seekers who meet the requirements

Use case name	<i>Receive Notification</i>
Scenario	Employers or job seekers receive system-generated notifications regarding relevant actions or updates
Triggering Event	A triggering action occurs, such as a job seeker applying for a job, an employer approving/rejecting an application, or the system updating an order status
Brief description of the event	The system generates a notification and sends it to the user about important updates or actions related to their account, such as job application status or new job matches
Actor	Job Seeker Employer
Related use cases	None

Stakeholders	Job Seeker Employer
Preconditions	The recipient must have a registered and active account The triggering event must occur The system is configured to send notifications
Postconditions	The notification is successfully sent and received by the intended user The user can take further action based on the notification
Flow of Activities	1. A triggering action occurs 2. The system generates a relevant notification message. 3. The system determines the recipient 4. The user views and optionally acts upon the notification
Exception conditions	user's notification settings block or disable certain alerts

Table 9 - Receive notification

Use case name	<i>View System Reports</i>
Scenario	Admins generate and review system reports to monitor platform activity and performance
Triggering Event	The admin logs into the system and selects the "View System Reports" option
Brief description of the event	The admin retrieves reports generated by the system, which include data such as the number of job seekers and employers, accepted and rejected job applications, account activity, and system usage statistics

Actor	Admin
Related use cases	None
Stakeholders	Admin
Preconditions	<p>The admin must have a verified and active account with the necessary privileges</p> <p>The report is pre-initiated</p>
Postconditions	<p>The admin successfully views the requested system reports</p> <p>The reports provide actionable insights for system monitoring and decision-making</p>
Flow of Activities	<ol style="list-style-type: none"> 1. Admin logs into the system. 2. Navigate to the "System Reports" section. 3. Select the type of report to view. 4. The system retrieves and displays the report 5. The admin reviews the report and optionally takes further action based on the insights
Exception conditions	<p>No reports are available due to lack of data or system errors.</p> <p>The admin account lacks sufficient privileges to access reports.</p>

Table 10 - View system reports

Use case name	<i>Create Profile</i>
Scenario	Users create their profiles to access system functionalities tailored to their roles.

Triggering Event	The user accesses the system and selects the “Create Profile” option
Brief description of the event	The system prompts the user to fill out a registration form with their relevant detail. Upon completion, the system validates the input and sends a verification email. Once verified, the profile is created, and the user can log in to access the system.
Actor	Job seeker Employer Admin
Related use cases	None
Stakeholders	Job Seeker Employer Admin
Preconditions	The user must have internet access and a valid email address The platform must be operational
Postconditions	The user’s profile is created and stored in the system A confirmation email is sent to the user

Flow of activities	<ol style="list-style-type: none"> 1. The user selects the “Create Profile” option on the login page 2. The system displays the registration form 3. The user fills out the form with the required details 4. The system validates the inputs for correctness and completeness 5. A verification email is sent to the provided email address 6. The user verifies the email by clicking on the verification link 7. The system activates the profile, allowing the user to log in
Exception conditions	<p>Invalid or incomplete form inputs: The system prompts the user to correct errors</p> <p>Email verification fails: The system notifies the user to retry or check their email.</p> <p>Duplicate email: The system notifies the user that the email is already registered</p>

Table 11 - Create a profile

Use case name	<i>Login</i>
Scenario	Users log into the system to access their respective functionalities based on their roles
Triggering Event	The user accesses the platform and enters their login information
Brief description of the event	The system authenticates the user's information. If successful, the user is granted access to their account and can proceed to utilize the system features
Actor	Job Seeker Employer Admin
Related use cases	None
Stakeholders	Job Seeker Employer Admin
Preconditions	The user must have a valid and verified profile The system must be operational and accessible
Postconditions	Successful login grants the user access to the system based on their role Failed login attempts are logged for security purposes

Flow of activities	<ol style="list-style-type: none"> 1. The user navigates to the login page 2. The user enters their email and password into the login form 3. The system validates the email and password 4. If the information is valid <ol style="list-style-type: none"> 5. The system authenticates the user and grants access 6. The system redirects the user to their 7. If the information invalid <ol style="list-style-type: none"> 8. The system notifies the user of the failure and provides an option to retry or reset their password
Exception conditions	<p>Incorrect email or password: The system notifies the user of an invalid attempt</p> <p>Account not verified: The system prompts the user to complete email verification</p> <p>Too many failed login attempts: The account is temporarily locked, and the user is notified</p>

Table 12 - Login

2.5 Activity Diagrams

An activity diagram is a flow chart representing the flow from one activity to another. The activity can be described as an operation of the system. It captures the dynamic behavior of the system.

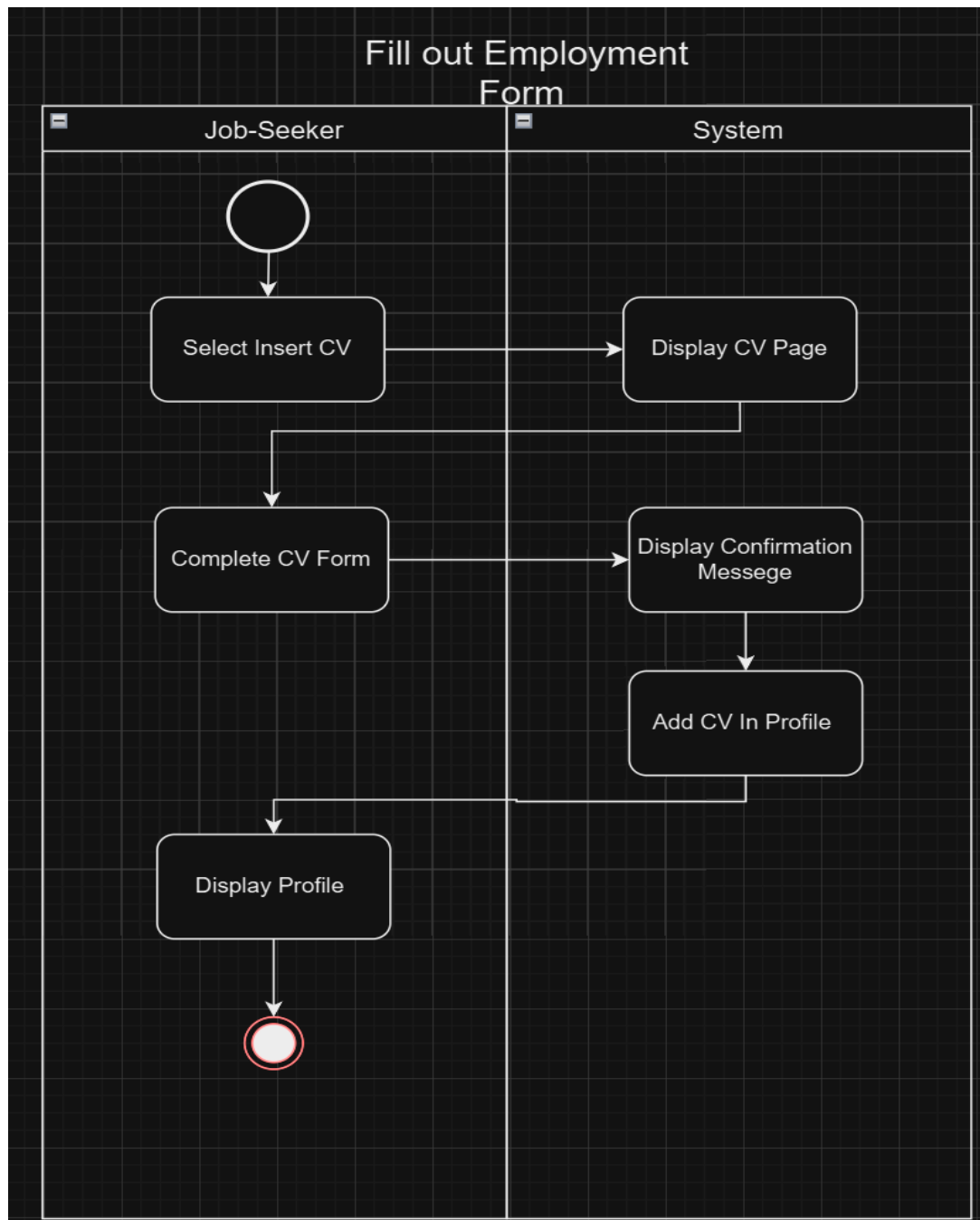


Figure 15 - Fill out Employment Form (Activity Diagram)

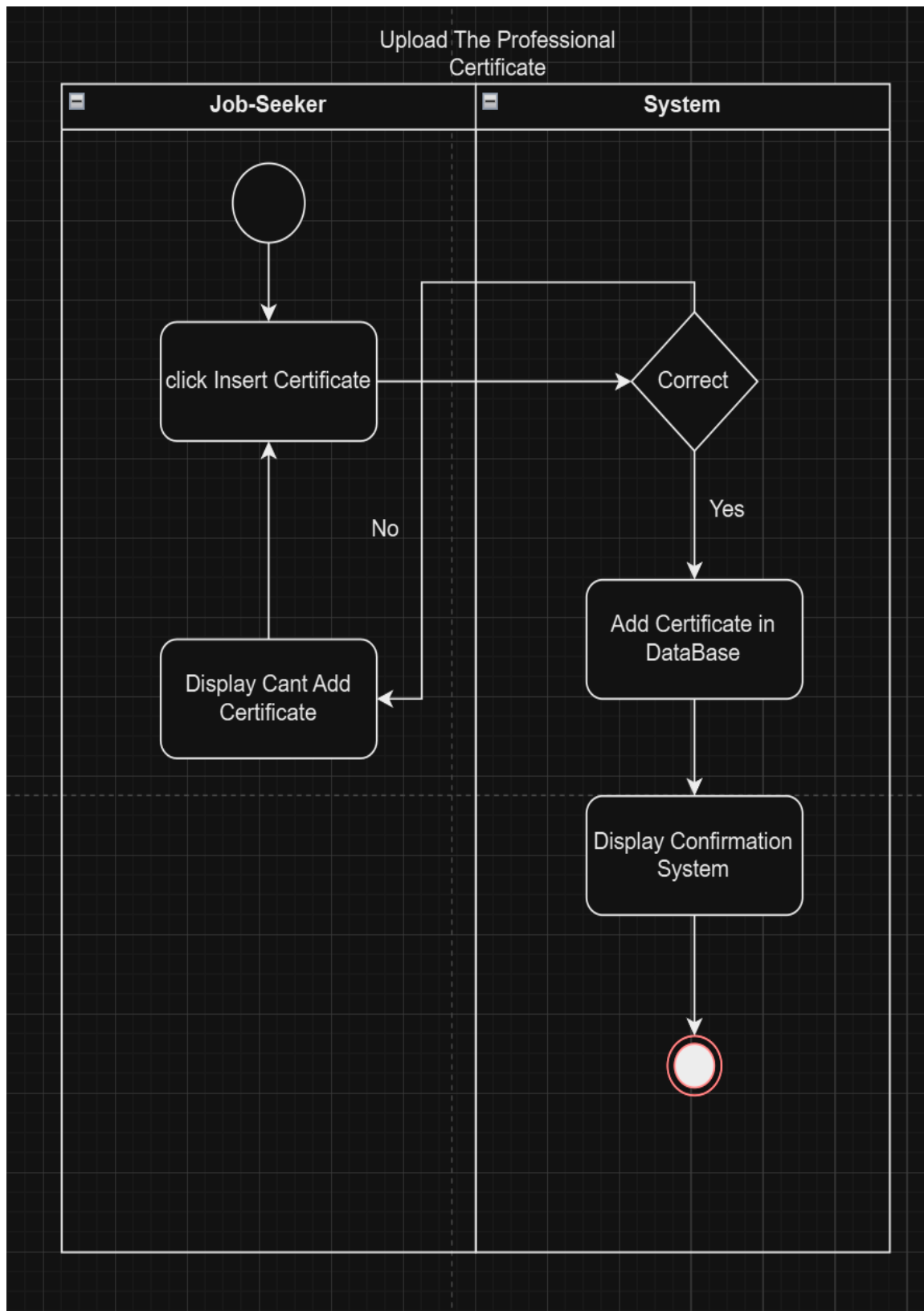


Figure 16 - Upload Professional Certificate (Activity Diagram)

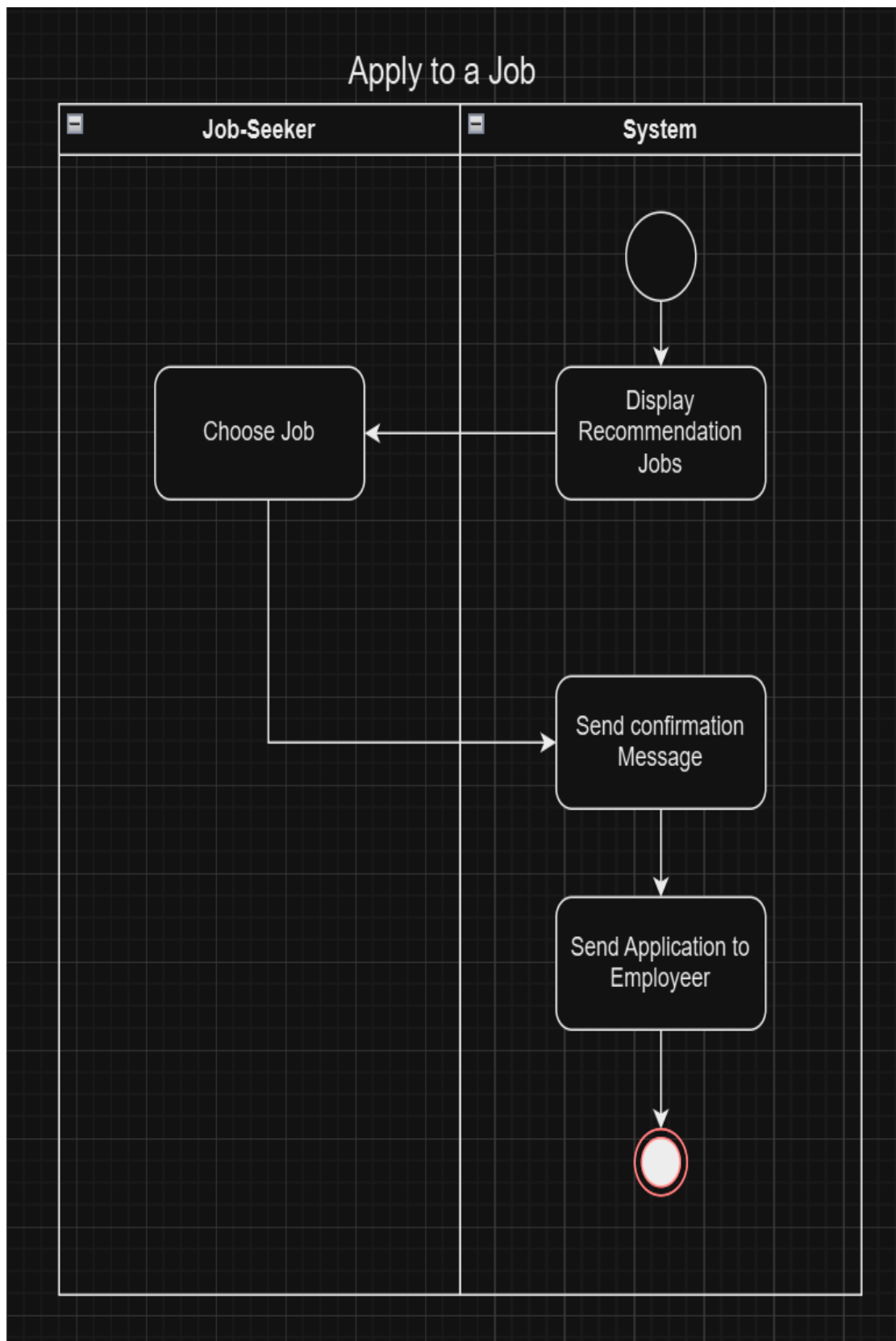


Figure 17 - Apply for a Job (Activity Diagram)

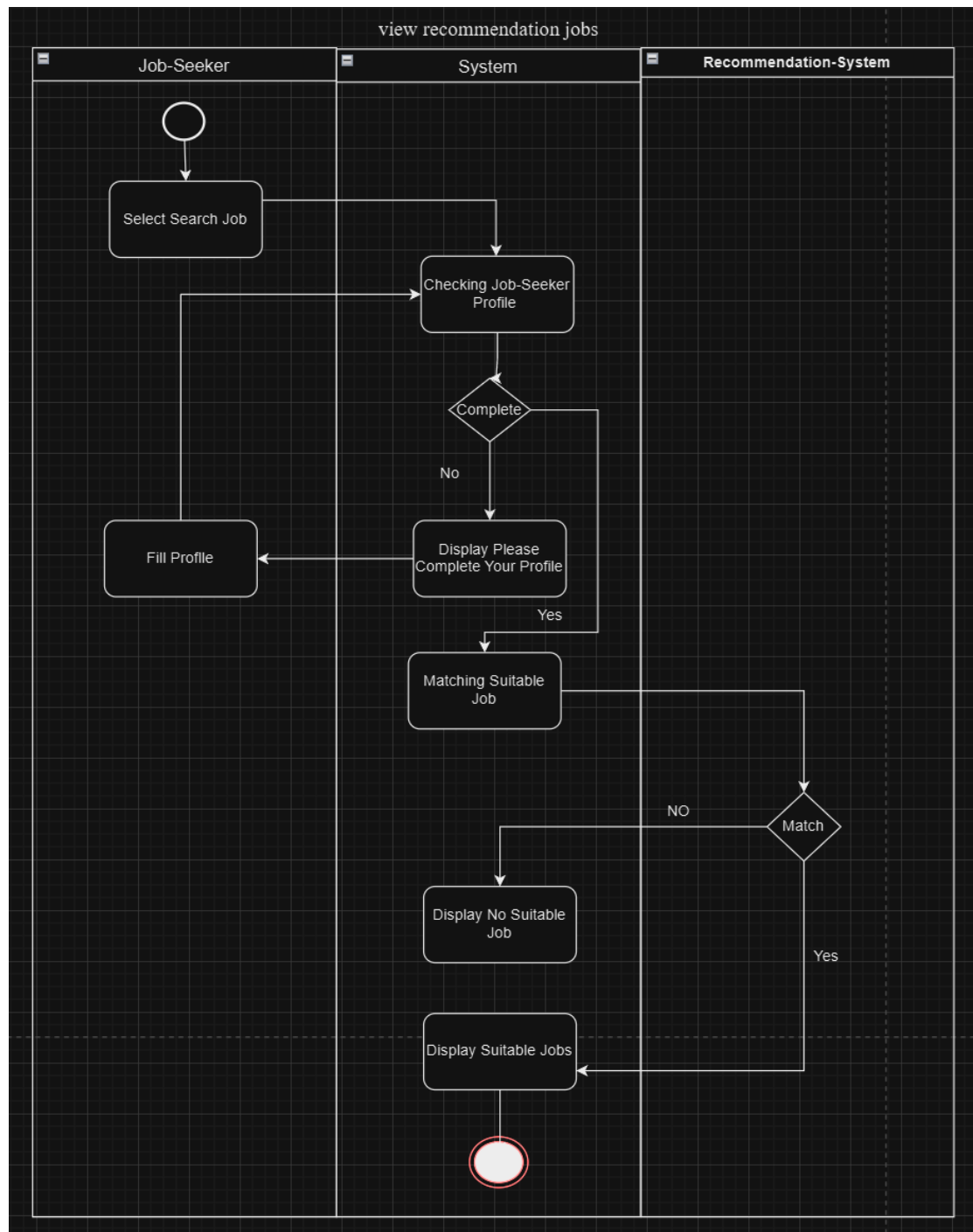


Figure 18 - View Recommendation Jobs (Activity Diagram)

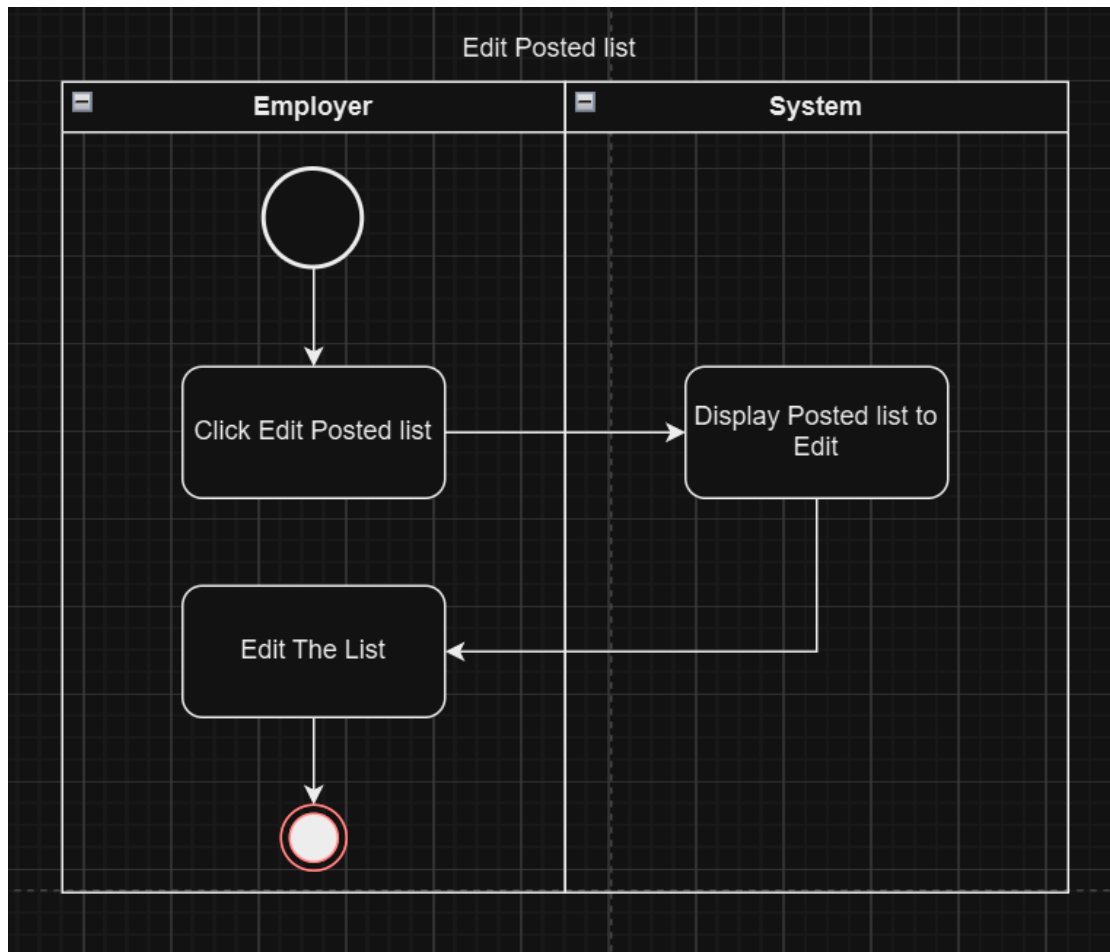


Figure 19 - Edit Posted list (Activity Diagram)

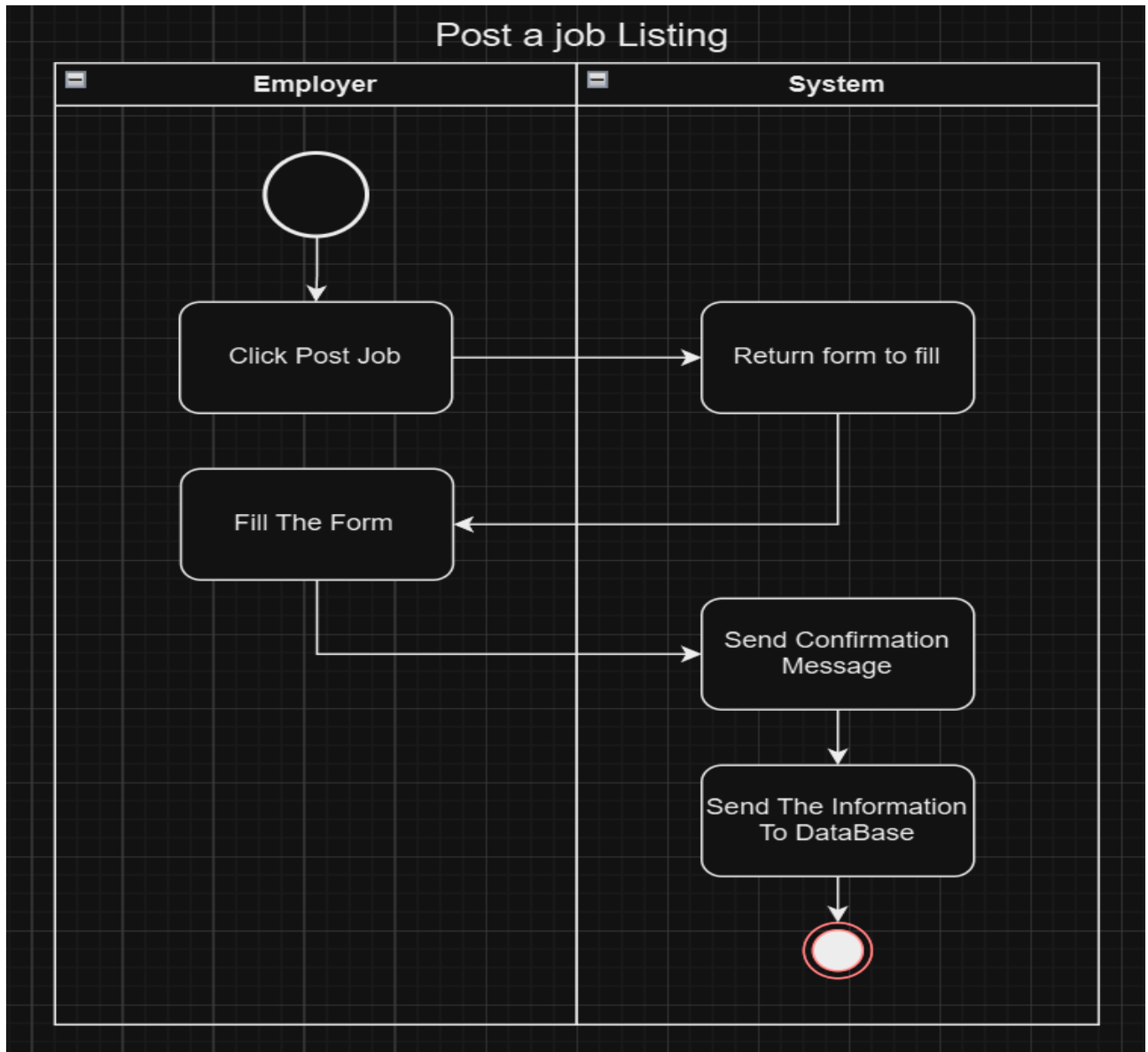


Figure 20 - Post a Job Listing (Activity Diagram)

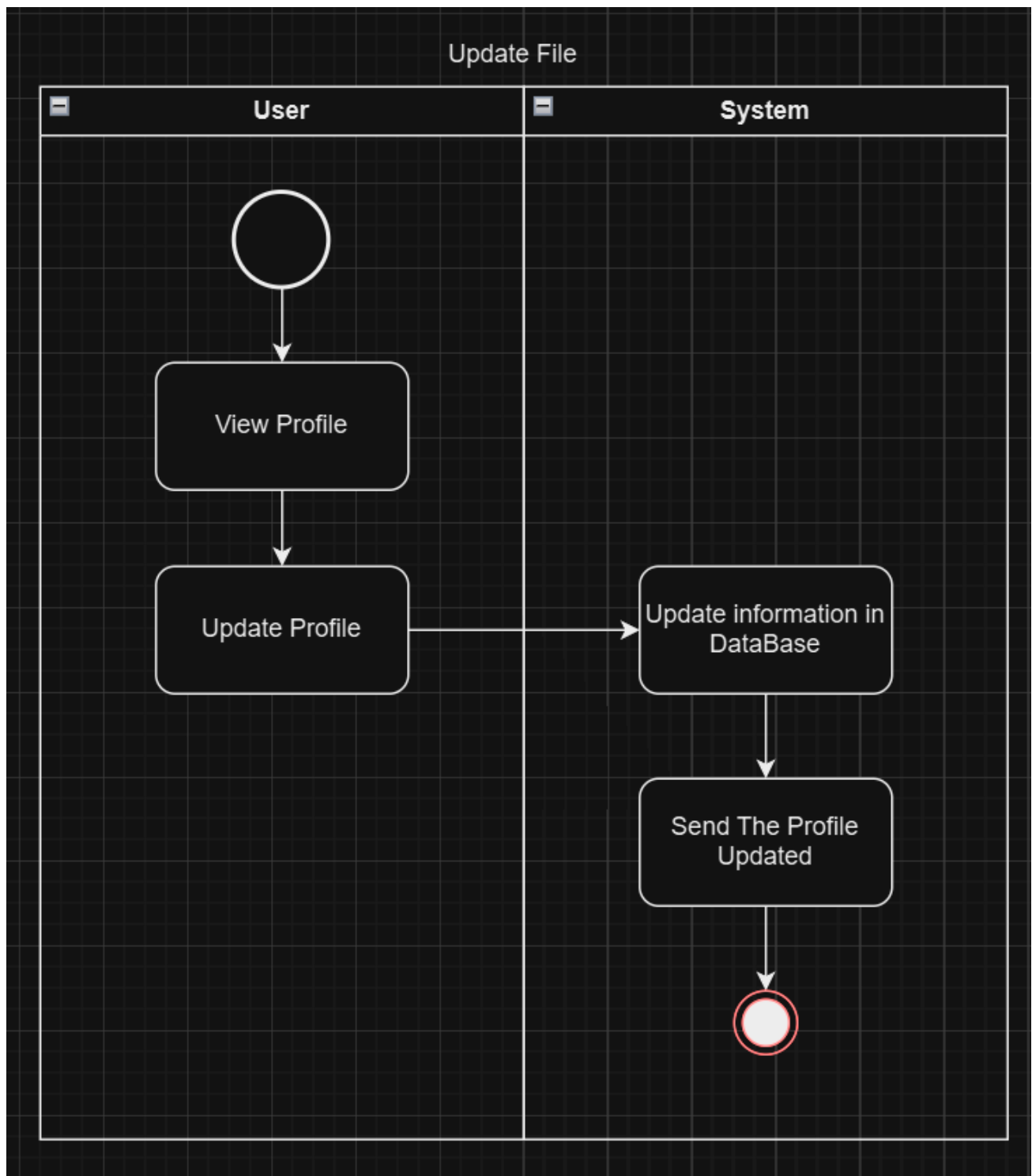


Figure 21 - Update profile (Activity Diagram)

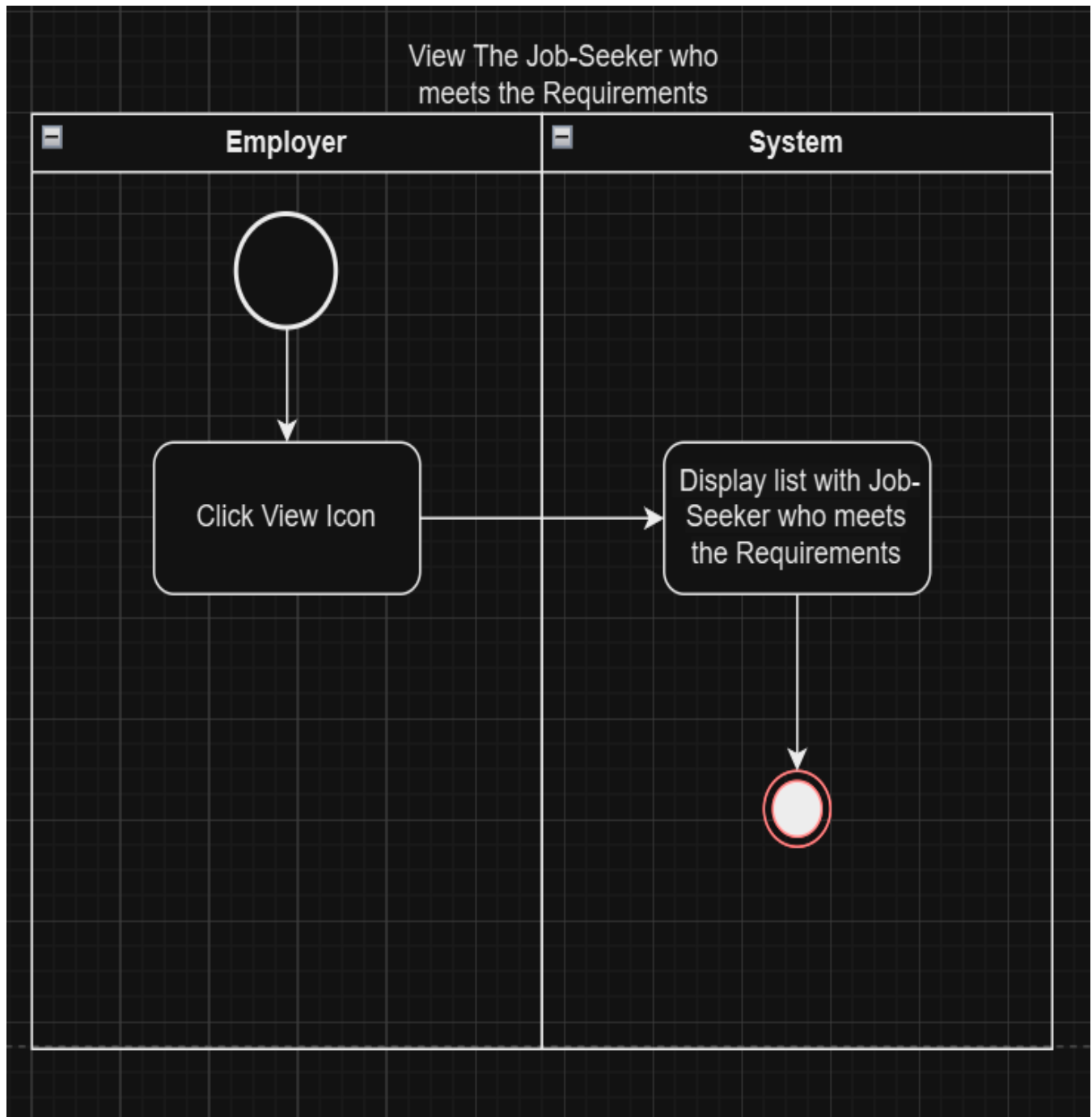


Figure 22 - View The Job-Seeker Who Meets the Requirements (Activity Diagram)

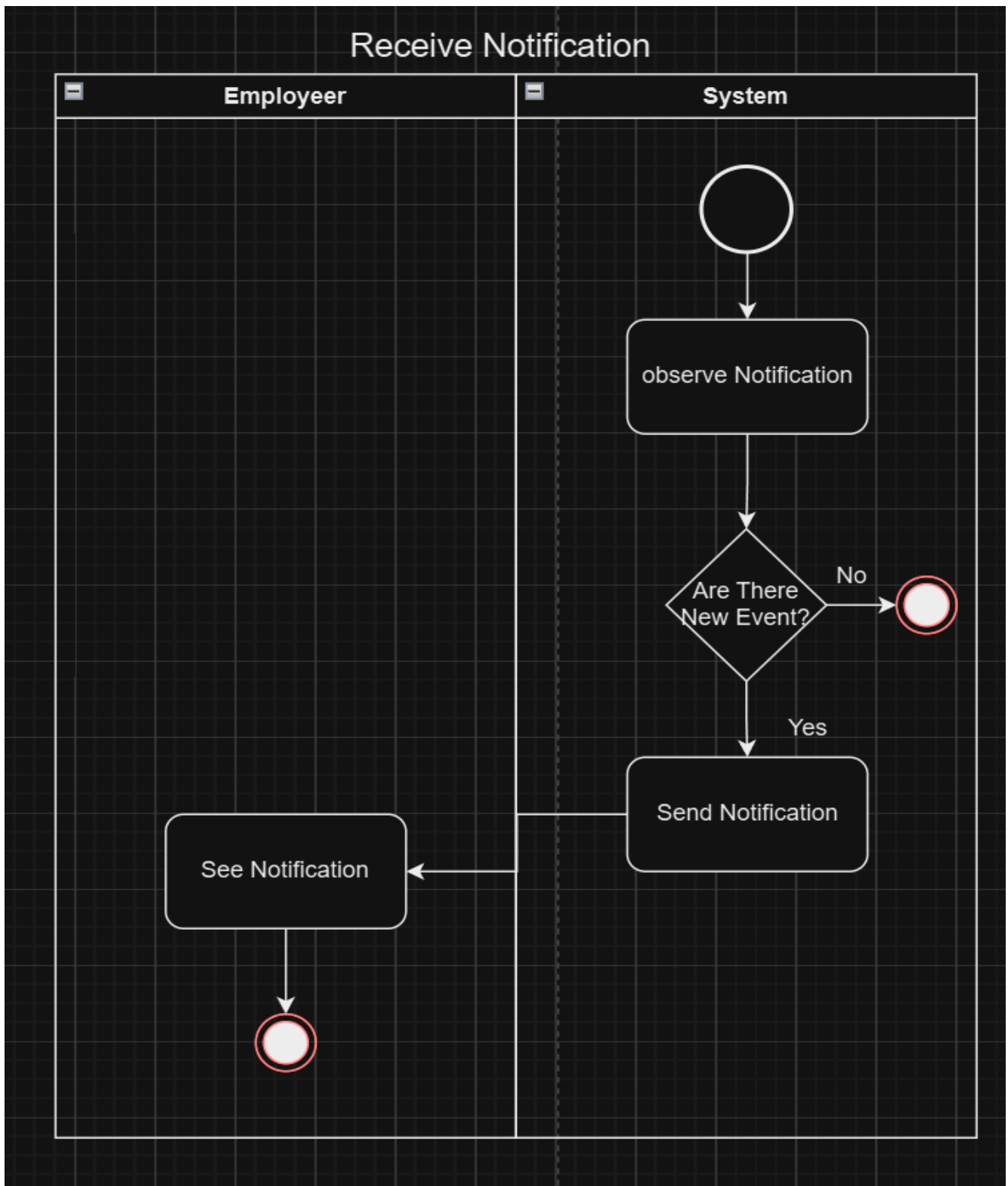


Figure 23 - Receive Notification (Activity Diagram)

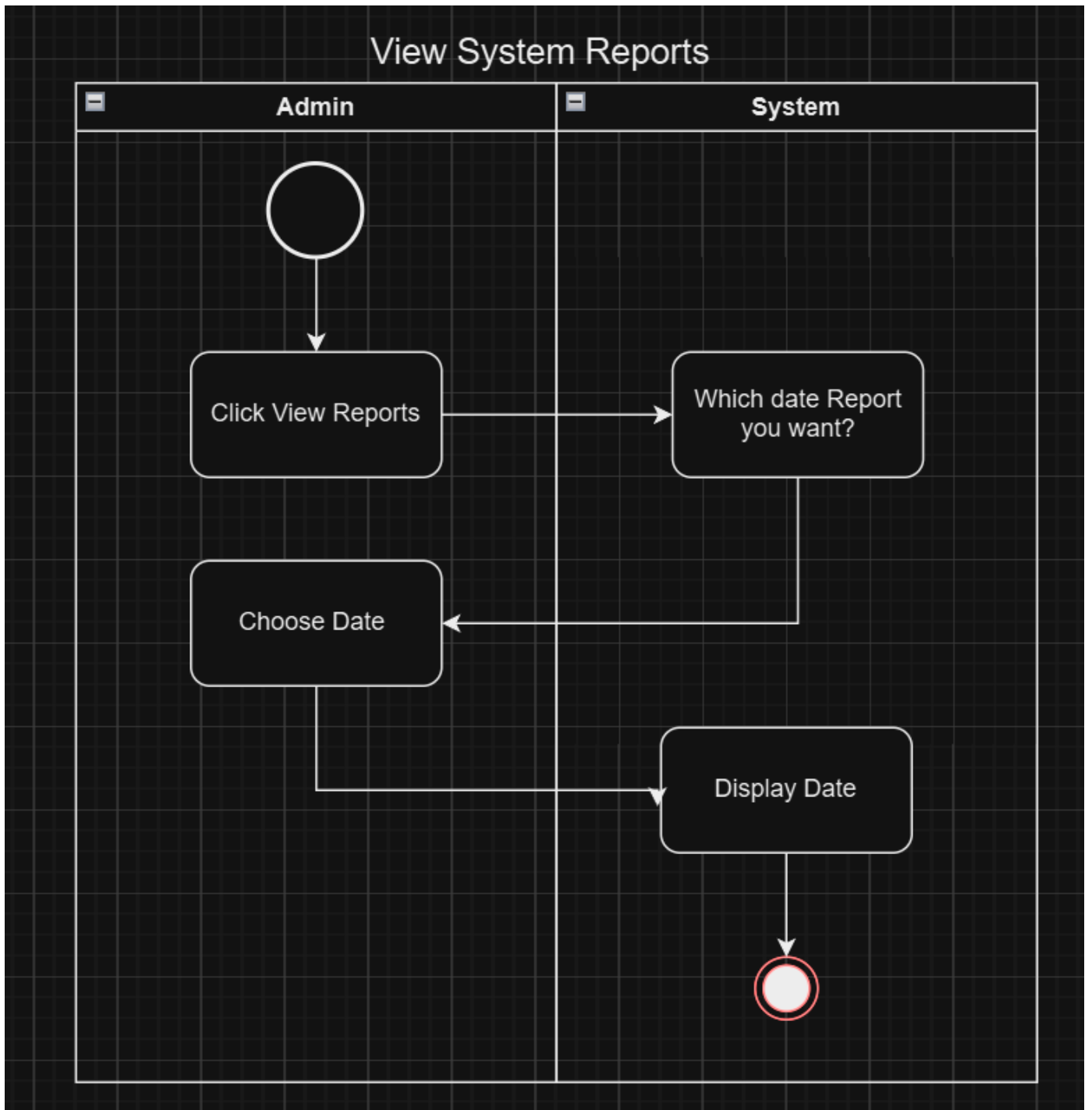


Figure 24 - View System Reports (Activity Diagram)

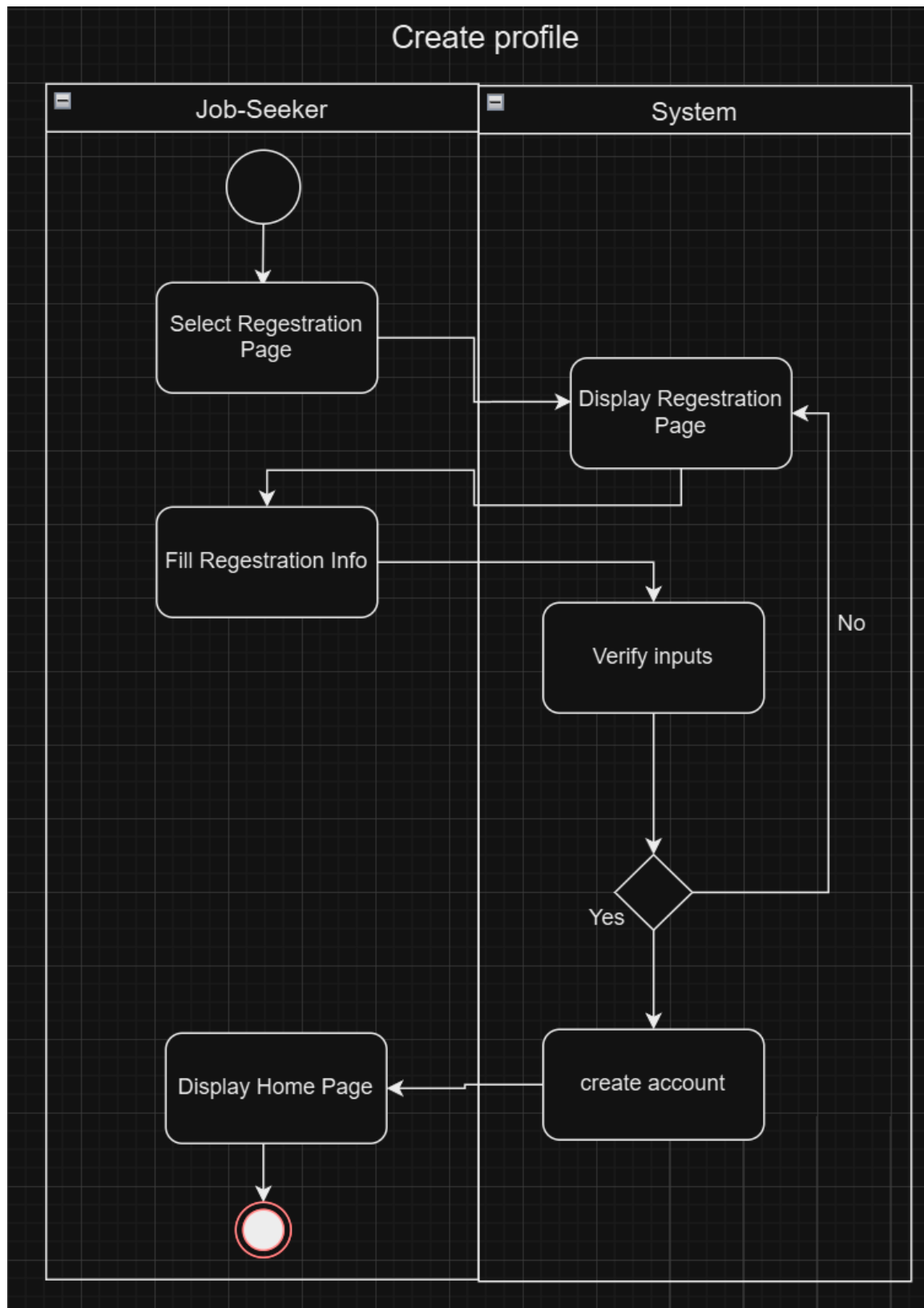


Figure 25 - Create Profile (Activity Diagram)

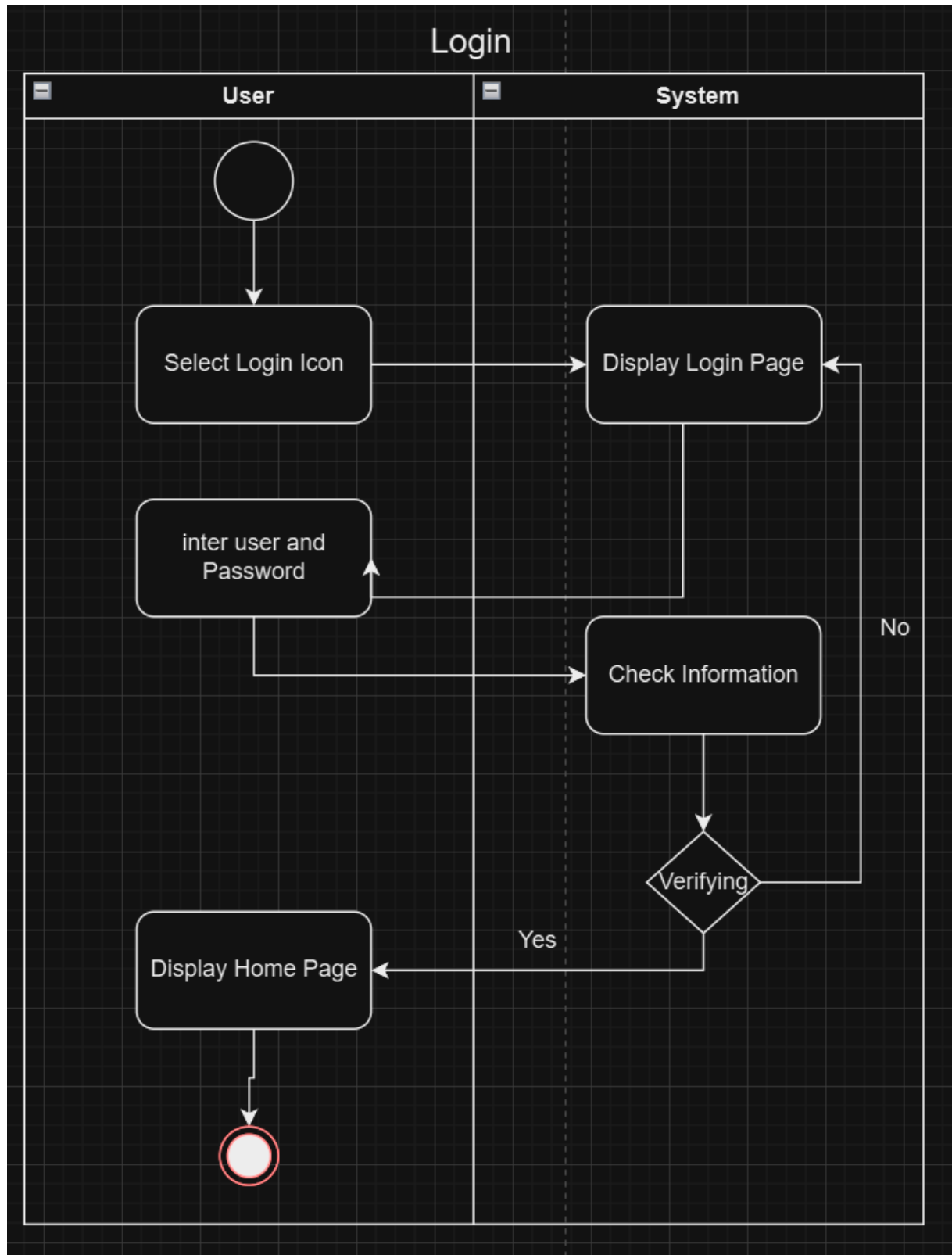


Figure 26 - Login (Activity Diagram)

2.6 System Sequence Diagrams

Developers use sequence diagrams as a debugging tool to identify and analyze issues related to the order and timing of messages during system interactions.

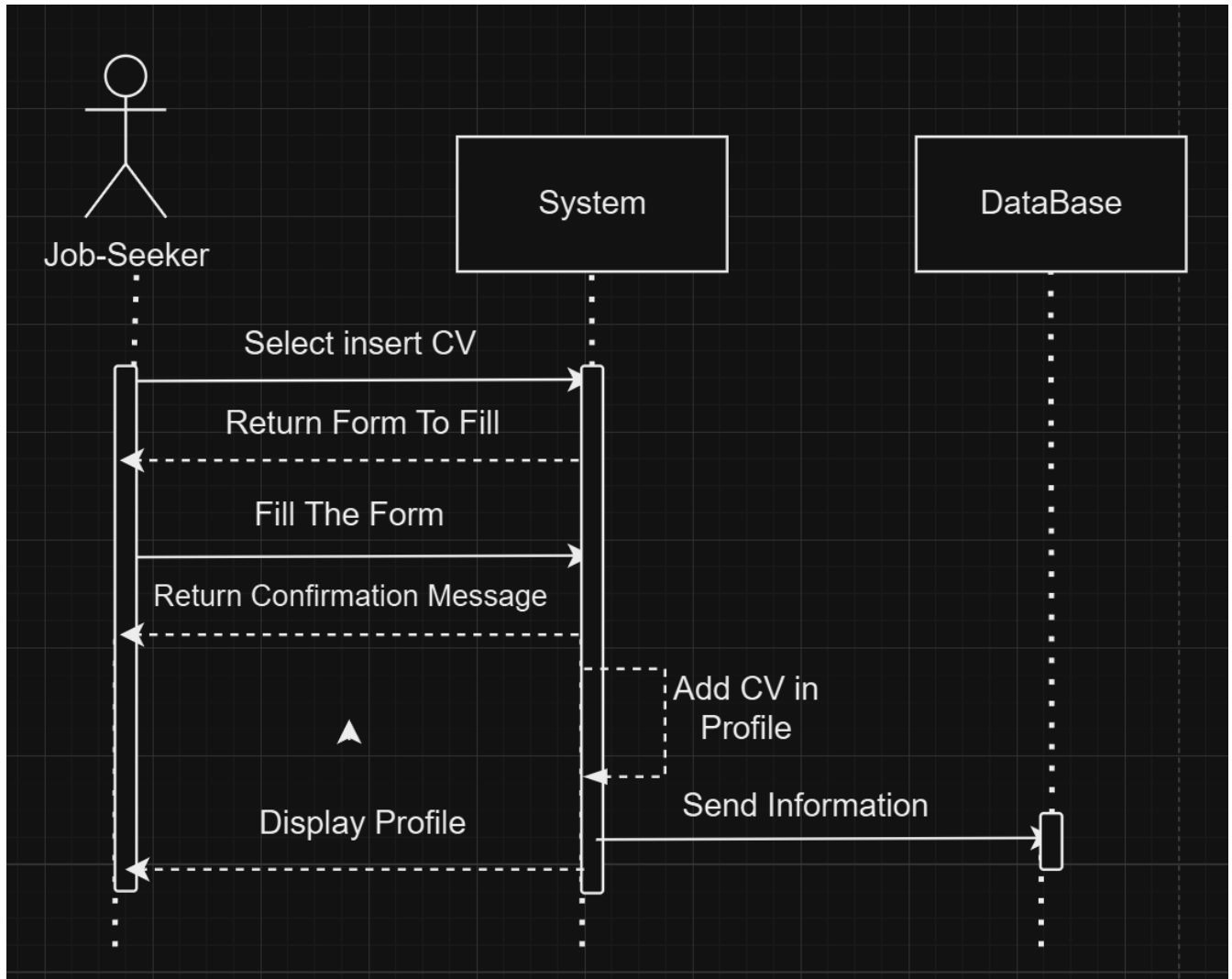


Figure 27 - Fill out Employment Form (Sequence Diagram)

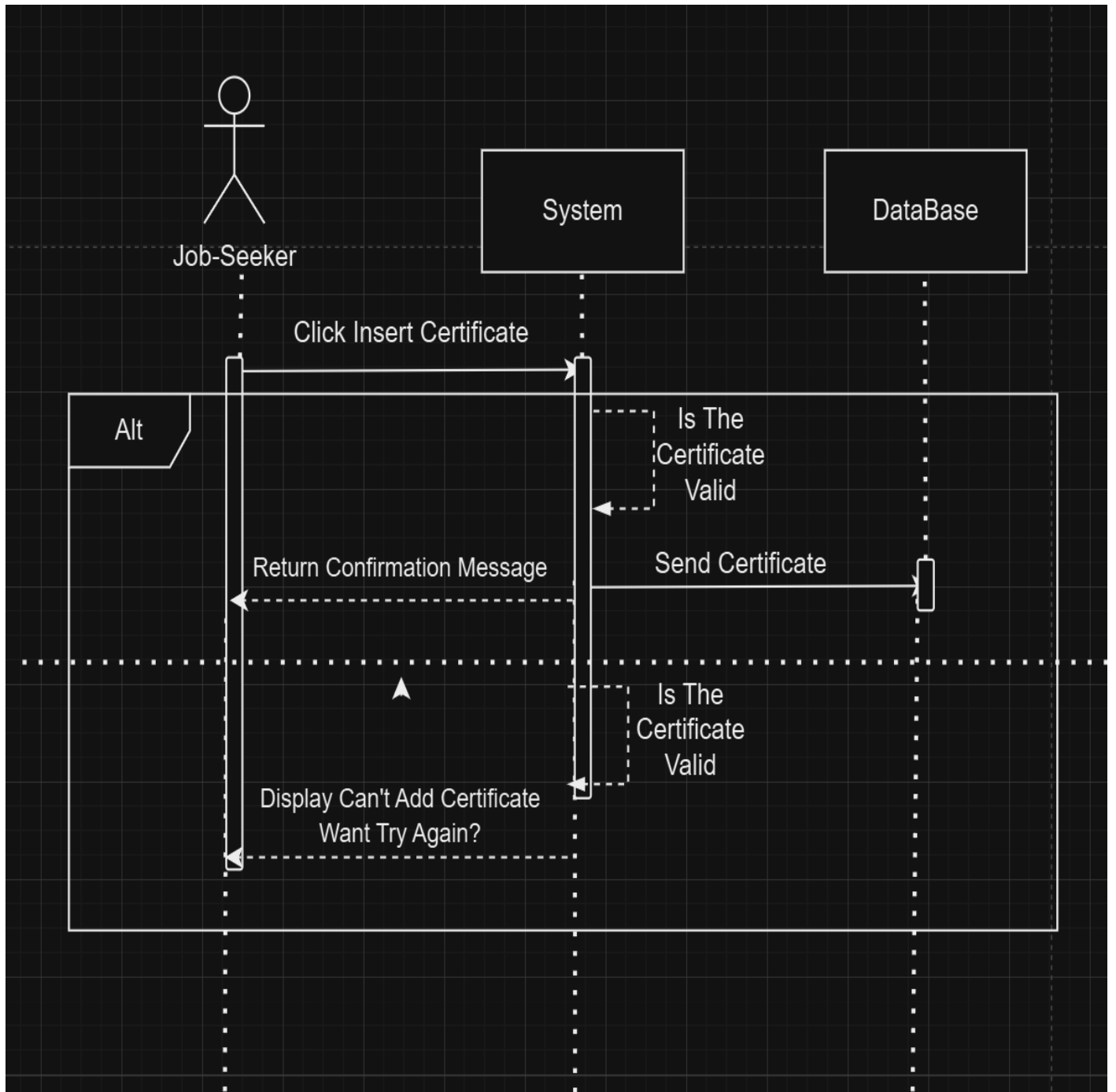


Figure 28 - Upload Professional Certificate (Sequence Diagram)

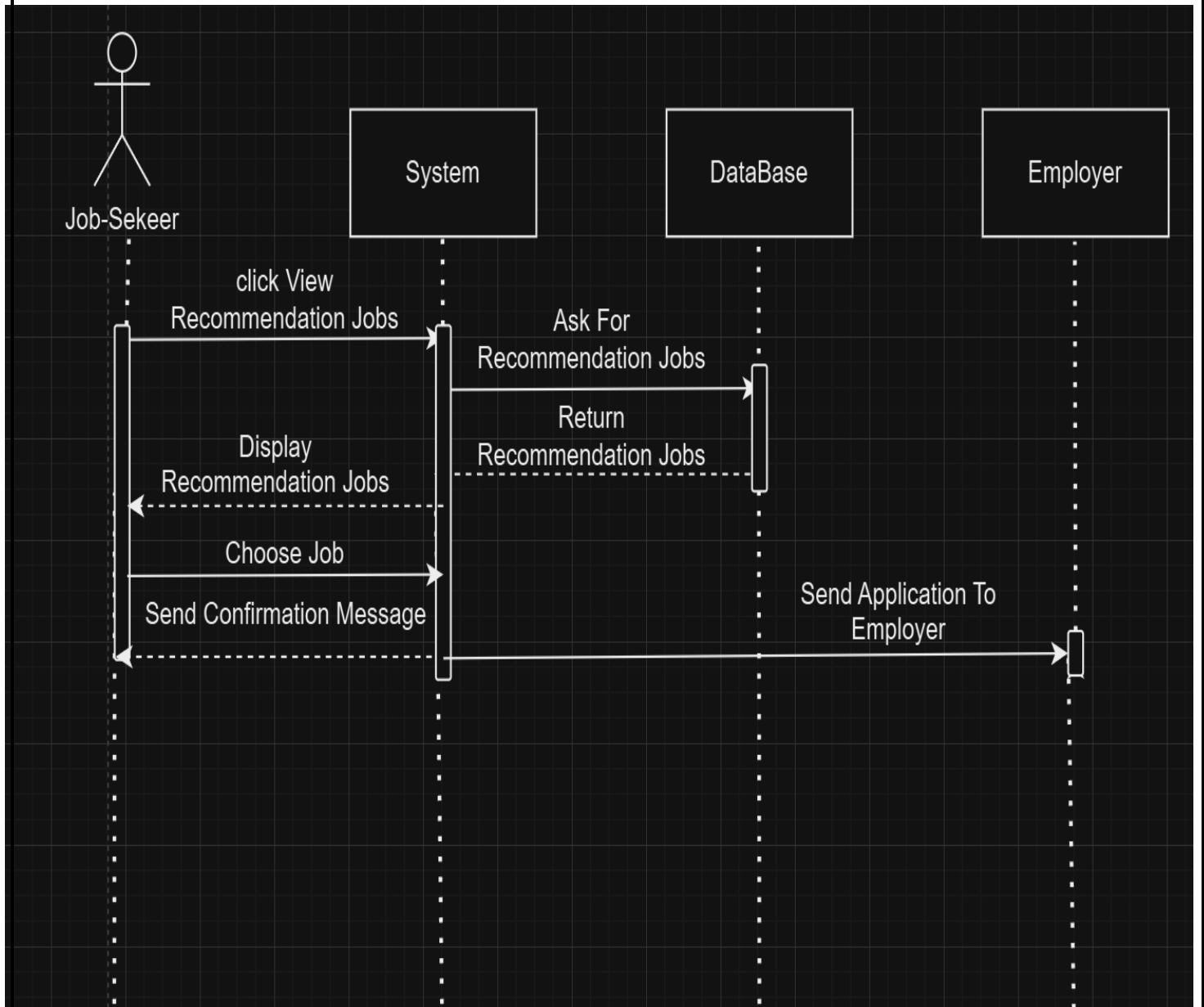


Figure 29 - Apply for a Job (Sequence Diagram)

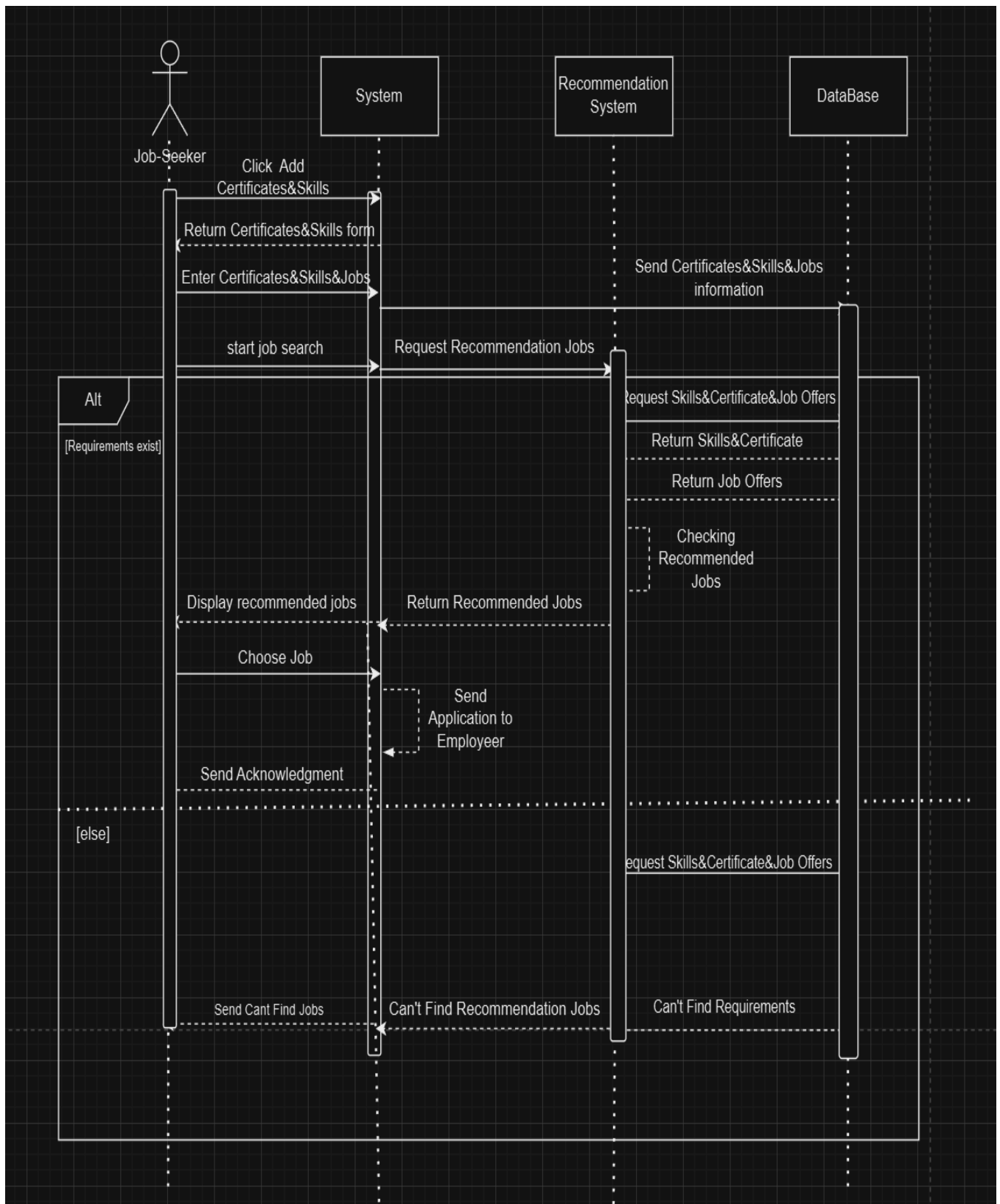


Figure 30 - View Recommendation Jobs (Sequence Diagram)

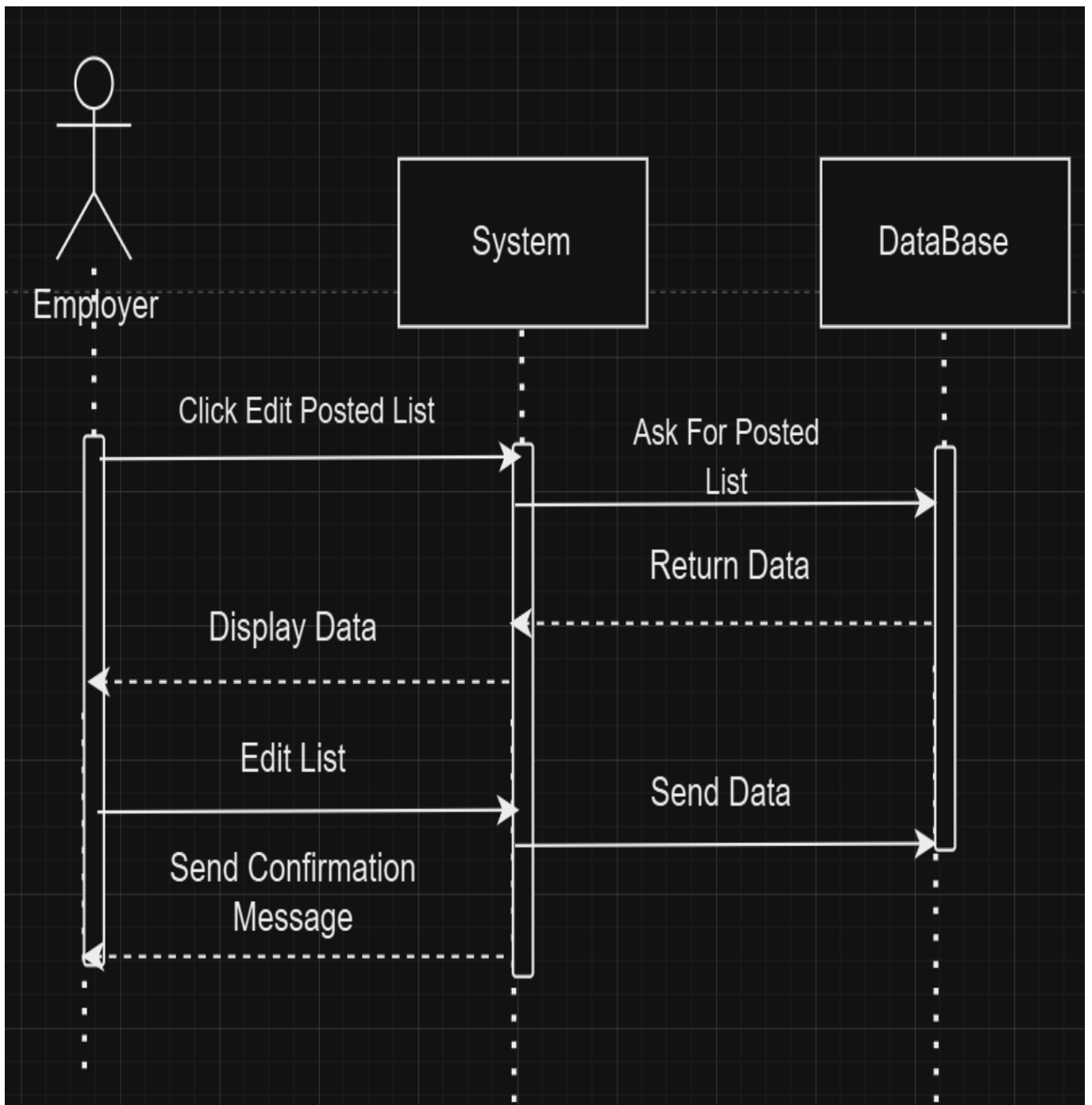


Figure 31 - Edit Posted List (Sequence Diagram)

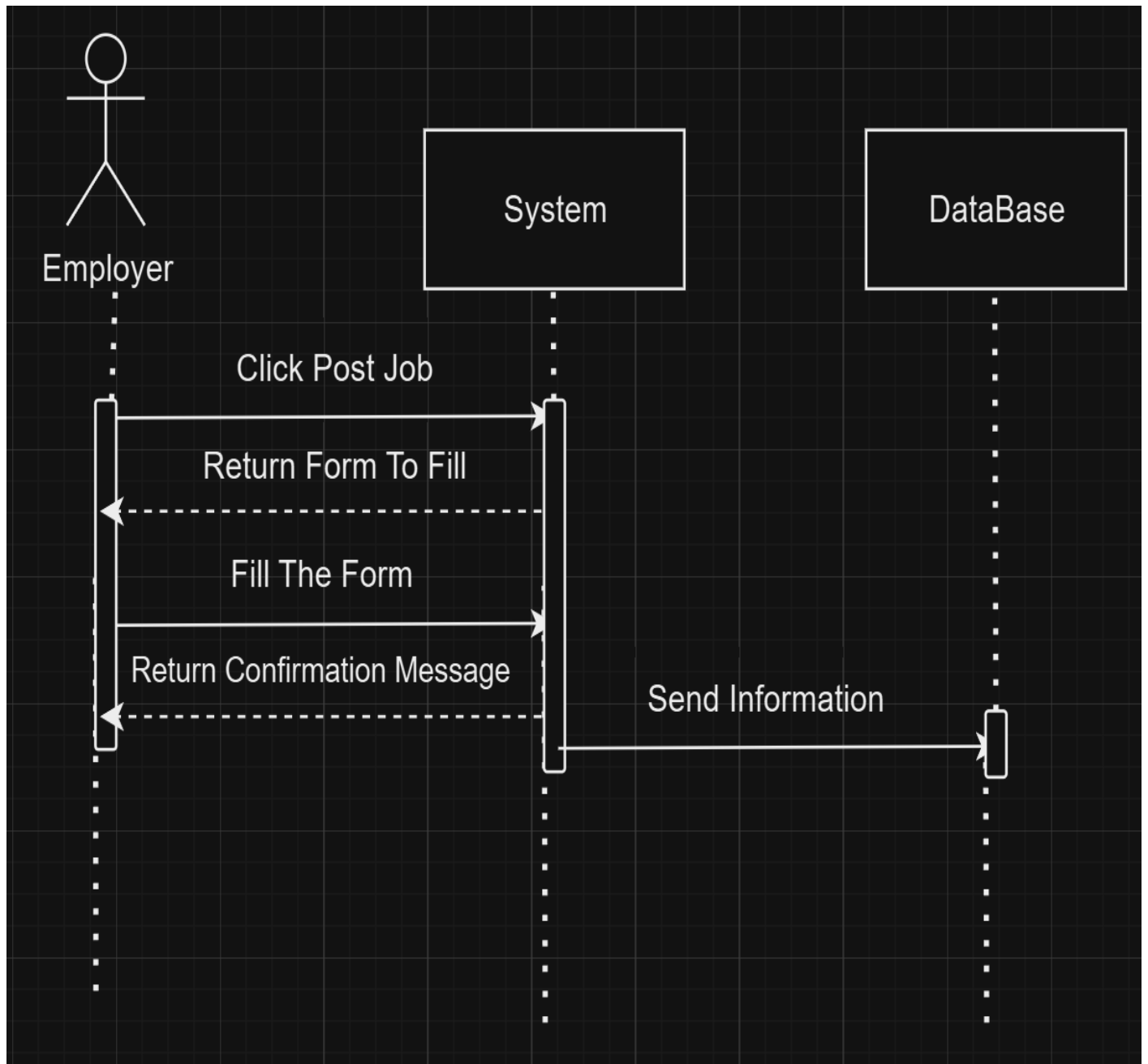


Figure 32 - Post a Job Listing (Sequence Diagram)

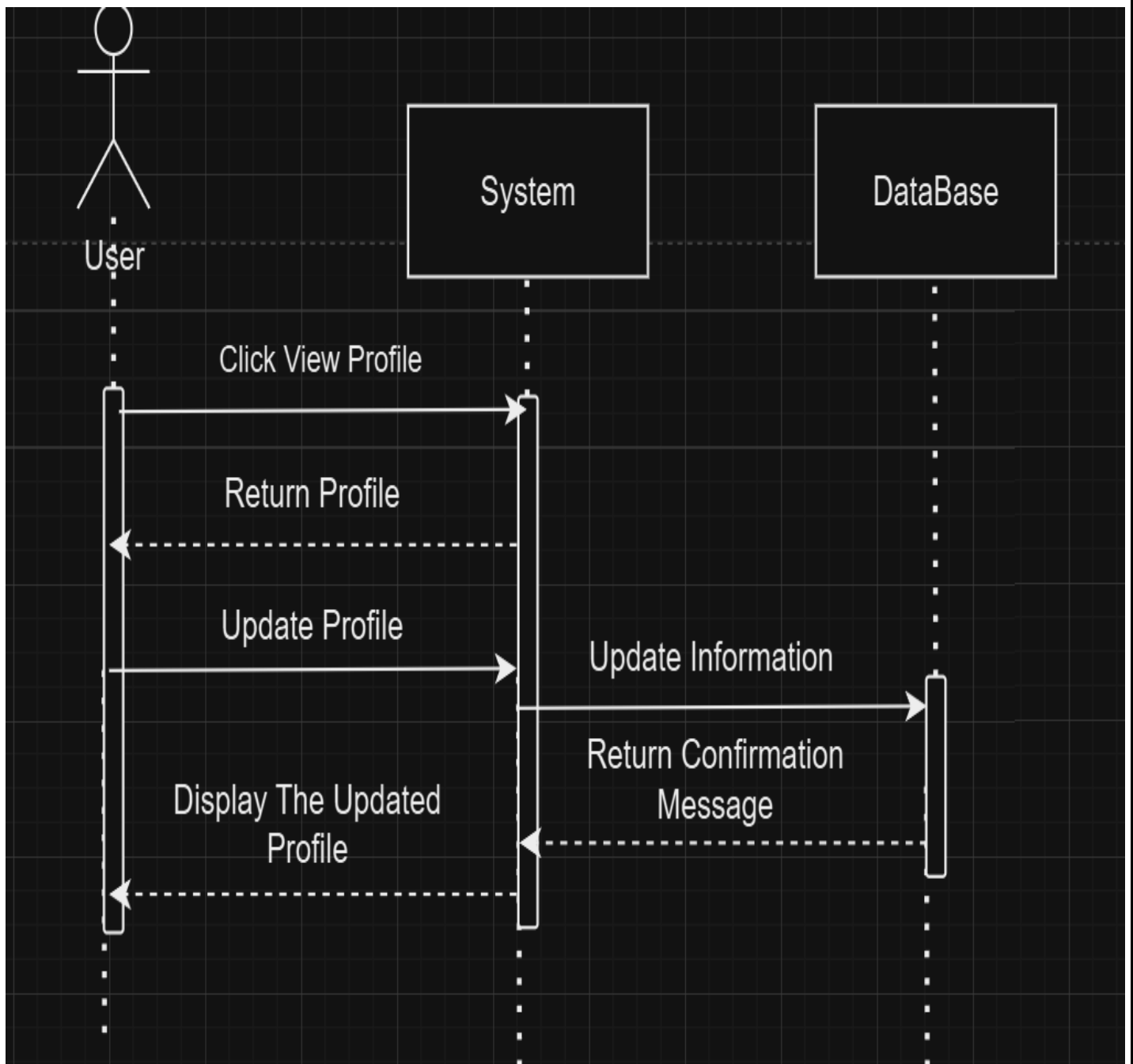


Figure 33 - Update File (Sequence Diagram)

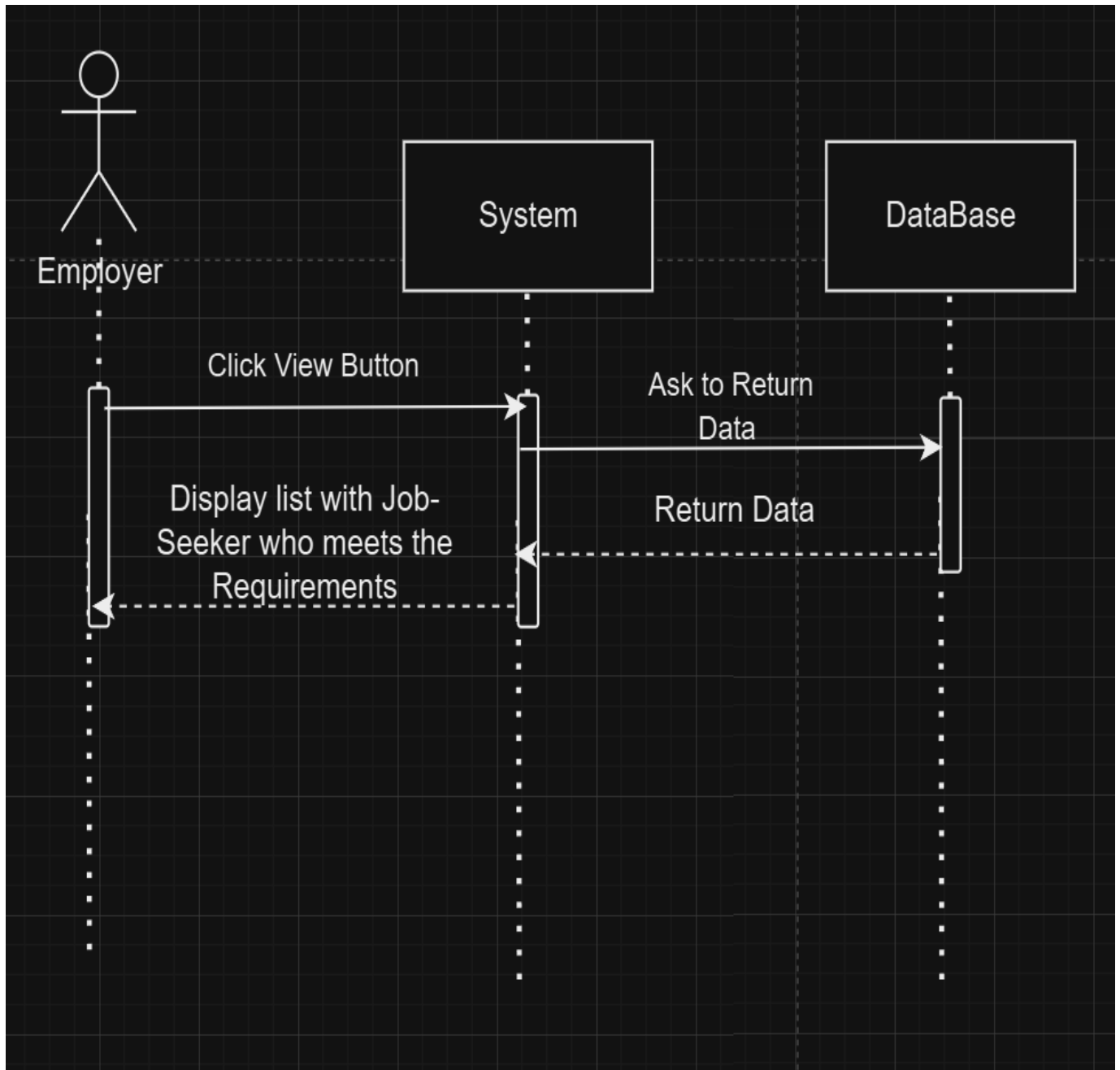


Figure 34 - View The Job Seeker Who Meets The Requirements (Sequence Diagram)

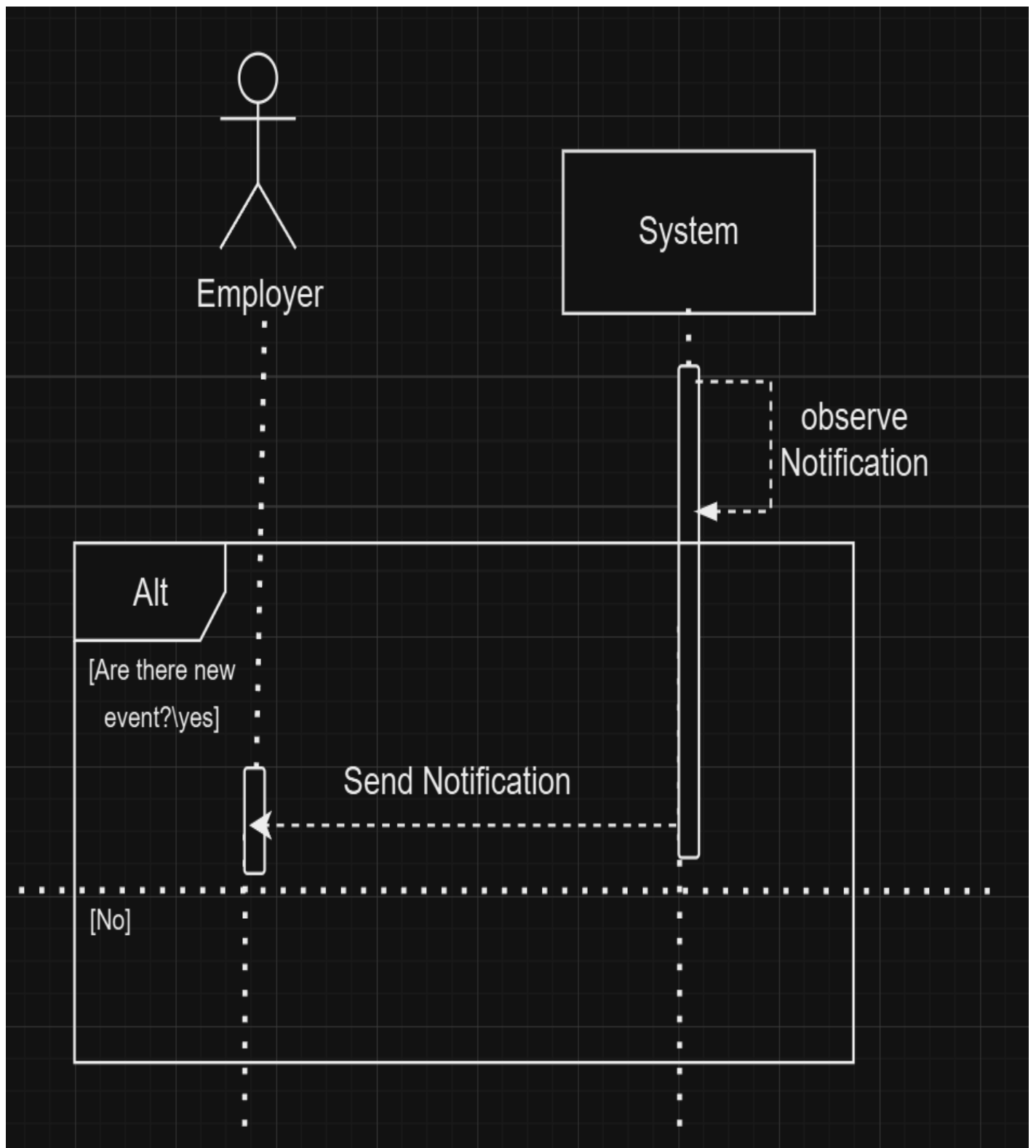


Figure 35 - Receive Notification (Sequence Diagram)

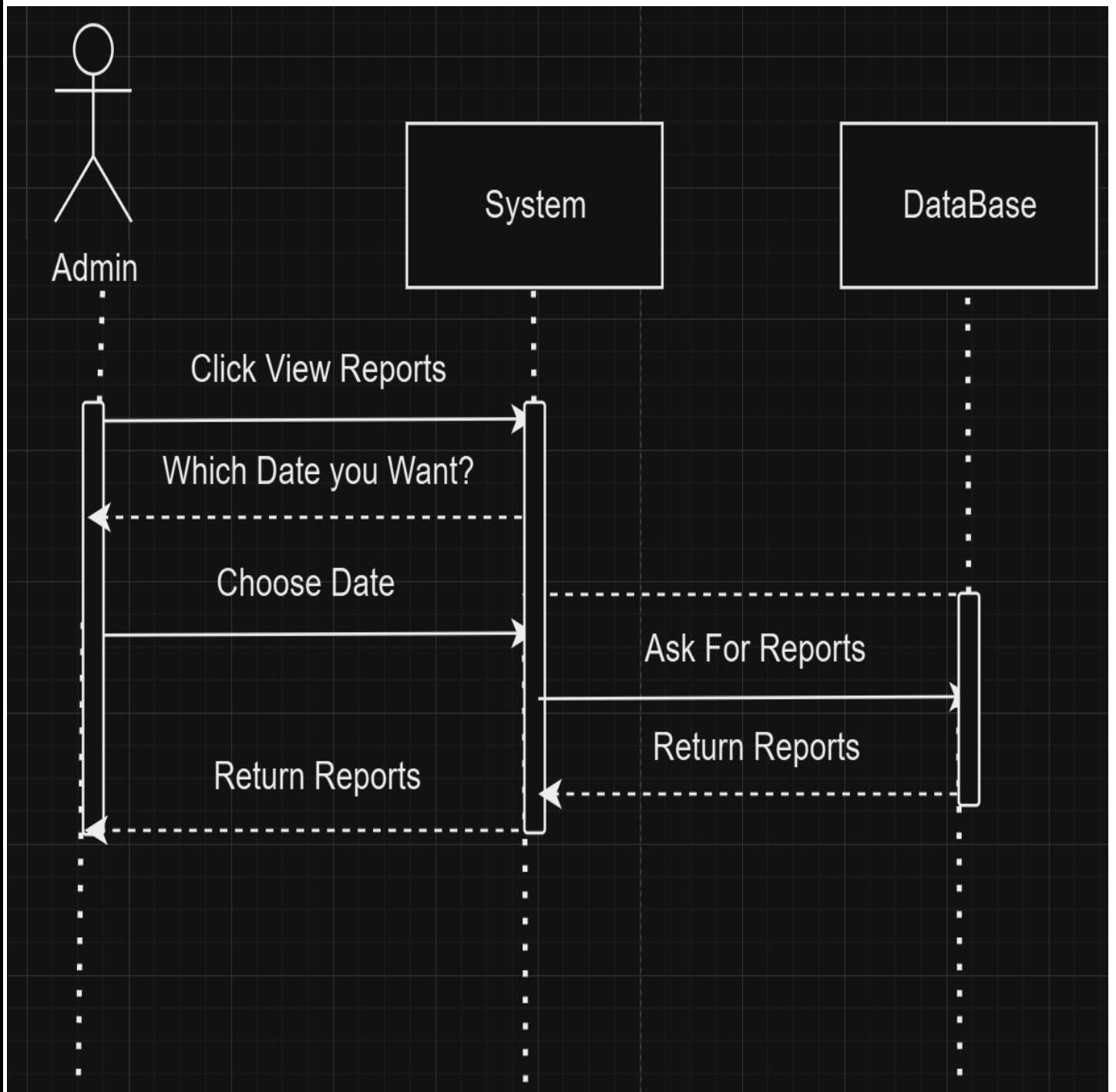


Figure 36 - View System Reports (Sequence Diagram)

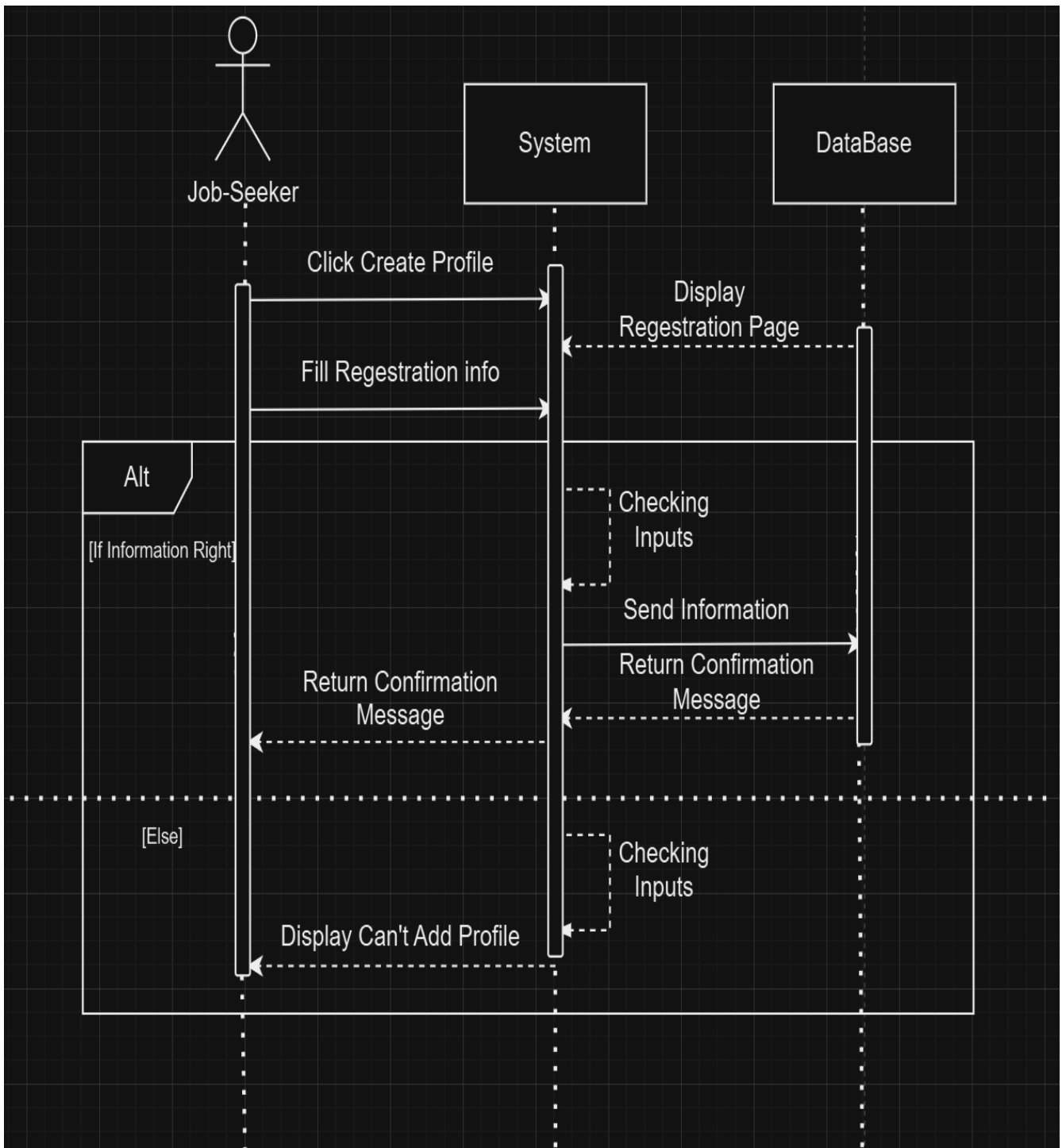


Figure 37 - Create Profile (Sequence Diagram)

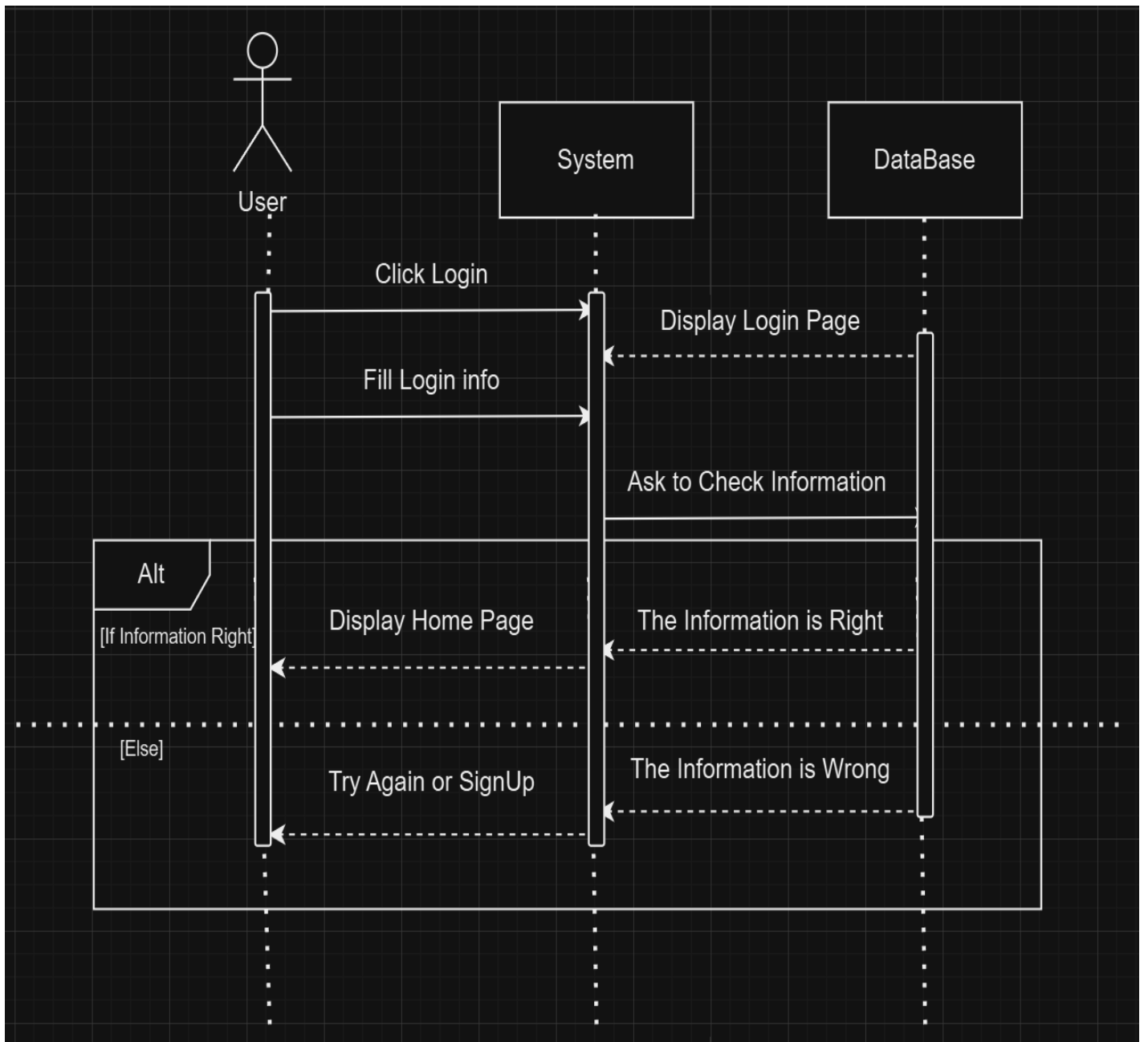


Figure 38 - Login (Sequence Diagram)

Chapter 3 | SYSTEM DESIGN

3.1 ER Diagram

An Entity Relationship Diagram (ERD) represents the overall logical structure of a database, which is independent of any software or data storage structure. It gives a formal representation of the data needed to run an enterprise or a business activity and will often contain data objects not yet implemented in the physical database. When designing a database, the design process normally starts at the conceptual level, where you do not need to consider the details of actual physical implementation. The following diagram will show the entity-relationship of this system.

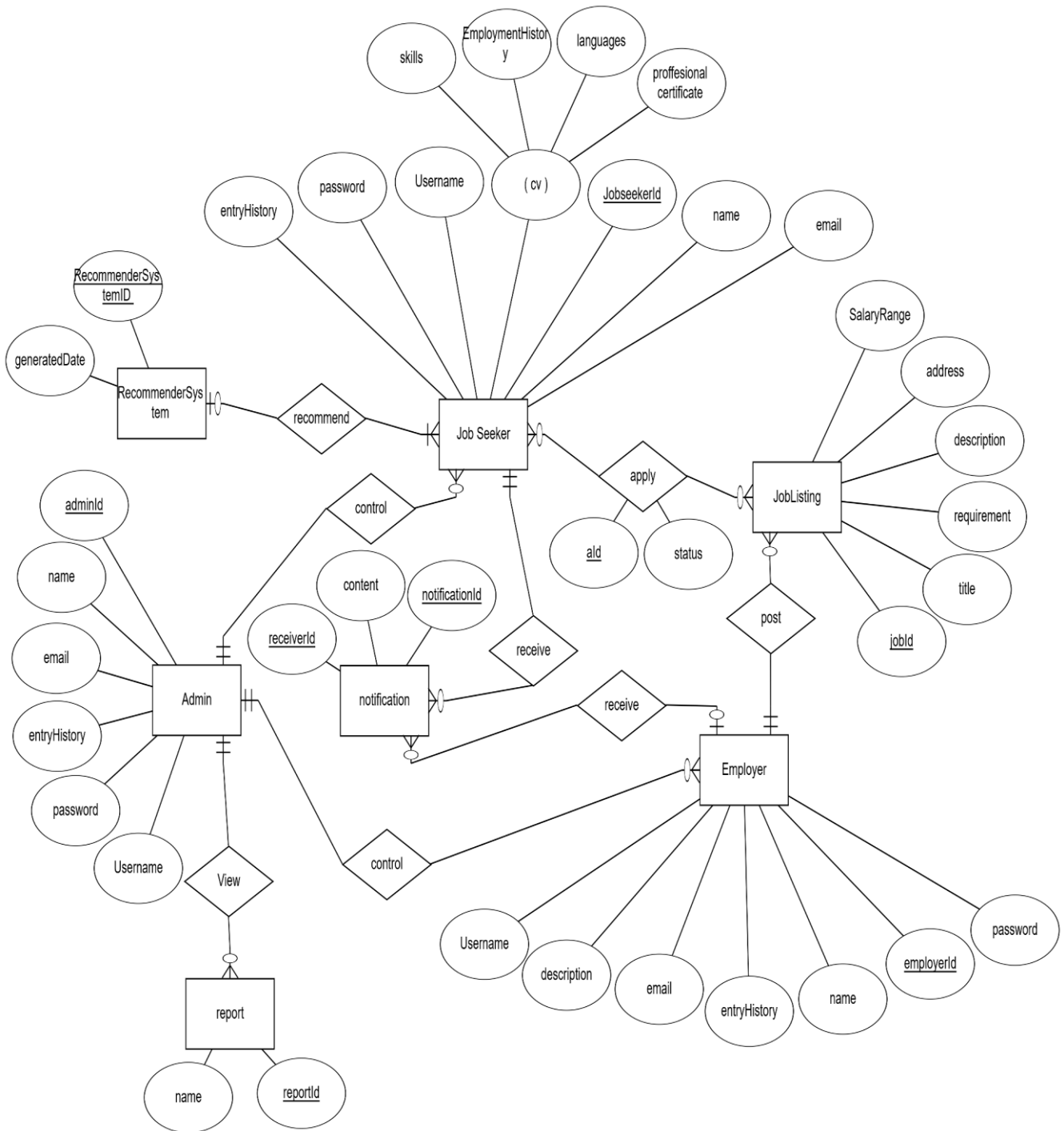


Figure 39 - ER Diagram

3.2 Relational Schema

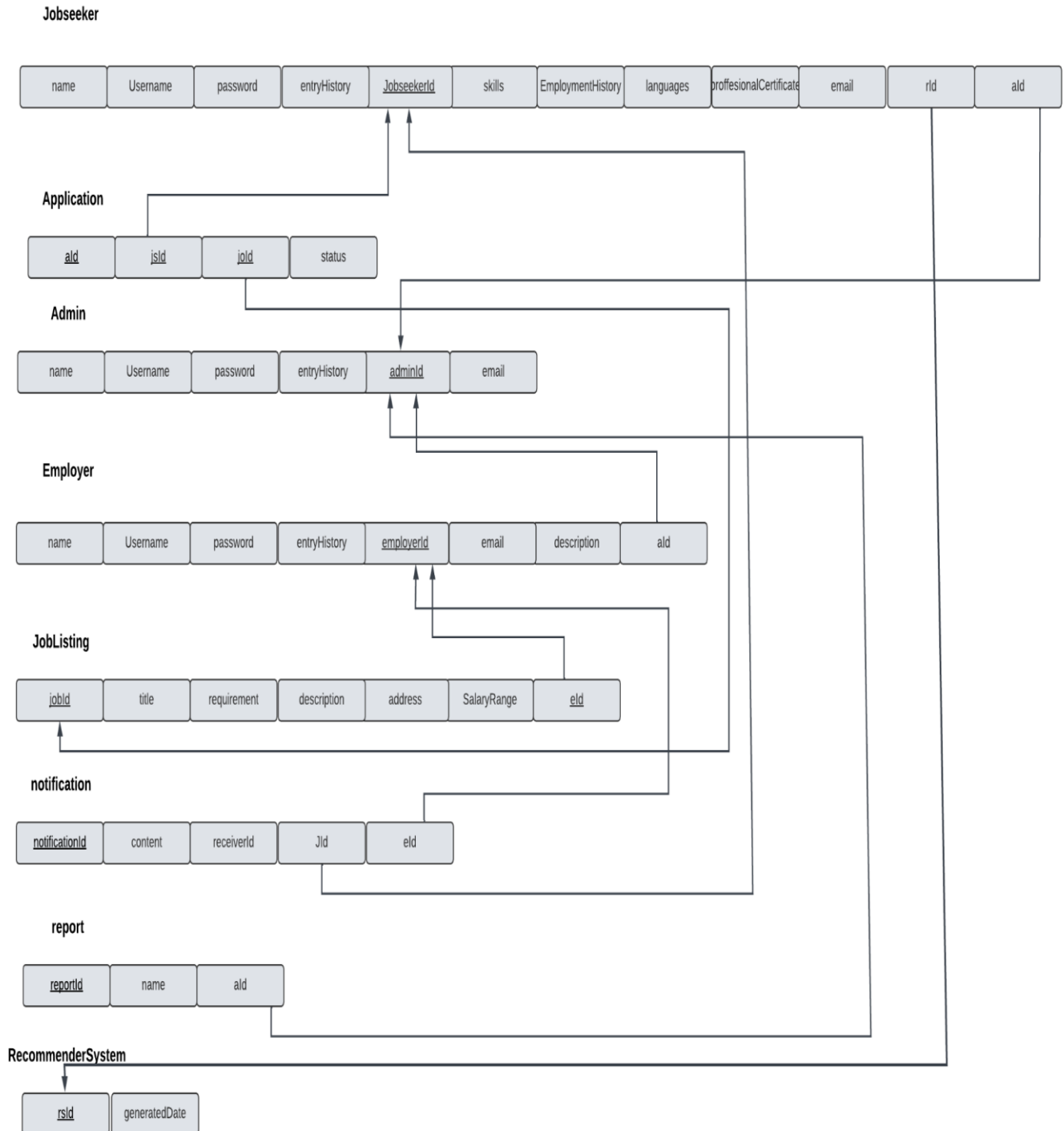


Figure 40 - Relational schema

3.3 Class Diagram

A class diagram is a UML diagram that contains classes, interfaces, packages, and their relationships, and that provides a logical view of all, or part of a software system. Class diagrams are the mainstay of object-oriented analysis and design. Class diagrams show the classes of the system, their interrelationships (including inheritance, aggregation, and association), and the operations and attributes of the classes. Class diagrams are used for a wide variety of purposes, including both conceptual/domain modeling and detailed design modeling.

The following diagram will show the UML class diagram for this system.

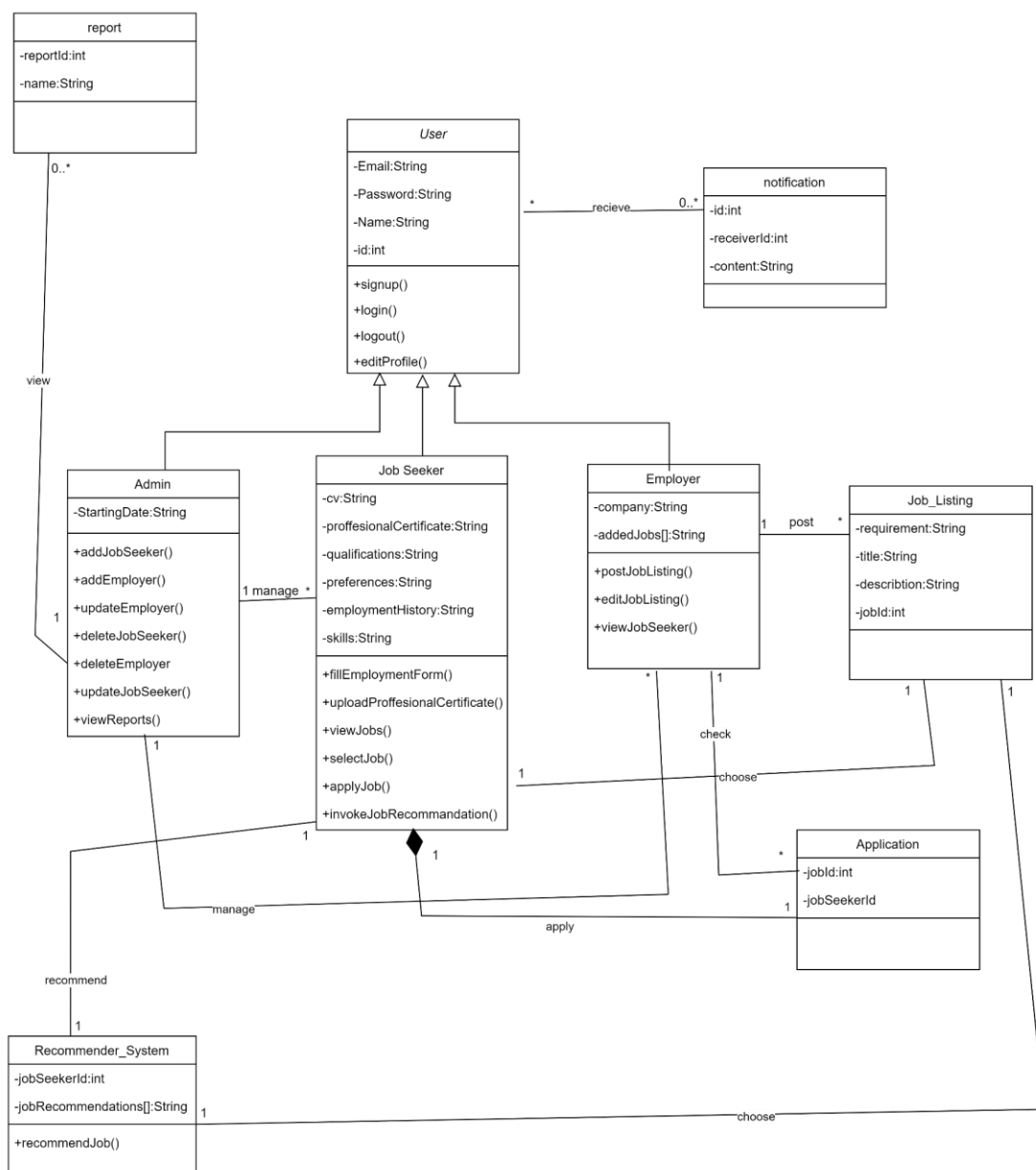


Figure 41 – Class Diagram

Chapter 4 | CONCLUSION

4.1 Social, ethical, legal, global, and security impact of the project on the society:

4.2 The application's impact on society:

- Simplifies job hiring and recruitment processes, saving time for job seekers and employers.
- Reduces unemployment by increasing access to job opportunities.
- Creates new opportunities for professional growth and career advancement.

4.3 Ethical, legal, and security impact:

- The platform adheres to data protection regulations, ensuring sensitive user data remains secure and private.
- Complies with employment and labor laws to safeguard the rights of job seekers and employers.
- Implements robust security measures, such as email verification and encrypted passwords, to protect user accounts and maintain trust in the system.

4.4 Future work:

In the next semester, we have to develop this project to be an easy-to-use website with a simple interface using our programming skills. The expected tasks in the next semester are:

- 1 Creating databases for related actors
- 2-Creating code using Python
- 3-Creating an easy-to-use website
- 4-Linking everything that needs to be linked

4.5 Conclusion:

In conclusion, this report is about developing a platform that facilitates the search process between job seekers and employers called 'Yusur'

'Yusur' is an Arabic word that means ease. It is a platform that seeks to facilitate the job search process for the job seeker and the process of finding the right employee for the employer through a website and services that serve both parties. The website will be available at all times for job seekers or those looking for the ideal employee. Finally,

we hope that our project will have an impact on society and serve everyone who needs to use it. We will strive to develop it continuously so that it will be satisfactory to users.

4.6 References:

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- [9] Erdplus <https://erdplus.com/>
- [10] Lucidchart
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