1. Introduction

1.1 Purpose
Job searching in today's world is difficult. Having to go through multiple different websites just to see if you are the right fit or not can be overwhelming and time-consuming. People are stuck in a maze of different job boards and company websites, making this process even more tedious. What if there was software that took all the job listings from all the different job boards and sights and put them in one place. Using the information the user gives either through their resume or experience they provide, this system will deliver jobs tailored for the user.

1.2 Scope
CareerSpark is a web-based and mobile application that offers the following core features:
- User Registration and Profile Management
- Resume Builder with Templates
- Web Scraping for Job Postings
- Job Search and Application Management
- Networking and Professional Connections
- Messaging and Communication Tools

1.3 Definitions

UML: Unified Modeling Language

1.5 Overview
The primary focus will be on English-speaking countries initially, with plans to expand globally based on the app's success. Integration will start with major job boards like LinkedIn, Indeed, and Monster, with more platforms added in subsequent phases. There are many pages that will need to be used to create this project. A user profile that contains all of the users information, resume builder, job search feature and networking features will need to have their own classes.

2 Overall Description
2.1 Product Perspective
The job search application is envisioned as a self contained software system created to help users with the process of finding employment, creating resumes and building networks. This document outlines the features that allow users to track their progress in their job search. The platform is designed with a user approach, accessible through web browsers and mobile devices enabling individuals to explore job opportunities, showcase their professional qualifications and connect with potential employers or colleagues. Figure 1 System Block Diagram provides an overview of the system using a Unified Modeling Language (UML) Block Definition Diagram (BDD).
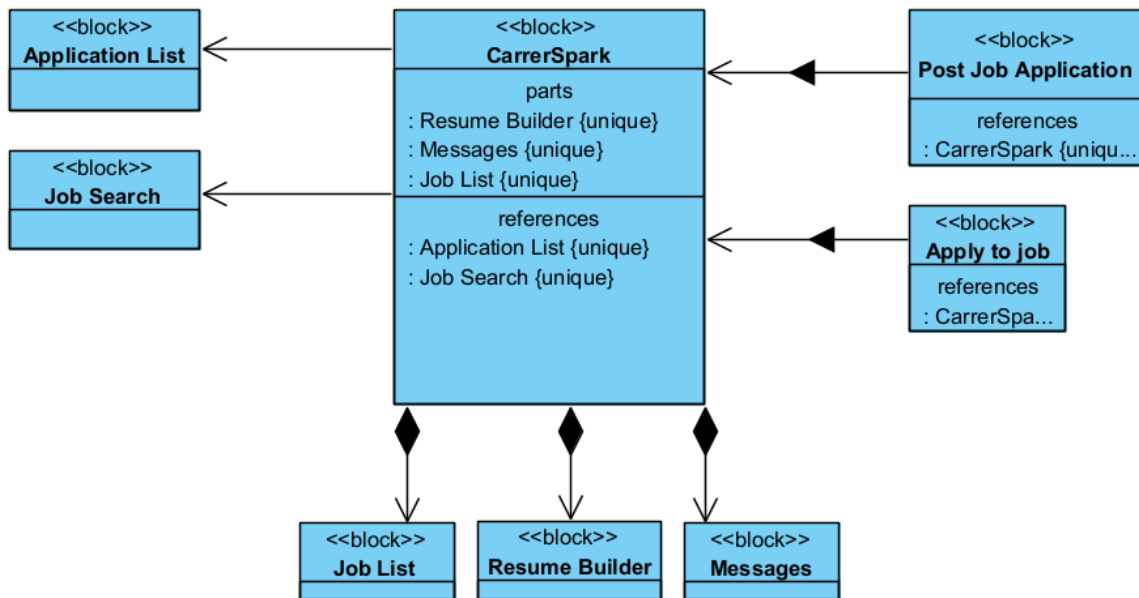
Figure 1 System Block Diagram

2.2 Product Functions

The following use case diagram depicts the users of the system, and the intended way in which they will interact with the system.
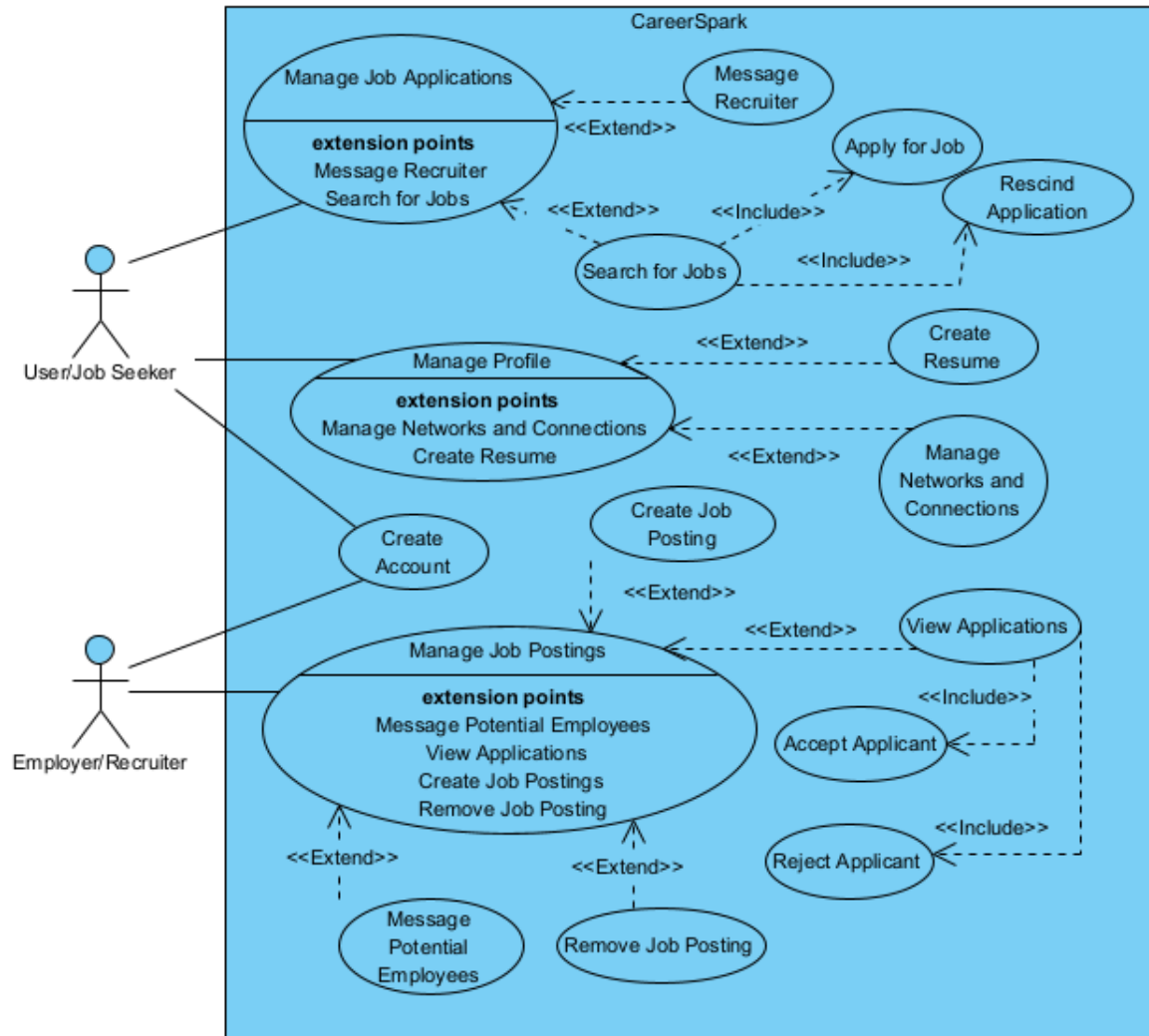
Figure 2 CareerSpark Use Cases

2.3 Use Case Descriptions

2.3.1 Manage Job Applications

GENERAL CHARACTERISTICS	
Intent	Allow users to manage their job applications on the job search website.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	None
Preconditions	1. User is logged into their account

	2. User has submitted a job application
2.3.4 Assumptions	The user's profile information, including job applications, is stored in the system.
Trigger	Users select the "Manage Job Applications" option from their dashboard.
Success Post Condition	Users are able to view, update, and track their job applications.
Failed Post Condition	Users are unable to access or manage their job applications.

Sunny Day Scenario

Step	Action
Start	This scenario begins when a user wants to manage their job applications.
1	The User/Job Seeker logs into their CareerSpark account successfully.
2	From their dashboard, they select the "Manage Job Applications" option.
3	The user is presented with a list of all their job applications..
4	They can view the details of each application, update any necessary information, and track the status of their applications.
5	If needed, the user can take additional actions like withdrawing an application or submitting an updated version
6	The user successfully manages their applications and logs out or navigates to another section of CareerSpark.

Rainy Day Scenario

Step	Action
Start	This scenario begins when a user tries to manage their job applications but encounters an error.
1	The User/Job Seeker logs into their CareerSpark account successfully.
2	From their dashboard, they select the "Manage Job Applications" option.
3	From their dashboard, they select the "Manage Job Applications" option.

4	The User/Job Seeker tries to refresh the page or log out and back in, but the error persists.
5	They attempt to contact support via a "Help" button or link provided on the website.
6	The Use Case ends when the user either waits for the issue to be resolved, follows any provided instructions, or decides to come back at a later time.

2.3.2 Message Recruiter

GENERAL CHARACTERISTICS	
Intent	Enable users to directly communicate with recruiters regarding job opportunities.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	Recruiter
Preconditions	1. User is logged into their account. 2. User has viewed a job posting or has an ongoing application.
2.3.4 Assumptions	Recruiters have enabled messaging options for the job postings.
Trigger	Users select the "Message Recruiter" option associated with a job posting or from their application status page.
Success Post Condition	Users successfully send a message to the recruiter and await a response.
Failed Post Condition	Users are unable to send the message due to technical issues or recruiter's restrictions.

Sunny Day Scenario

Step	Action
Start	This scenario begins when a user wants to communicate with a recruiter about a job opportunity.
1	The user, logged into their CareerSpark account, selects the "Message Recruiter" option after viewing a job posting or accessing their ongoing application.

2	A messaging interface appears, enabling the user to compose a message expressing interest or seeking clarification.
3	The user selects the specific recruiter associated with the job posting.
4	After composing the message, the user successfully sends it to the recruiter.
5	A confirmation message is displayed, indicating the successful sending of the message.
6	The user now awaits a response from the recruiter.

Rainy Day Scenario

Step	Action
Start	The user encounters technical issues while trying to message a recruiter.
1	After attempting to select "Message Recruiter," a loading screen appears for an extended time.
2	An error message pops up, explaining that the message couldn't be sent due to technical issues.
3	The user is advised to check their internet connection, refresh the page, or try again later.
4	If the issue persists, the user may consider using alternative communication channels like email or support features.
5	The user can choose to log out or wait and try messaging the recruiter again at a later time.
6	Despite the setback, the user remains open to exploring other means of contacting the recruiter or addressing their inquiries.

2.3.3 Search for Jobs

GENERAL CHARACTERISTICS	
Intent	Allow users to search and filter available job opportunities based on their preferences.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	None

Preconditions	1. User is logged into their account or using the platform as a guest.
2.3.4 Assumptions	The system has an updated list of job postings.
Trigger	Users enter the job search page and input their desired job title, keywords, or filters.
Success Post Condition	Users are presented with a list of relevant job postings based on their search criteria.
Failed Post Condition	No jobs are found matching the user's criteria or technical issues prevent the search.

Sunny Day Scenario

Step	Action
1	User logs into their CareerSpark account (or accesses as a guest).
2	User navigates to the job search page.
3	User inputs their desired job title, keywords, or applies specific filters.
4	User inputs their desired job title, keywords, or applies specific filters.
5	User browses through the results and selects a job posting of interest for more details.

Rainy Day Scenario

Step	Action
1	User logs into their CareerSpark account (or accesses as a guest).
2	User navigates to the job search page.
3	User inputs their desired job title, keywords, or applies specific filters.
4	The system processes the search but fails to find any matching results.
5	A message is displayed to the user: "No jobs found matching your criteria. Please refine your search or try again later." Alternatively, a technical error message might appear if there's an issue with the system.

2.3.4 Manage Profile

GENERAL CHARACTERISTICS	
Intent	Allow users to view, update, and maintain their personal and professional profiles.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	None
Preconditions	1. User is logged into their account 2. User has submitted a job application
2.3.4 Assumptions	The system retains previously entered user profile data.
Trigger	Users select the "Manage Profile" option from their dashboard or settings.
Success Post Condition	Users successfully view or make modifications to their profile.
Failed Post Condition	Users are unable to access or modify their profile due to technical issues.

Sunny Day Scenario

Step	Action
1	User logs into their CareerSpark account.
2	User navigates to the dashboard or settings.
3	User selects the "Manage Profile" option.
4	The system displays the user's current personal and professional profile data.
5	The system displays the user's current personal and professional profile data.
6	The system displays the user's current personal and professional profile data.

Rainy Day Scenario

Step	Action
1	The system displays the user's current personal and professional profile data.
2	User navigates to the dashboard or settings.

3	User selects the "Manage Profile" option.
4	The system encounters a technical error and fails to

2.3.5 Apply for Job

GENERAL CHARACTERISTICS	
Intent	Allow users to formally apply for a specific job posting they're interested in.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	Recruiter
Preconditions	1. User is logged into their account 2. User has viewed a job posting.
2.3.4 Assumptions	The job posting is still open and accepting applications.
Trigger	Users select the "Apply" option associated with a specific job posting.
Success Post Condition	Users successfully submit their application for the job.
Failed Post Condition	Users are unable to apply due to job closure or technical issues.

2.3.6 Rescind Application

GENERAL CHARACTERISTICS	
Intent	Allow users to withdraw a previously submitted job application.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	Recruiter
Preconditions	1. User is logged into their account 2. User has an active application for a job.
2.3.4 Assumptions	The application hasn't been processed or finalized by the recruiter.
Trigger	Users select the "Rescind" option associated with an active job application.
Success Post Condition	Users successfully withdraw their application.

Failed Post Condition	Users are unable to rescind the application due to its progress status or technical issues.

2.3.7 Manage Networks and Connections

GENERAL CHARACTERISTICS	
Intent	Allow users to view and manage their professional connections on the platform.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	Other platform users
Preconditions	1. User is logged into their account
2.3.4 Assumptions	The user has existing connections or has sent/received connection requests.
Trigger	Users select the "Networks and Connections" option from their dashboard.
Success Post Condition	Users can view, add, or remove connections.
Failed Post Condition	Users face difficulties managing their connections due to technical issues.

2.3.8 Create Resume

GENERAL CHARACTERISTICS	
Intent	Allow users to create and save a professional resume on the platform.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	None
Preconditions	1. User is logged into their account
2.3.4 Assumptions	The platform provides a template or builder for resume creation.
Trigger	Users select the "Create Resume" option from their dashboard or profile.
Success Post Condition	Users successfully create and save a resume.

Failed Post Condition	Users are unable to create or save a resume due to technical constraints or missing information.

2.3.9 Create Account

GENERAL CHARACTERISTICS	
Intent	Allow new users to register and create a personal account on CareerSpark.
Scope	CareerSpark
Primary Actors	New User
Secondary Actors	None
Preconditions	None
2.3.4 Assumptions	The platform has enough resources to accommodate new users.
Trigger	Potential users select the "Sign Up" or "Register" option on the CareerSpark homepage.
Success Post Condition	New users successfully create an account and can access the platform's features.
Failed Post Condition	Potential users face issues during the registration process, preventing account creation.

2.3.10 Manage Profile

| GENERAL CHARACTERISTICS	
Intent	Allow users to edit and update their profile details.
Scope	CareerSpark
Primary Actors	User/Job Seeker
Secondary Actors	None
Preconditions	User is logged in and has an existing profile.
2.3.4 Assumptions	User has provided valid information during registration.
Trigger	User selects the "Manage Profile" option from the user menu.
Success Post Condition	User's profile is updated with the new information.
Failed Post Condition	User's profile remains unchanged. An error message is displayed.

3.3 System Features
3.3.1 The system software supports the Use Cases described in Figure 2 CareerSpark Use Cases
3.3.1.1 Manage Job Applications
   3.3.1.1.1 Introduction/Purpose of Feature
   3.3.1.1.2 Stimulus/Response Sequence
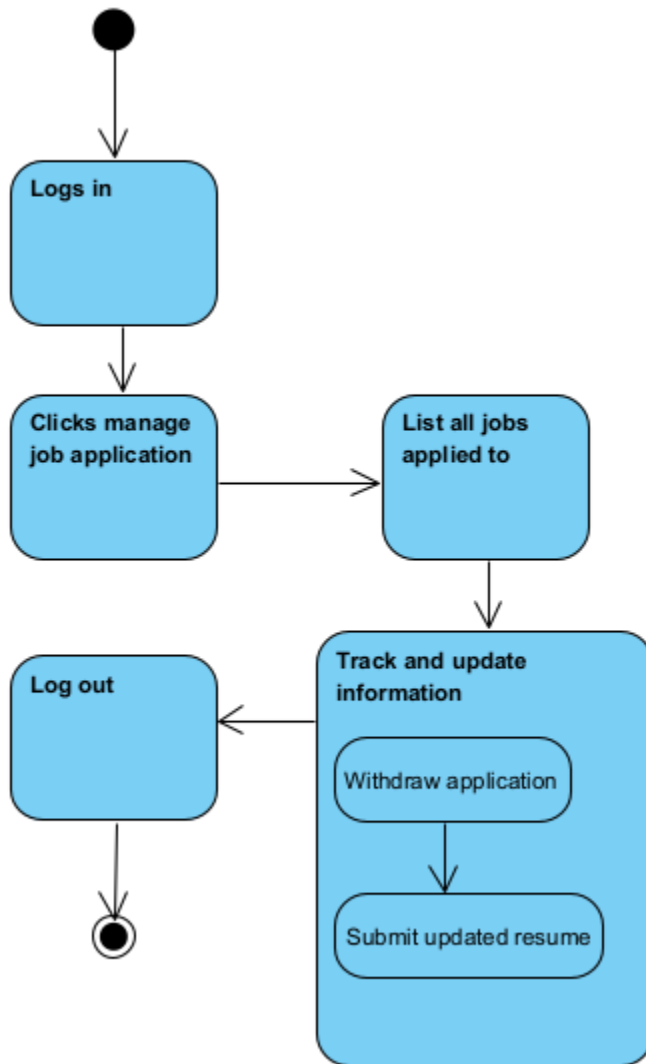
   3.3.1.1.3 Associated Functional Requirements
     3.3.1.1.3.1 The system shall provide the user with the ability to log in.
     3.3.1.1.3.2 The system shall provide the user with the ability to log in
     3.3.1.1.3.3 The system shall list all the jobs the user has applied to.
     3.3.1.1.3.4 The system shall provide the user with the ability to track and update their job application information, which includes:
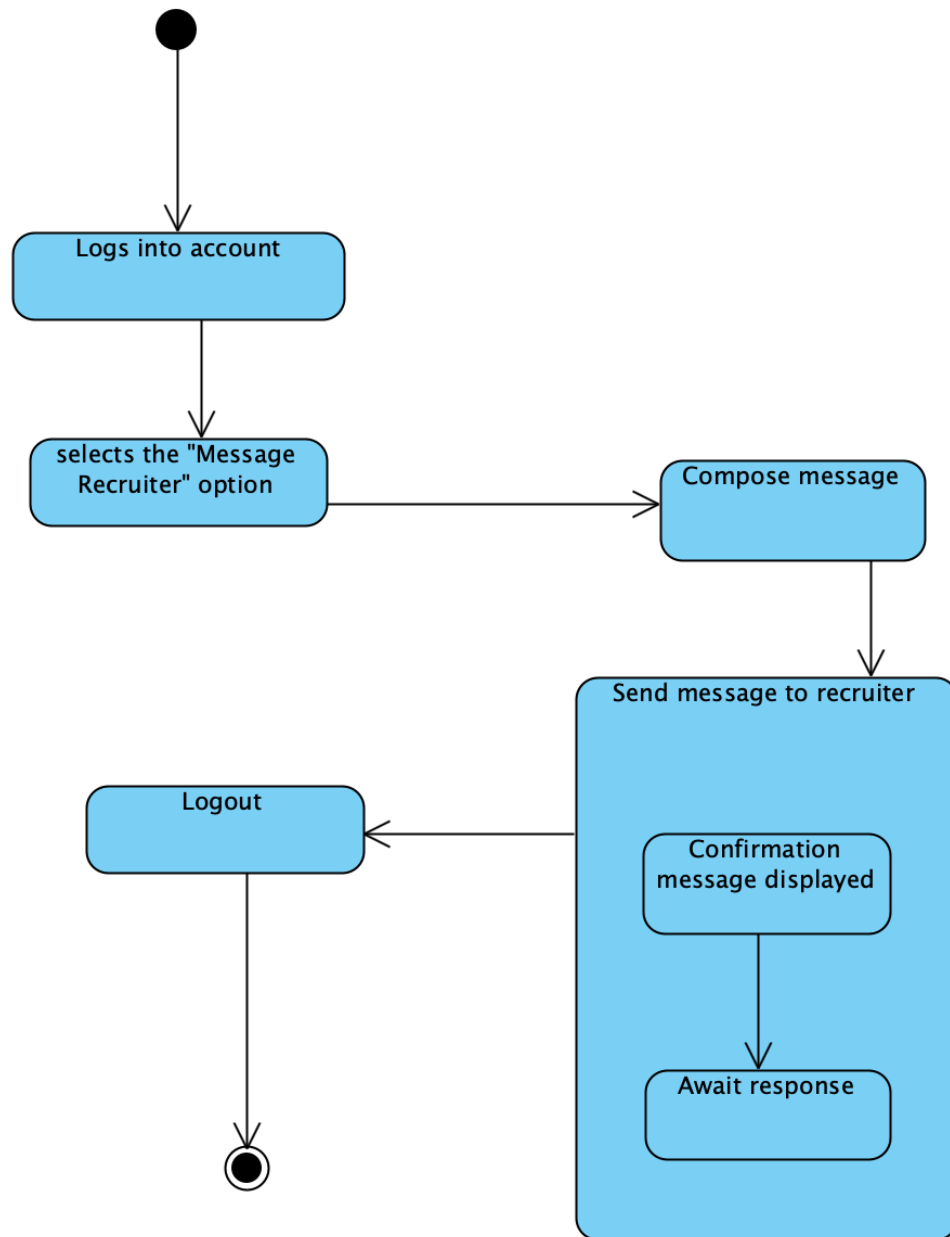
Withdrawing an application

Submitting an updated resume

3.3.1.1.3.5 The system shall allow the user to log out securely once they have finished their session.

3.3.1.2 Manage Profile

  3.3.1.2.1 Introduction/Purpose of Feature

  3.3.1.2.2 Stimulus/Response Sequence

3.3.1.2.3 Associated Functional Requirements

    3.3.1.2.3.1 The application shall allow users to log in using their email and password.

    3.3.1.2.3.2 The application shall allow users to edit their profile information.

    3.3.1.2.3.3 The application shall provide a resume builder feature that auto-fills user profile information into a customizable resume template.

    3.3.1.2.3.4 The application shall allow users to save specific job listings to a "Saved Jobs" section for future reference.

    3.3.1.2.3.5 The application shall provide privacy settings for users to control the visibility of their profile information and activity.

3.3.1.3 Manage Job Postings

  3.3.1.3.1 Introduction/Purpose of Feature

  3.3.1.3.2 Stimulus/Response Sequence

  3.3.1.3.3 Associated Functional Requirements

    3.3.1.3.3.1 The application shall allow recruiters to log in using their email and password.

    3.3.1.3.3.2 Recruiters shall have the capabilities to edit tags, job title, company name, location, job description, and application instructions

    3.3.1.3.3.3 Recruiters shall be able to delete their own job postings which will permanently remove them from the system

    3.3.1.3.3.4 The system shall allow employers to set the visibility of a job posting (e.g., public, private, hidden).

    3.3.1.3.3.5 The system shall allow employers to view and manage applications received for a particular job posting. Employers shall be able to mark applications as "shortlisted," "rejected," or "hired."

3.3.1.4 Create Account

  3.3.1.4.1 Introduction/Purpose of Feature

  3.3.1.4.2 Stimulus/Response Sequence
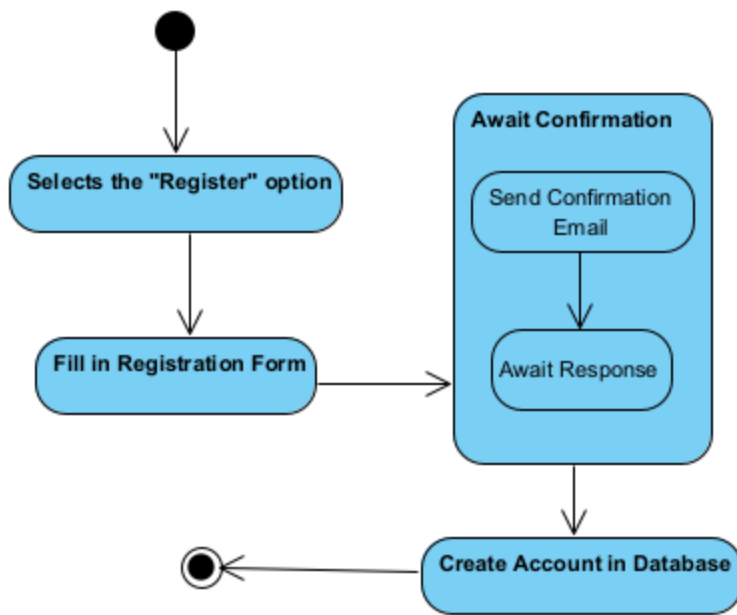
3.3.1.4.3 Associated Functional Requirements

3.3.1.4.3.1 The user shall be required to enter a valid email address, which shall serve as their username.

3.3.1.4.3.2 The system shall verify the uniqueness of the email address.

3.3.1.4.3.3 The user shall choose a strong password containing at least eight characters, including uppercase, lowercase, and special characters.

3.3.1.4.3.4 Upon successful registration, the system shall send a verification email to the provided email address.

3.3.1.4.3.5 The system shall prompt the user to enter their basic profile information.