

TEAM PROJECT MILESTONE

4

System Analysis and Design
IS 390

Designing a Tech Recruiting Platform

Final Report



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Submitted on:

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By designing *OptiScorify®* Tech Recruiting Platform, we leverage online assessments to accurately and quickly find the right candidates who fit a tech company for a given role. Currently, manual actions must be performed by the recruiting team in external portals, in order to order an online assessment for a candidate on a particular job requisition. Such portals can be iCIMS, or competitive assessment partner's websites directly.

Once the candidate completes the assessment assigned by *OptiScorify®*'s assessment partners, bringing those results into the contractors respective HR depts. requires additional manual work before members of the hiring team can review the candidates' work and make wise decisions.

Thanks to an advanced integration in our project design, assessments will be automatically delivered to the candidates at that trigger point, and federated scoring tools will bring visibility on the candidates taking them. Results will be visible in *OptiScorify®* as soon as reviewed by contractors.

Furthermore, this final milestone, we are updating our project BRD. In the core of this document, we design class/sequence and collaborative diagrams to describe the serial assessment process within our tech recruiting solution that we choose to call *OptiScorify®*, in a result-driven fashion. The remaining parts of this report, which are described in details further down in the document, are simplified for the sake of system analysis design clarity.



SECTION 1 Market Research



Section One: Market Research

I. Executive Summary

1. Overview

The main goal is to create a convenient platform capable of delivering great experiences to both the candidate and the hiring manager. For this, we will tackle some of the biggest challenges businesses face such as attracting, screening, interviewing, and engaging top developers.

Our mission through conceptualizing a web-based tech recruiting platform is to help IT hiring managers assess their candidates' skills by testing their code online.

2. Background

Project sponsor: NJIT & the Rutgers's Career Exploration and Success (CES)

Business need – There is a clear disconnect between applicants and businesses. Applicants should be able to apply to jobs that will fit them well while businesses should be able to find applicants that will be able to fit there need. This project is to bring the best fit applicants and businesses together.

Business requirements – Using the web, applicants will be able to fill out surveys and write code to best show off their abilities. Then using the web, be able to see the business that would best match them. Companies will also use the web to fill out their needs and view applicants that would best match their needs. Functionality including:

- Tailored surveys
- Web based module that allows for coding in many languages
- Matching companies and applicants
- Communications between all parties

Business value – We expect that our unique way of linking businesses and applicants together will steadily increase our customer base through our success, word of mouth, and marketing.

Special issues or constraints:

- There are competitors that have similar business models that we have to overcome.
- We will need good marketing to bring both applicants and businesses to the site.
- The site will have advanced features and will need to be intuitive and smooth for customer satisfaction.

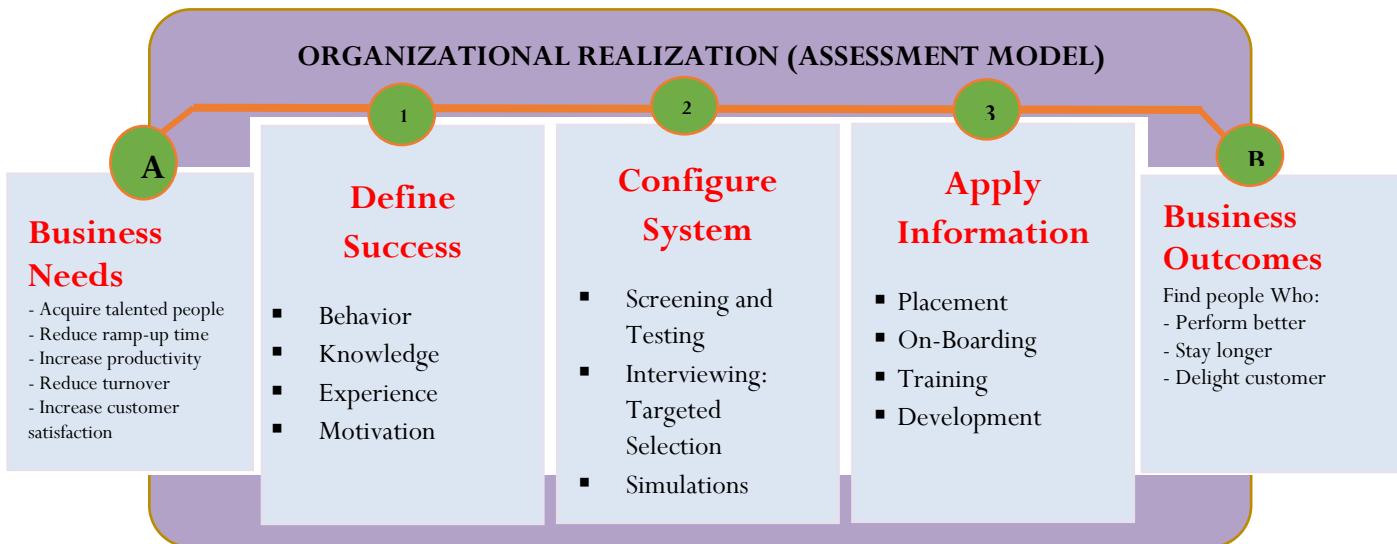
3. Objectives

The main objectives are:

- Providing a software based platform to connect the best employer to their best future employees.
- Saving technical hours and money for hiring firms by effectively screening the right candidate.
- Providing bias free, equal opportunity platform where only skills are matter.

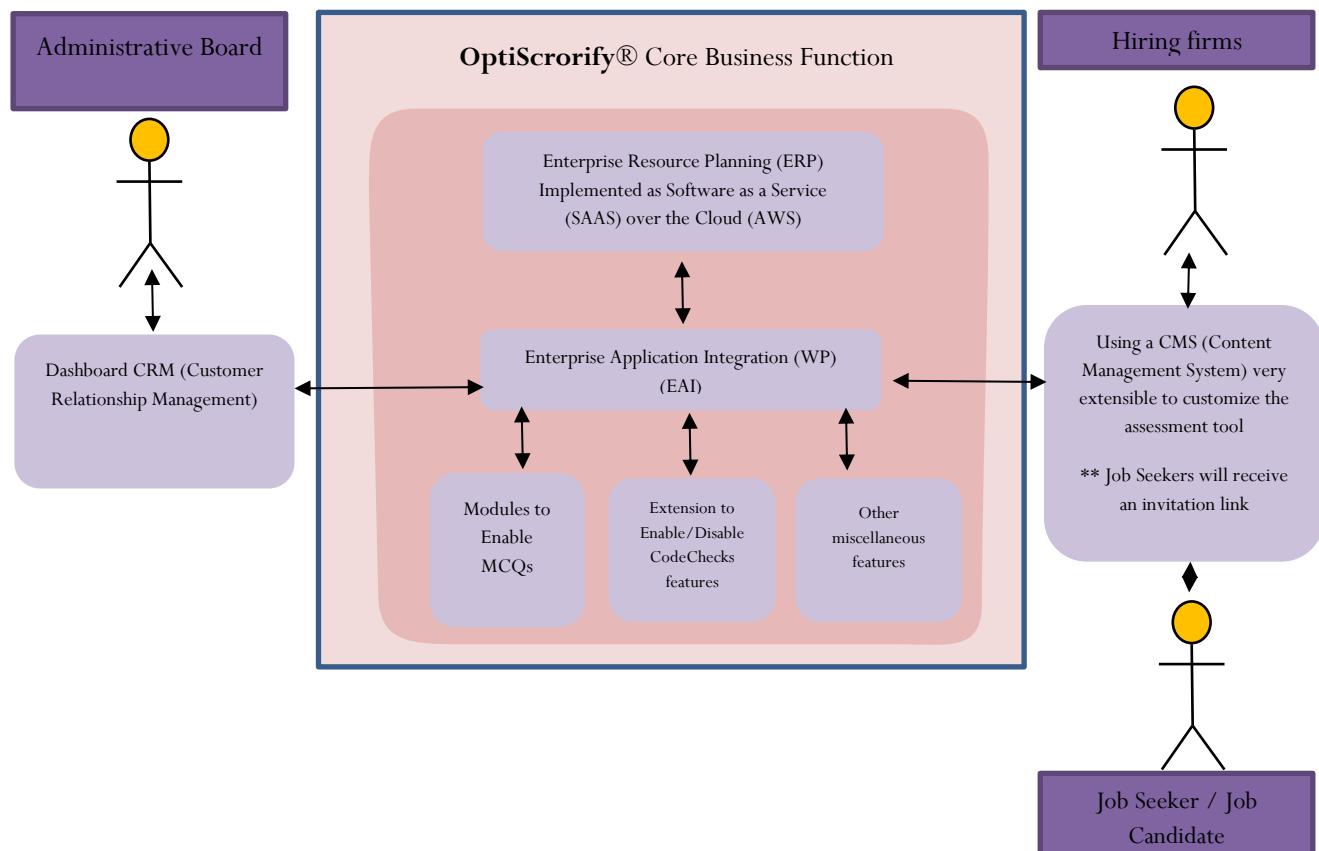


We will implement the assessment model based on the following steps:



4. Resource Requirements

We aspire to build a platform that evaluates cognitive, personality, and motivation of the job seekers through measuring their abilities to learn, adapt, solve problems and understand instructions. The business needs will be necessitating an aggregative approach combining numerous technologies such as the cloud AWS (Amazon Web Services) and platform as a service to provide an SaaS solution delivering scores and reports about the job candidates.





5. Project Team

We are team **four**. We are reachable by email at:

- Reda Mastouri (Team Leader): rm795@njit.edu
- John McMinn: jcm44@njit.edu
- Ruben Rojas: rcr35@njit.edu
- Mel Rosado: mdr46@njit.edu
- Piyushkumar Gandhi: pdg5@njit.edu

Our typical weekly meeting agenda has the following items:

Week days:	Duration/Time	Item description	Action items
Monday	10:10am – 01:00PM	<ul style="list-style-type: none"> - Review the minutes from last meeting - Review pending tasks - Review the status report - Working on the prototype - Miscellaneous tasks 	<ul style="list-style-type: none"> - Watching the project critical delivery path (GANTT) - Peer-reviewing the tasks
Wednesday	10:10am – 01:00PM	<ul style="list-style-type: none"> - Review the minutes from last meeting - Review pending tasks - Review the status report - Working on the prototype - Miscellaneous tasks 	<ul style="list-style-type: none"> - Watching the project critical delivery path (GANTT) - Peer-reviewing the tasks
Friday	05:00PM – 07:00PM	<ul style="list-style-type: none"> - Job-Market investigation - Developing the app and implementing the work environment 	<ul style="list-style-type: none"> - Scheduling new tasks for the following week

For project management, we are using Visio and Gantt Project with combination with other flexible tools such as:

- Google Calendar (Scheduling meetings)
- Google Doc (Sharing thoughts on the studied subject)
- Monday.com (Assigning tasks)
- Discord (Chat)



II. Project Scope

To date, the team is working on developing beta version prototype 1.0. With an objective to develop a legally defensible coding challenging/ Tech Online Assessment, team four is settled on using *HackerRank APIs/ domjudge.org* and *Sharif-Judge CRM Solutions/* and also partnering with existing recruiting PaaS, AWS, BizDev and NJIT's handshake solution.

Over the course of our current prototype design 1.0 we have explored three vendors. *HackerRank*, *Codility*, and *Aspiring Minds*. Gaining the fact of re-using all the given vendor's key feature, our solution will allow to move faster on code question development, more security in the test taking environment, and alternative automated code evaluation metrics.

OptiScorify® solution will offer all of these, however we will be in need of getting code questions support by an endorser such as *trusted evaluator (TE)* to use their metrics to provide incremental prediction above test cases

Our prototype would be delivered by **December 9th, 2019** on which we will aspire to be a code evaluation solution, with more robust cheating prevention and auditing mechanisms (e.g., browser lock, print screen test shut down, and candidate authentication via photos), having a technical team who could write an authentic *Optiscorify's* owned code questions that met a TE code question design specifications, generating multiple metrics in addition to test cases that predicted job performance.

In addition to the above we've started with. We suggest to help the job seeker get prepared for the interview if and if they pass the job assessment and get short-listed for ulterior job screening.

The function of interview preparation is to deliver clear and concise guidance to candidates on how to best prepare for any type of interview (phone screen, on-site, hiring event, assessment, etc.). Prep materials not only provide guidance and understanding of what a candidate should expect during the interview process, but also helps a candidate set themselves up for a successful interview.

For the Online Assessment (OA) also be a little change in the project scope. The OA is a validated assessment used companywide that replaces the initial technical phone screen (TPS) to assess external job candidates. The OA is objective, will have tendency to predict job performance, reduces unconscious bias, and provides time efficiencies for candidates, recruiters, and business. The immediate benefits of the assessment are the reduction of interviewer time allowing *OptiScorify®* to screen more candidates using fewer business resources, automated identification and categorization of top talent, and enablement of process steps used to fast track top candidates to interviews.

The OA consists of a 90-minute *Code Test* that assesses basic programming skills, data structures, and algorithms; and a 15-minute Behavioral Assessment that assesses competencies linked to soft skills leadership principles.

Assessment	Description	Competencies Assessed	Format	Coding Languages	Time
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Coding	Assess on basic programming constructs, data structures, and algorithms	<ul style="list-style-type: none"> - Test cases Passed - Programming Practices - Run-time Complexity - Stylistic Components 	Two Code Questions: 1 “Moderate”; 1 “Hard”	Java, C/C++/C#, Python, Ruby, JavaScript, Swift	90 min total
Problem Solving (Optional)	Freeform text box provided for candidates to briefly explain their problem solving approach for each coding question	<ul style="list-style-type: none"> - Problem Solving Approach 	Freeform test; responses are not evaluated	N/A	15 min
Soft Skills Assessment	Assess fit for overall Leadership Principles	<ul style="list-style-type: none"> - Delivers Results - Bias for Action - Learn to Be Curious - Earns Trust - Are Right Lot 	Multiple Choice Questions, Likert Scale**	N/A	15 min
Candidate Feedback (Optional)	Candidate feedback	Optional Experience Survey	Multiple Choice Questions, Likert Scale**	N/A	N/A

Likert Scale:** A Likert scale is a psychometric scale commonly involved in research that employs questionnaires. It is the most widely used approach to scaling responses in survey research, such that the term is often used interchangeably with rating scale, although there are other types of rating scales.

In this below representation, we assume a candidate can go from a state to another as long as there is no blocking transition between them. An Assessment Review is the manual task that can today be assigned to a user in OptiScorify®, in order to assess a candidate’s assessment results.



III. Key Features

The main key features that will be highlighted for our project are described as follows:

- Providing technical solution to hiring companies to screen the candidates based on their coding skills.
- Offering a customized solution to hiring firms based on the posted job description
- Designing a user interface where a candidate can search job, apply and test his/her skills online.
- Offering training tutorials for users that walk them through the offered system
- Allowing job seekers customize their resumes based on their current skills and areas of interest



- Conceptualizing a notification system based on an automated email engine where candidates can receive new job postings.
- Creating a blogging system where different job seekers can share their experiences with different companies where they actually worked for or had been interviewed with.

The following table us describing the key feature per types of the app's users:

Hiring Firms	Job Seeker / Job Candidate	Administrative Board
<ul style="list-style-type: none"> • Software based solution to screen the best candidate • Customize solution as per individual firm's job requirement • Can Access the candidate information. • Automated email generation system 	<ul style="list-style-type: none"> • Search tool to find job posting, company research • Can create customize professional resume. • Training Tutorial for new users • Automated email generation system • A blog to review the experience with hiring firms. 	<ul style="list-style-type: none"> • Our ERP/SAAS/CMS system will allow the IS admin to either enable/Disable a module or a given Extension. • Access to both candidate profile and company profile to resolve any technical issues.

IV. Market Research

1. Summary

By developing a tech recruiting platform called “*OptiScorify®*”, our mission would be to experiment and innovate on assessment and selection strategies that continuously improve the prediction of a candidate’s success at any given IT corporation, by raising the bar on its quality of hire.

Our team is expanding through the BRD, our project’s scope by providing a focus across multiple job families and assessment types using a very aggregative methodology designed to hire people who best fit the job and a company’s peculiar culture.

We continue to work toward a mission of objective prediction of a candidate’s success for specified jobs (SDE, Ops, CS). We will explore expanding our solution key features to broader IT job families by making a number of our assessments available. This will include assessments of abilities and skills such as detail orientation, personality, and cognitive assessments that our solution would be built for particular roles but can be made applicable to a wider base of IT business related jobs.



Because People are considered as company's most important asset, our goal is indeed to create an application that will be delivering a great experience to both the user and the hiring manager.

To better respond to the business needs, let's answer the following questions:

- **What are the challenges to overcome?**

Well, technology positions can sometimes be hard to fill – with a recent CareerBuilder/Sologig.com study showing that a third of IT employers having open positions which they are unable to fill.

One of the main challenges we have to overcome is the talent shortage. We're actually having a huge gap in finding the best tech talents. The studies show that by 2020, there will be more than one million unfilled programming jobs (glassdoor.com).

Second challenge that is persisting is the recruiting costs. Recently, recruiters charge 20% — 25% of the recruit's annual salary. Startups quickly hire in-house recruiters in an effort to save money (forbes.com).

And lastly, it has been noticed that most of the startups are miserable at interviewing candidates. To assess skills, founders rely on their existing engineers, but most engineers are terrible at interviewing candidates.

- **Can we solve this problem?**

Absolutely, to pick the best candidate, we need a tech-based platform that simplifies the hiring process by:

- Identifying the top applicants
- Streamlining the hiring process
- Predicting applicant fit
- Comparing candidates side-by-side

2. Key Strengths

Here is a comparative study of competitive brands based on marketing and key features:

key competitors (1)	Triplebyte https://triplebyte.com/	Codility https://www.codility.com/	Fetcher https://www.fetcher.ai/
Marketing/Identifying the key features	Key Features Each company has its own, long interview process. And with every new company, a candidate must do it all over again go through Triplebyte once, then skip straight to final interviews with top tech companies.	Use CodeCheck technical screening to assess real-life development skills, fundamental programming skills, and technical knowledge. Screen based on technical test Save engineering time Only interview qualified candidates	Automated email outreach Integration with ATS Use past searches to guide future search results Ability to leave qualitative feedback on a profile (e.g., avoid candidates from agencies) ·No need to write Booleans



		<p>Once the candidate pass, he will be accepted for life.</p> <p>450 Companies actively hiring 10,000+ candidate/company matches per week 3000 job offers received by their candidate</p>	<p>Better Candidate experience</p> <p>Identify top candidates faster</p> <p>Reduce unconditional bias</p> <p>High scale plagiarism protection</p>	<ul style="list-style-type: none"> In-depth company intelligence (e.g., source from private equity-backed, pharma companies) Long-term relationship with candidate via CRM Capabilities Learning algorithms that improve candidate quality Metrics & best practices to maximize email conversion
	Cost	Free	Free Trial/ Subscription	Subscription
	Features the competitors do not have	<ul style="list-style-type: none"> A way to test people in the tech industry on their knowledge. 	<ul style="list-style-type: none"> Doesn't have global challenges Only creates coding level problems 	<ul style="list-style-type: none"> Doesn't have global challenges Doesn't test people in technology knowledge

	key competitors (2)	DevSkiller https://devskiller.com/	Scorify https://www.scorify.me/	EmployBlue https://www.employblue.com/
Marking/identifying the key features	Key Features	<ul style="list-style-type: none"> Android Development Programming libraries Programming Tasks Source Code Comparison Test Management Tool Video Conferencing Task n' test creation Everything is customizable Testing ground for front-end, back-end and mobile SQL task 	<p>Combination of AI and human calibrations</p> <p>Automation process to reach to candidates</p> <p>Integration with ATS</p> <p>Use of past searches for guidance</p> <p>No need to write Booleans</p> <p>In-depth company intelligence (e.g., source from private equity-backed, pharma companies)</p> <p>Data that empowers your recruiters (e.g. Contact 125 iOS Developers in NY for 90% chance to hire)</p>	<ul style="list-style-type: none"> Create Exams Send Exams Ability to choose from after screening process Dashboard Analysis program Share Feature Customizable



		<ul style="list-style-type: none"> · Automated IT screening process · Candidate report · Automated coding scoring · Natural programming environment · Multiple programming language support 	<ul style="list-style-type: none"> · Long-term relationship with candidate via CRM capabilities · Learning algorithms that improve candidate quality · Unearth skillset patterns in existing employee base to identify strong potential candidates 	
Cost		Subscription	Free Trial/ Subscription	Freemium
Features the competitors do not have	<ul style="list-style-type: none"> - AI assistance - Connections with other companies to help the applicants more focused on the company user 	<ul style="list-style-type: none"> - Mobile support - Test Ground for code - No Multiple languages support 	<ul style="list-style-type: none"> - Lacks lot of features such as resume screening to narrow the pre-selection of the candidate that will receive the invitation to start their evaluations - The platform lacks the generation of user reports 	

To sum up our main goals and business outcomes will converge in a way that the aspired mission will remain to be more in depth than the competitors that try to use technology to simply select the potential best candidates. By using our competitive assessment solution, candidates will receive detailed metrics measuring their performance across a wide panoply of competencies.



SECTION 2 Project Plan and Management





Section Two: Project Plan and Management

I. Version Control

A. Revision history

Date	Version	Description	Author(s)
21-Oct-19	1.0	<p>This is the BRD (Business Requirement Document).</p> <p>The purpose of this BRD is to lay out the methodology and requirements used to develop, validate, and implement a legally defensible Tech Recruiting Platform for the goals of increasing objectivity, enhancing efficiencies, and reducing unconscious biases in the IT job offers screen process.</p>	Reda Mastouri John McMinn Ruben Rojas Mel Rosado Piyushkumar Gandhi
20-Nov-19	2.0	<p>This document is enlisting the class diagram and sequence/collaborative diagrams to illustrate the project design as a whole.</p> <p>fYI: The miscellaneous BRD appendix, which is result-driven fashion, is also attached to complete the system analysis phase.</p>	Reda Mastouri John McMinn Ruben Rojas Mel Rosado Piyushkumar Gandhi
09-Dec-19	3.0	<p>This is the final report about designing a Tech Recruiting Platform called OptiScorify®</p>	Reda Mastouri John McMinn Ruben Rojas Mel Rosado Piyushkumar Gandhi

B. RACI chart

RACI chart is a tool that identifies roles and responsibilities against tasks within a project.

What does RACI stand for?

- Responsible
- Accountable
- Consulted
- Informed

2.a) Responsible: Doing The Task

This person actions the task or deliverable. They are responsible for getting the work done or making the decision. It can sometimes be more than one person.

2.b) Accountable: Owning The Task

This person or role is responsible for the overall completion of the task or deliverable. They won't get the work done, but are responsible for making sure it's finalized.

2.c) Consulted: Assisting

This person, role or group will provide information useful to completing the task or deliverable. There will be two-way communication between those responsible and those consulted.

2.d) Informed: Keeping Aware



These people or groups will be kept up to date on the task or deliverable. This could be on progress, or when the task or deliverable is completed. They won't be asked to feedback or review, but they can be affected by the outcome of the task or deliverable. There should be one-way communication to these roles or groups.

2.e) RACI: Project RACI

Below is our rectified project's RACI table:

	Reda Mastouri	John McMinn	Ruben Rojas	Mel Rosado	Piyushkumar Gandhi
Scope(Rectified)					
Determine the project scope	R				
Complete the market research	R				
Running a comparative study of all the competitors	R				
Define preliminary resources	R				
Secure core resources(Staff, Software tools)	R			A	
Correspondence with the client: meeting setup and follow-up.	A			R	
Analysis/Software Requirements (Rectified)					
Preparation for the interview: design of interview questions and flow	A			R	
Conduct needs analysis	C	I			R
Draft preliminary software specifications	A	R			I
Develop preliminary budget	R				
Review software specifications/ Budget with team	R	I	I	A	I
Incorporate feedback on software specifications	R	I	I		I
Develop delivery timeline	R				
Obtain approvals from all team (Concept, timeline, budget)	R				
Secure required resources	R				
Design (Rectified)					
Review preliminary software specifications	C	R	I		R
Develop functional specifications(Features..)	C	R	R	I	R
Develop prototype based on functional specifications	C	R	R	I	R
Review functional specifications		I	I	R	I
Incorporate feedback into functional specifications		R	R	I	R
BRD Write-up	A		R	I	
BRD Quality Assurance	A		R	I	



Development					
Class Model Development	A				R
Use Case Realization: Collaboration Diagram Development	A	I	C		R
Use Case Realization: Sequence Diagram Development	A				R
Identify modular/extensible design parameters	R				
Assign Development staff	R				
Develop Code	C	R	R	I	R
Deliver the beta version of the tech hiring platform	R				

II. Risk Management

Below is an ensemble of potential risks associated with few eventual mitigation plans:

Risk # 1: Breakdown of specification	Risk Type: Requirements
Description: As an initial stage, the end product system requirement is not clear. Some of the team members might have conflict view on the system requirement. It is possible that during the project this requirement will change.	Likelihood of occurring: medium (40% chance)
Mitigation Plan: Document the core requirement of the end product system. Project Manager Reda will make sure everyone in team member understand the core requirement of the project. Also he will provide an update and guide the team members for any changes in requirements during the project.	Impact on project: serious
Risk # 2: Unplanned work that must be accommodate	Risk Type: Operational/organizational
Description: Unplanned work include the support escalation, new stockholder demand, or add the new feature in the system due to the market competition..	Likelihood of occurring: medium (30% chance)
Mitigation Plan: Identify and decide the priority of unplanned work as early as possible. Discussion with all team members about project process, changes ad new findings during the weekly meeting helps everyone stay on the same page. Review the planned work as it is possible that adding new work might exclude the other work. One item in, One item out.	Impact on project: serious
Risk # 3: Requirements and developed function do not match	Risk Type: Software (Technology)
	Likelihood of occurring: High (60% chance)



<p>Description: The end system do not reflect all the core requirement. Some requirements are missing or do not work properly. User interface do not fit needs.</p>	<p>Impact on project: Catastrophic</p>
<p>Mitigation Plan: Actively getting feedback and description from the users, focus on prototyping, Analyzing development of scenario, finalize application description in early faces of projects.</p>	
<p>Risk # 4: Availability of team members</p> <p>Description: Key team members are ill or not available at the critical time of project. Some team members left the company mid-way of project.</p>	<p>Risk Type: People</p> <p>Likelihood of occurring: medium (35% chance)</p> <p>Impact on project: serious</p>
<p>Mitigation Plan: Document all the works done by the team member on a weekly basis. Have team manager access to work done by the team members. Create a backup of the system and coding assignment. Document the work assigned and work responsibility of each team member, so when they are not available, it gives a clear understanding of what work we are missing.</p>	
<p>Risk # 5: Time requirement</p> <p>Description: The estimated time to finish the project is underestimated. Due to the unplanned work and absent of key team members we might running behind our deadlines to complete the project.</p>	<p>Risk Type: People</p> <p>Likelihood of occurring: medium (45% chance)</p> <p>Impact on project: Catastrophic</p>
<p>Mitigation Plan: All team members will Keep track of project progress. Reda will update status on the Grant chart whenever we finish the assigned task. Also he modifies the Grant chart and assign more team members for task if we miss the deadline for that task in order to complete as early as possible. The closer look at Grant chart give clear idea of the timeline for finishing the project on time. If necessary remove any unnecessary tasks to save time.</p>	
<p>Risk # 6: Insufficiency of feedbacks</p> <p>Description: User testing is the most critical task for developing a successful software platform. The more user testing better we have feedback on our system to incorporate them. Due to the time limitation, it is possible that during the software analysis/requirement stage we might not get more quantitative feedback.</p> <p>Mitigation Plan: Due to the limited time we should focus on quality than quantity. Screening the right user for our software testing will give valuable feedback required for our project development. If possible, test individual features with different user as soon as we develop them instead of waiting for all the features to be developed.</p>	<p>Risk Type: Requirements</p> <p>Likelihood of occurring: medium (60% chance)</p> <p>Impact on project: serious</p>

**Risk # 7: hardware/software issues****Description:**

If the hardware and software products are prone to bugs and are “slow”, they may be inappropriate for developing a system. This can affect development, especially during the coding and testing stages.

Risk Type: Legacy Technology

Likelihood of occurring: medium (25% chance)

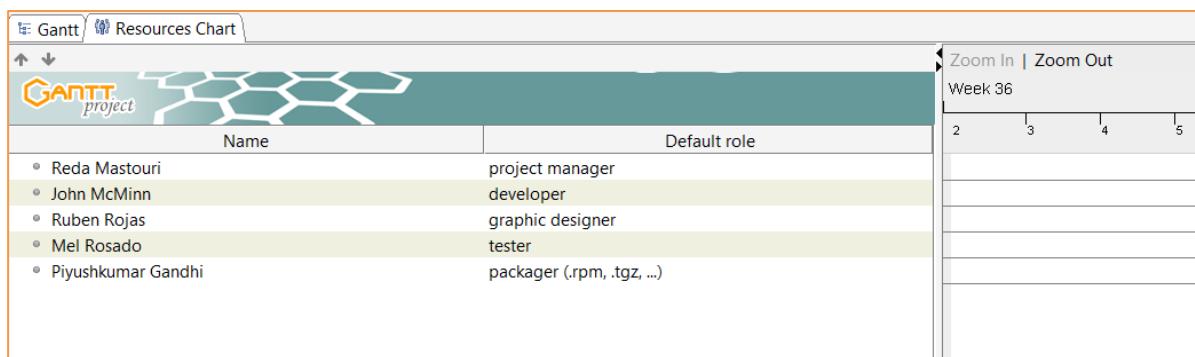
Impact on project: serious

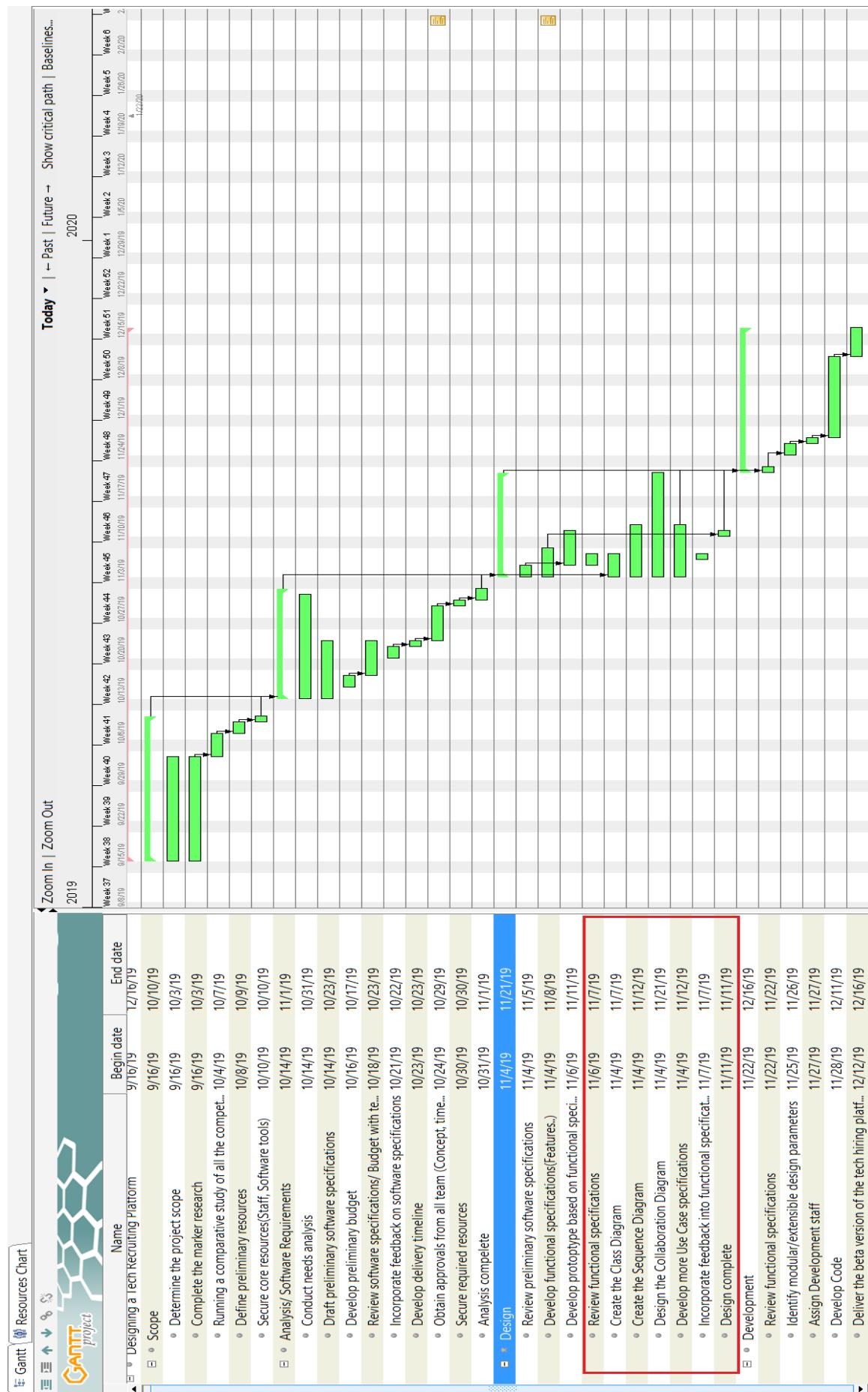
Mitigation Plan:

Use the latest version of the software and hardware. Identify any problems with the software in the initial stage of coding and testing. Team members will make sure that hardware and software handle the workload required to complete the project.

III. Project Workplan

Below is our rectified Gantt chart covering all the activities in the system analysis phase.







SECTION 3 System Requirements Specifications

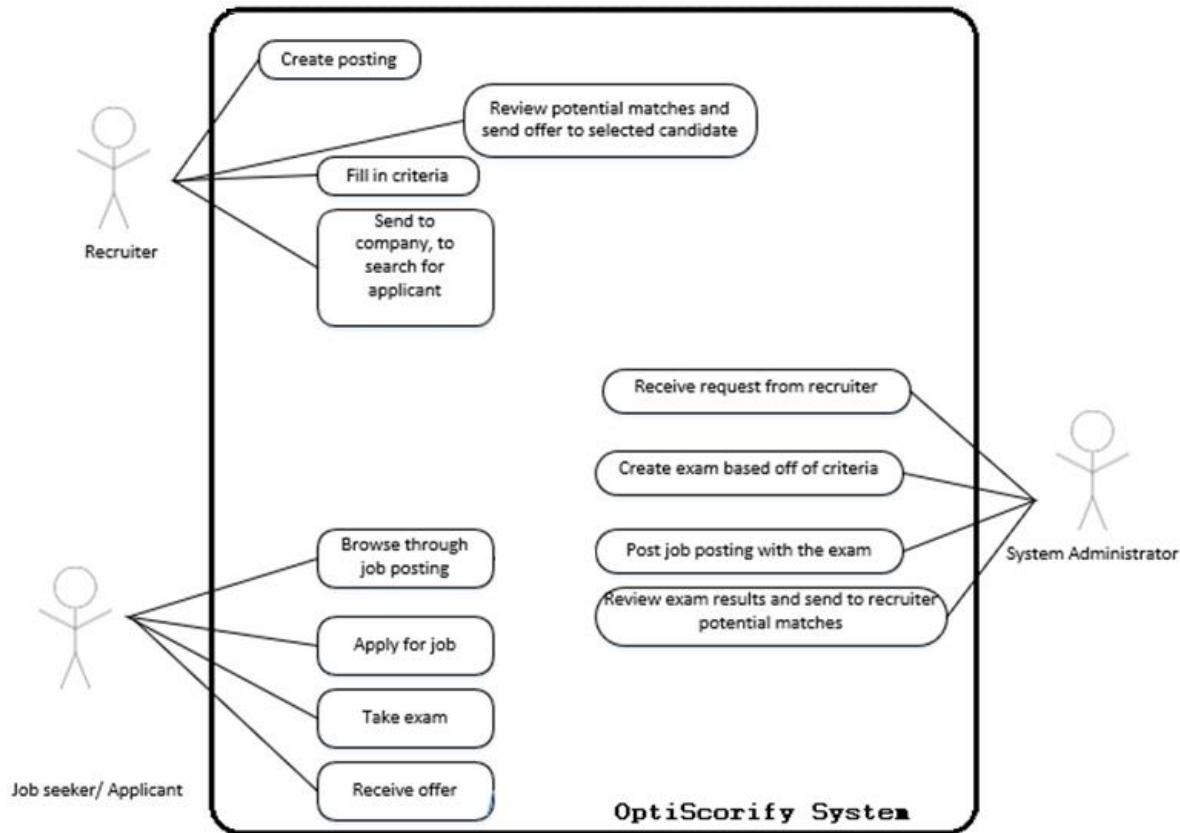
**SYSTEM
REQUIREMENTS**

Section Three: System Requirements Specifications

I. Use Cases

1. Use Case Diagram

Here is our main use case diagram:



2. Impact of Proposed Change

Here is our “Impact of proposed change” regarding *OptiScorify®* solution:

Use Case Name	New (Yes/No)	Function	Stakeholders	Priority
Create posting	No	Allows the recruiter to create a posting letting the system administrator know that we need to fill in a position	Recruiter	Medium
Fill in criteria	No	Allows the recruiter to fill in the requirements for the position that they are trying to fill	Recruiter	High
Send to System Admin in search for applicant	No	The recruiter sends a request to the system admin	System Admin, recruiter	Medium



Receive request from recruiter	No	The system admin is notified that a new posting has been created and the system admin analyzes the request from the recruiter	System admin	Medium
Create exam based off the criteria	Yes	The system admin creates an exam based off what the recruiter is looking for	System Admin	High
Post job posting with the exam	no	The System admin post the job opening with the exam attach on the system	System Admin	High
Review exam results and send to recruiter for potential matches	Yes	The System Admin analyzes the applicants and their test scores and sends the potential matches to the recruiter	System Admin, Recruiter	High
Browse through job postings	No	The applicant browses at the job openings	Applicant	Low
Apply for the job	No	The applicant applies for one of the job openings available in the system	Applicant	Medium
Take Exam	Yes	The Applicant takes the exam associated with the job posting. The exam is based off the qualifications of the role.	Applicant	High
Receive offer	No	The Applicant receives a offer from the recruiter to have a final interview or to offer them a role in the company	Recruiter & Applicant	Medium
Review Potential matches and send offer to candidate	No	The recruiter reviews the potential matches and invites some of the candidates for a final interview or offer one of them the role within the company	Recruiter & Applicant	High



3. Use Case Specifications

We have a set of rectifications and FAQs that we are trying to fulfill such as the following questions:

- Does *OptiScorify®* display the risk and rewards?
- Does the use case show the competition that are already established on the market?
- Is there potential growth?
- By being introduced to the market will there be an impact from the product?
- Do the company users have any type of risk by using the software?
- Do the applicants have a higher success rate on job acceptance versus other similar type of services/software?

To learn more about the use case specs, please refer to the annexed document *in the last pages of this current report!*

4. Scenarios

To learn more about the use case scenarios, please refer to the annexed document *in the last pages of this current report!*

II. Class Diagram

As *OptiScorify®*, we are striving to create the software base application that allows user to perform various tasks. To assist the users to navigate our system, we are designing the database system to keep track of the all activities perform by our users on our system. Our system has 3 preliminary users. The first type of user who are applying for job (Jobseekers), second type is the user who wanted to hire applicant (Hiring firm) and last type is the system administration. For each of this users we plan to store the information and access of our system solely based on the user type. All the user must have to register and create the account with our system in order to access the service of our system.

For Job seeker we wanted to store their demographic information such as name, gender, DOB, contact, address. Also we are providing opportunity to jobseeker to create resume within our system. The Resume stores the demographic information about the jobseeker as well as additional information such as summary, degree obtained (degree name, university and year), work experience (company name, city, job detail and experience, starting date and end date) and skills.

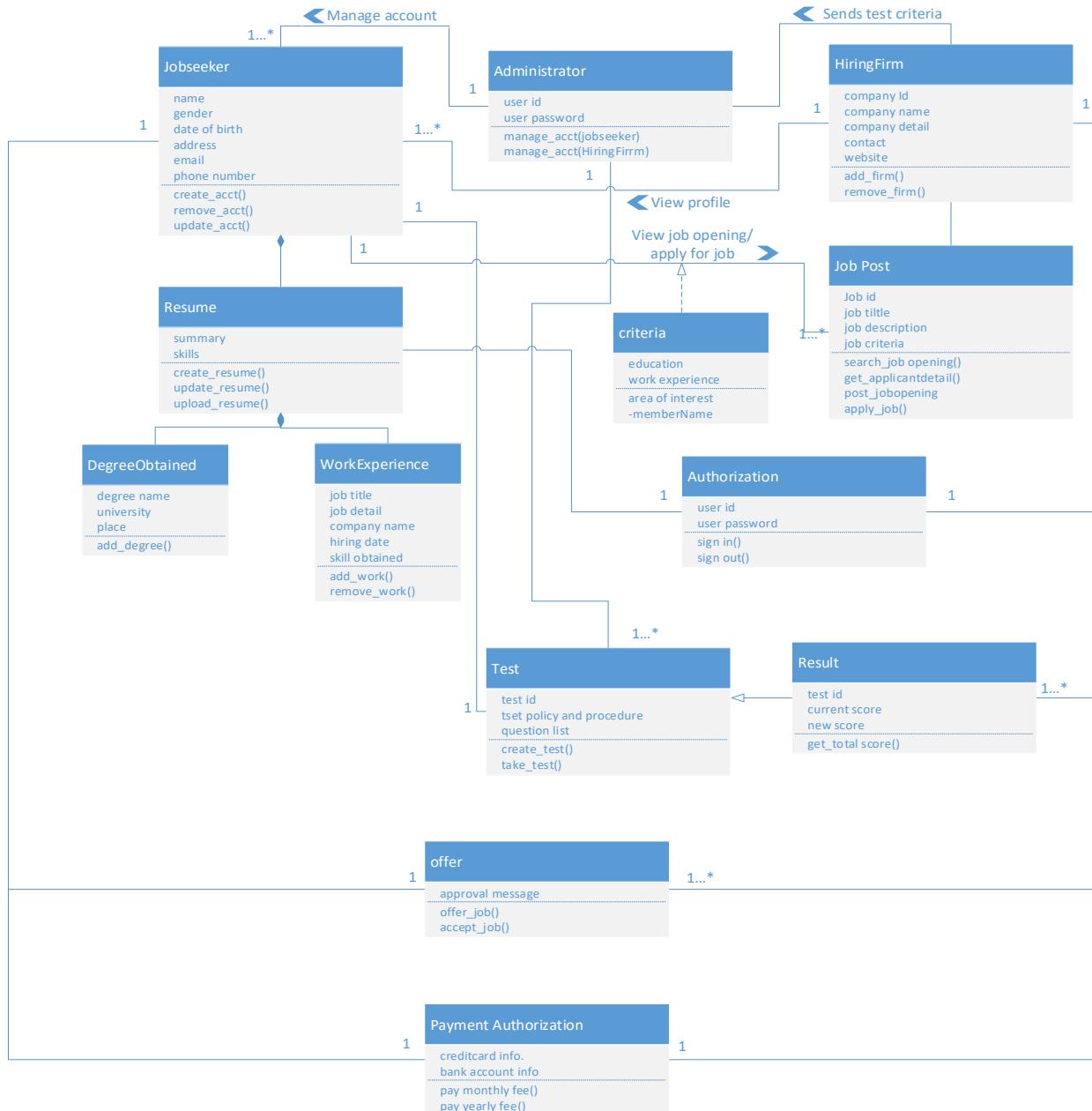
For our recruiter we are planning to store the information such as company detail, address, contact information, point of contact, and website. Also our system will assign unique company ID to each hiring firm once they registered with our system. The recruiter has ability to post job vacancies (include Job tile, Job detail, company information) in our system through their account.

For system administrator we are storing their credential to access the system. The system administrator has access to both jobseeker and hiring firm accounts. The system administrator also prepares the test for the jobseeker as per the hiring firm's criteria.

The jobseeker can access the job posting, apply for job and take the test related to their job application. The job seeker can also tailor the job search based on their education background, experience and area of interest. The system generates the result for the test and transfer the result to



Hiring firm for decision making process. The recruiter can offer the job to candidate and candidate can accept the job offer through our system. The payment authorization has been setup for the users to pay for our services.



Class Diagram: OptiScorify®

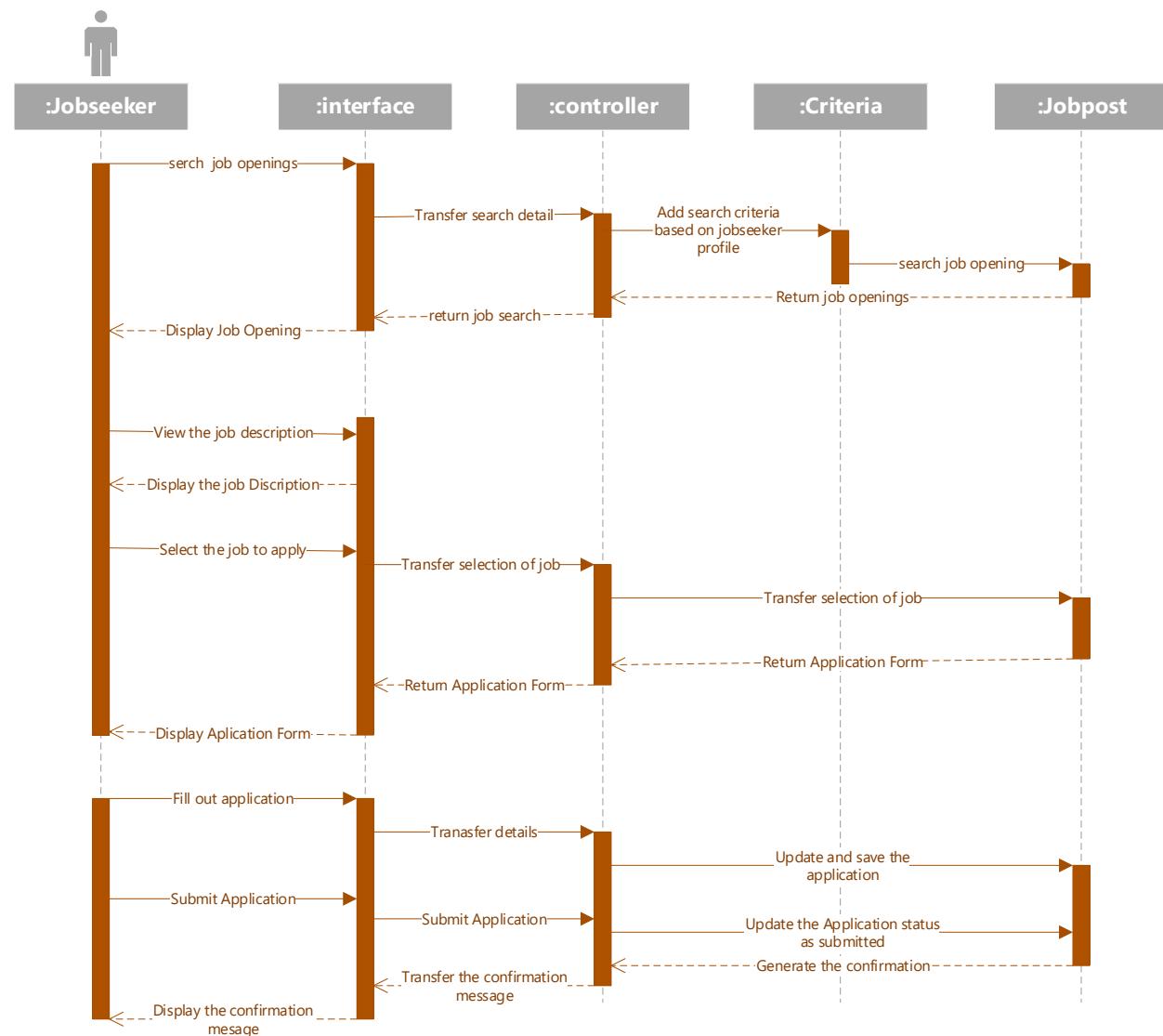
Class Diagram: Assumptions

- All users except system administration must register with our system to receive the services. The system administrator will provide with credential to access the system.
- For job seeker users, there are 2 types of registration account. One is free with limited access, other is paid subscription for unlimited access. The hiring firm only have a paid subscription.

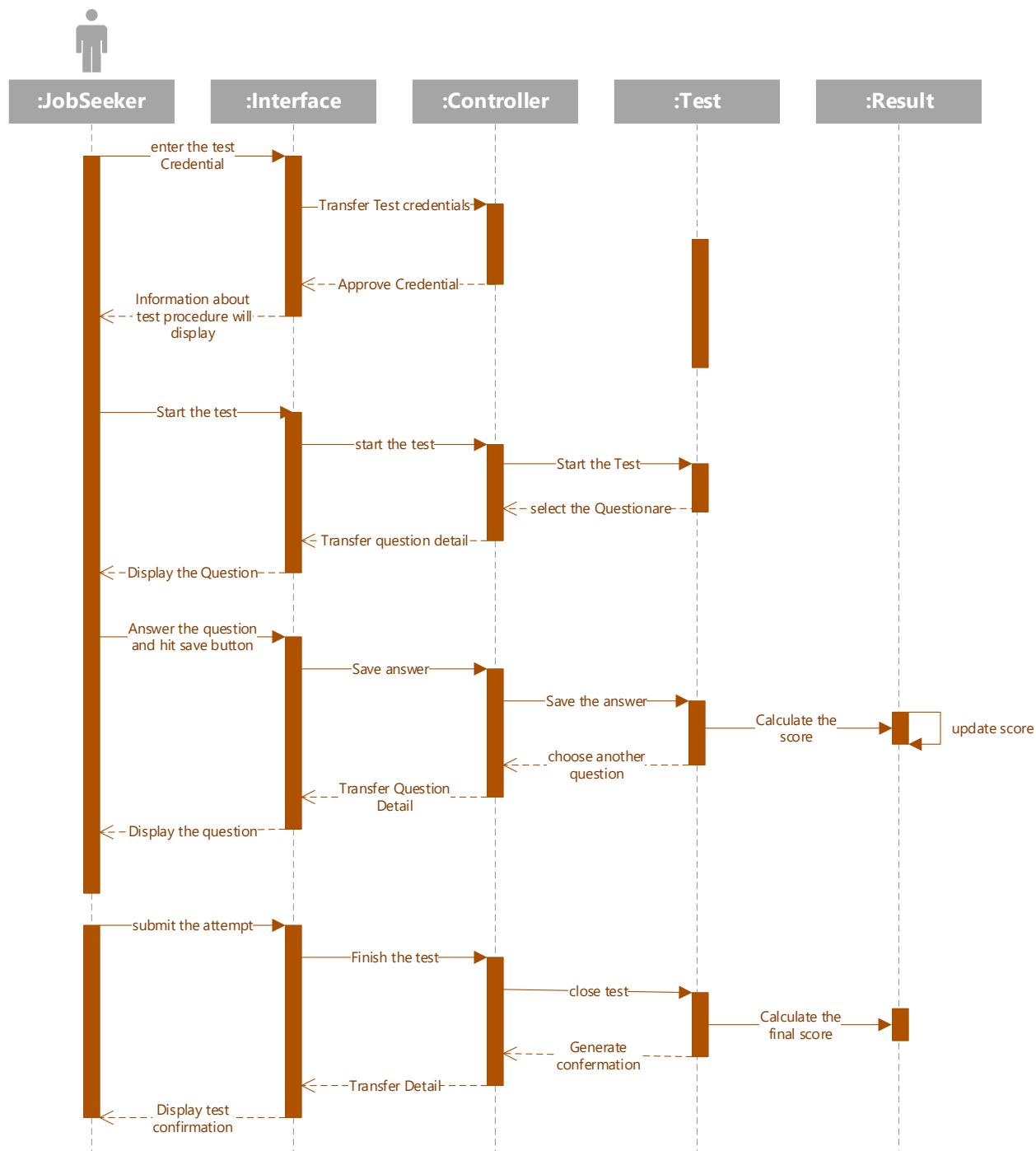
- Job seeker have an option to create the resume using our system. However it is possible that they choose not to. In this case they must upload their own version of resume in order to apply for job.
- The company ID and Job ID automatically generated by our system.
- Each job seeker can only apply one time per Job ID and only one attempt to take test per job application.
- Test result only deliver to hiring firm by system administrator.

III. Sequence and Collaboration Diagrams

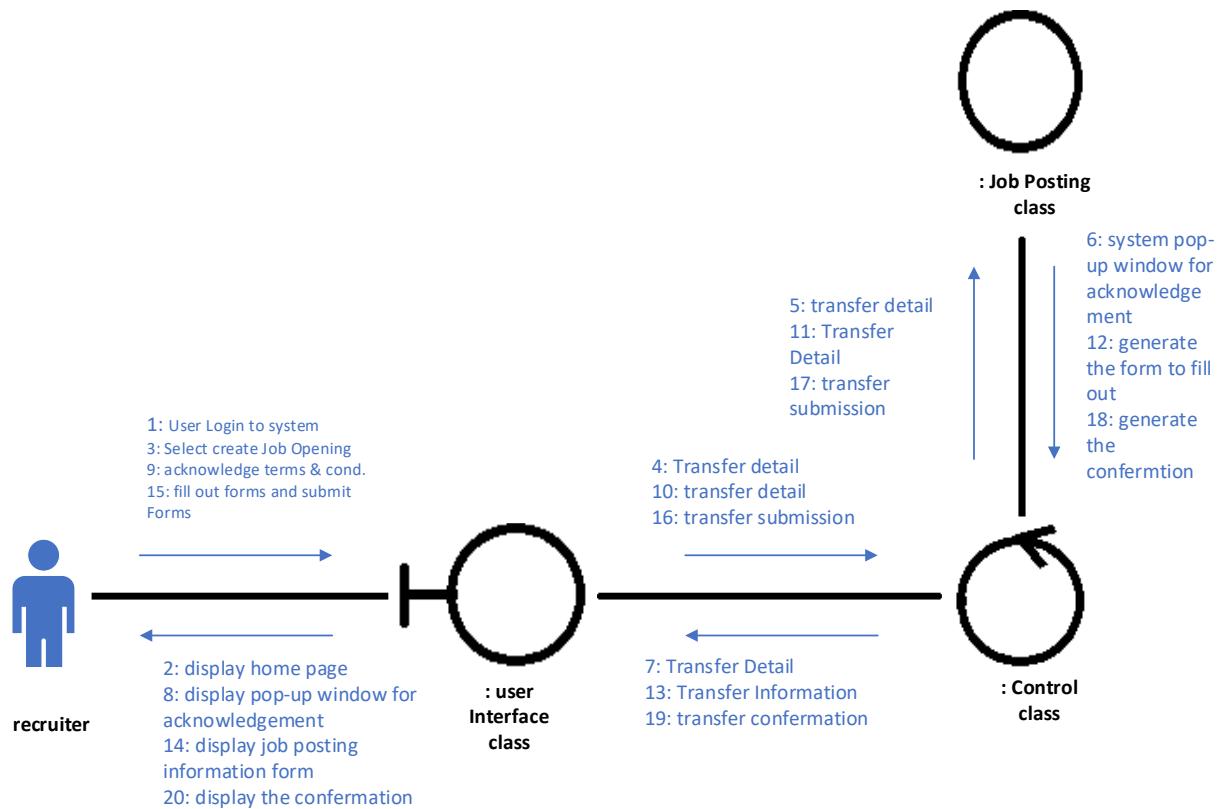
Sequence Diagram 1: Use Case: 1 Jobseeker Apply for Job



Sequence Diagram 2: Use Case- 2 Jobseeker Take a test

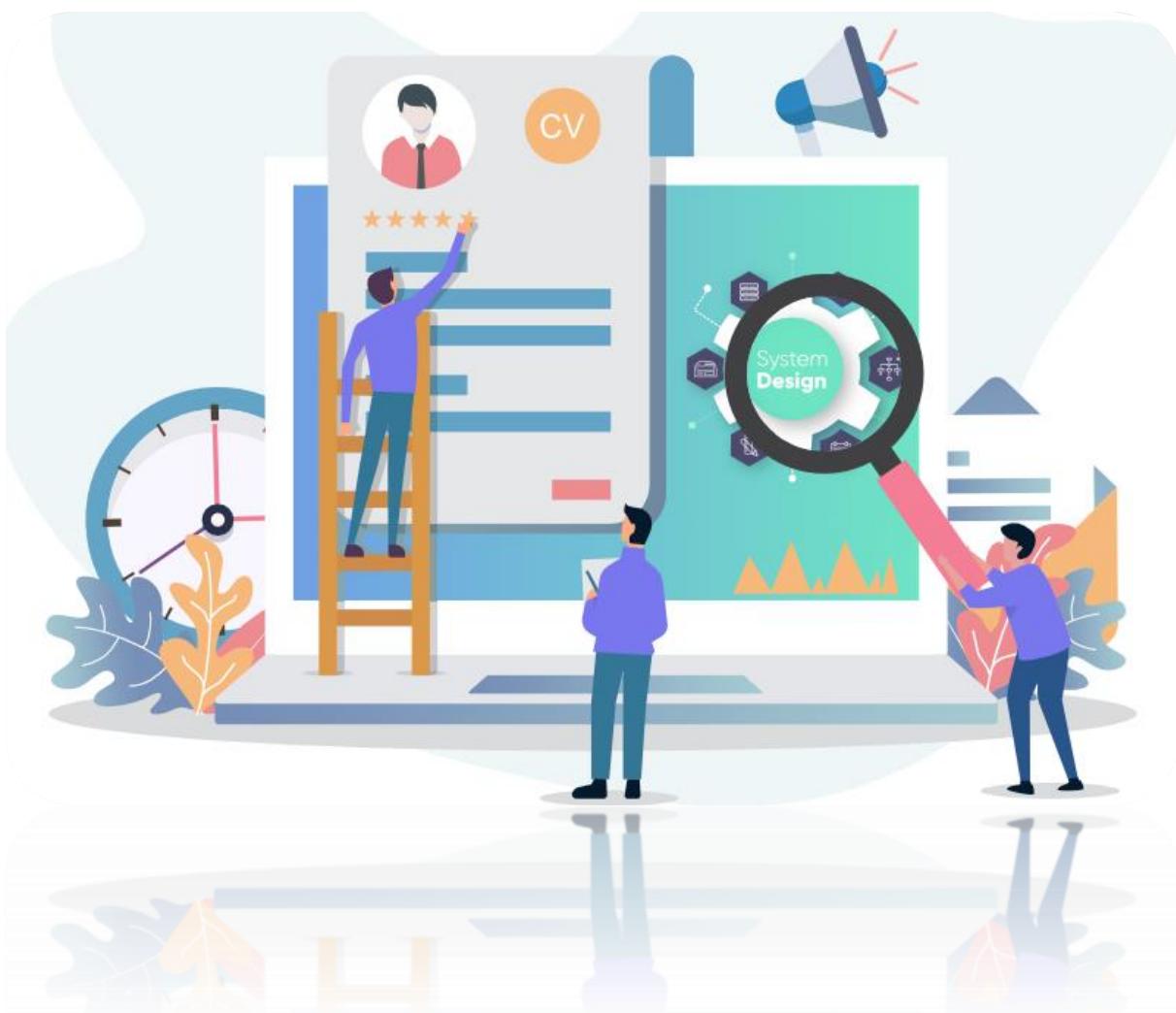


Collaboration Diagram 1: Use Case-3 recruiter Post the Job





SECTION 4 System Design Solution





Section Four: System Design Solution

I. Interface Design

Here is the home page:

The screenshot shows the homepage of OptiScorify. At the top, there are links for "Recruiter Login" and "Applicant Login". The main header features the "OptiScorify" logo with a person icon. Below the header, a large graphic illustrates a hand pointing to a small figure running through a crowd of people, symbolizing matching professionals with companies.

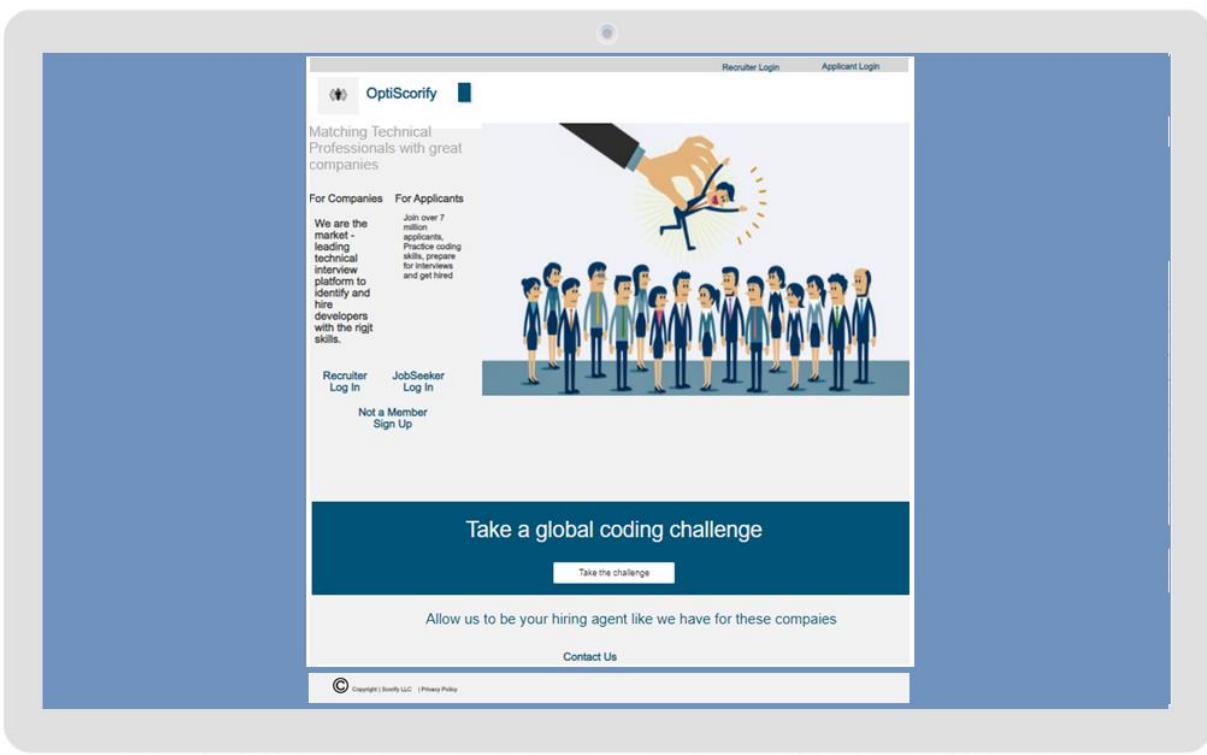
On the left, there are two main sections: "For Companies" and "For Applicants". The "For Companies" section includes a sub-section about being the market-leading technical interview platform. The "For Applicants" section highlights joining over 7 million applicants, practicing coding skills, and preparing for interviews to get hired.

At the bottom of the main content area, there are links for "Recruiter Log In" and "JobSeeker Log In", along with a "Not a Member? Sign Up" link.

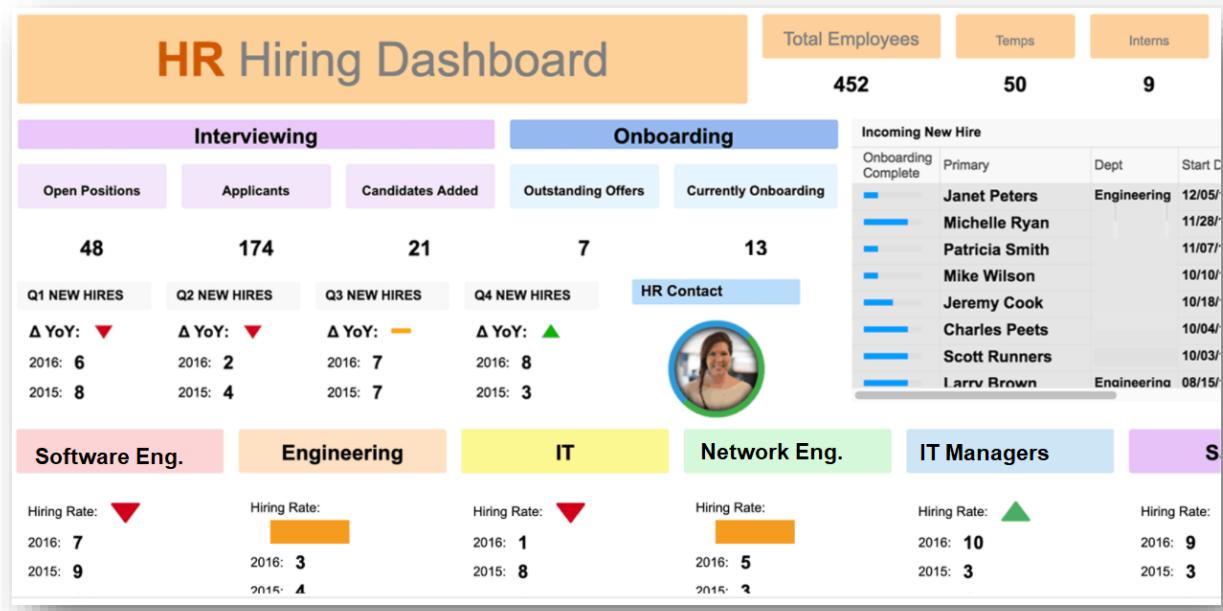
A prominent blue banner in the center reads "Take a global coding challenge" with a "Take the challenge" button below it.

Below the banner, a message encourages users to allow OptiScorify to be their hiring agent for companies like Booking.com, Goldman Sachs, LinkedIn, Stripe, VMware, and WPS.

The footer contains a copyright notice: "Copyright | Scorify LLC | Privacy Policy".

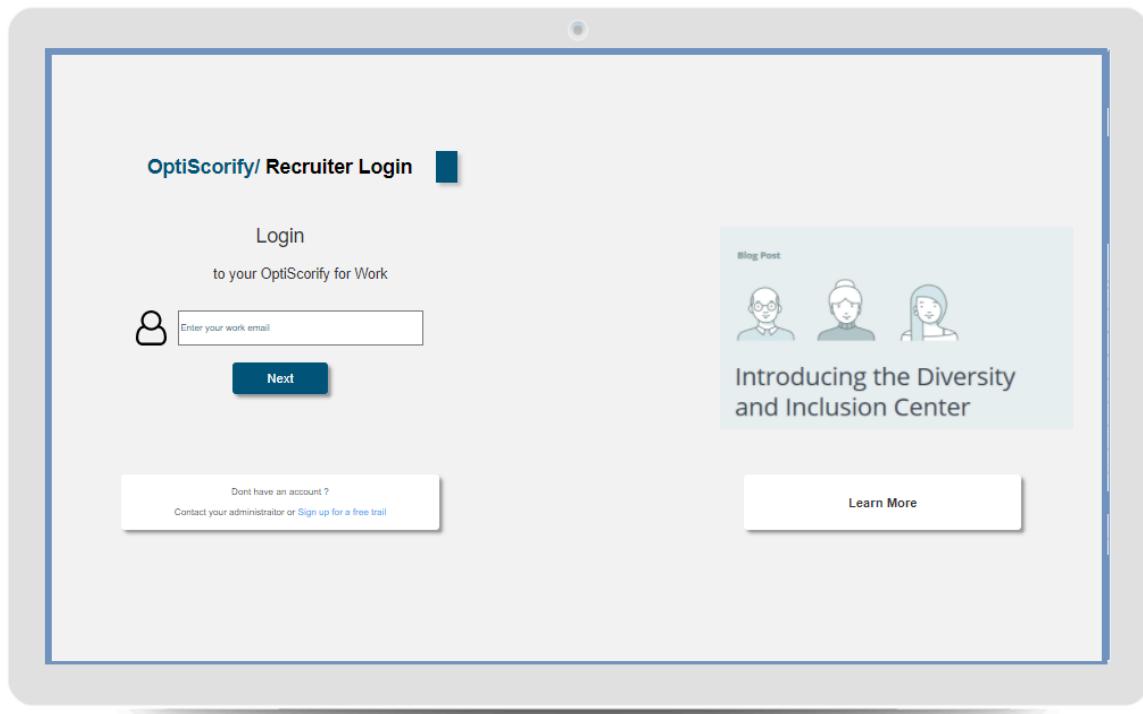


Hiring Dashboard:

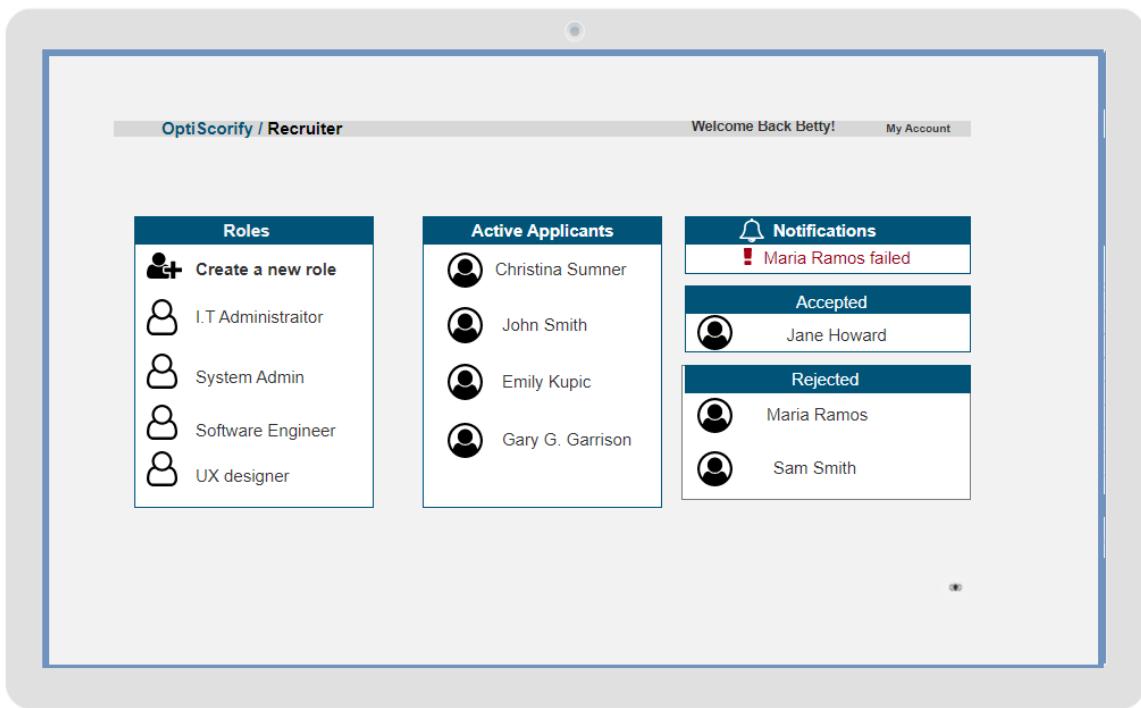




Recruiter Login:



Recruiter interface:





Opening a new “Role”:

The screenshot shows a computer monitor displaying a web application titled "OptiScorify / Recruiter". In the top right corner, the name "Betty Lopez" is displayed. The main area contains a form with the following fields:

- Company: An input field.
- Department: An input field.
- Role: An input field.
- Salary: An input field.
- Job description: A large text area.

A green "Submit" button is located at the bottom of the form. The entire form area is enclosed in a light gray border.

Submitting the opening of a new role:

The screenshot shows a computer monitor displaying the same web application. The "Request Submitted" message is now visible above the "Submit" button, indicating that the form has been processed. The rest of the interface remains the same as the previous screenshot.



Applicant interface:

OptiScorify / Recruiter



Christina Summer
christina.summer@optiscorify.com

ACHIEVEMENTS:

- President's List every semester 2009-2010 (NCC)
- Award for Superior Academic Excellence 2010-2011 (PBU)
- Participated in the Research Project "A System on Oracle EPIC: Brain Computer Interface"
- Placed 2nd in a speech competition in August 2011

VOLUNTEER WORKED:

- Volunteered at Ronald McDonald House - January 2009
- Helping taking care of special needs and handicapped adults
- Mentored at Ronald McDonald House - April 2011
- Volunteered in the Physical Therapy Department assisting patients and helping assist in the treatment of the disabled
- Volunteered for the Homeless - January 2012 - March 2012
- Helped clean up the streets and provide basic supplies
- Ronald McDonald House - July 2012 - present

EDUCATION:

- Spartanburg County College - January 2009 - August 2010
 - Completed Associate of Arts Degree - 1.8 GPA
 - Program: Psychology, Sociology, English, Spanish, August 2011
 - Behaviors of Arts in Psychology - 170 - GPA Major GPA - 176
 - University of South Carolina - Spartanburg - August 2011
- Bachelor of Science in Interdisciplinary Studies with a major in Physical Sciences and Life/Biomedical Sciences
- Research Assistant working in the Applied Human Factors - August 2011 - March 2012
- Research Assistant working in Medical Research and Physician's Office - May 2012 - December 2012

EXPERIENCE:

- Physical Therapy High School Intern - August 2010 - May 2012
- Instrumental Support Internship (Science) at Spartan State College - June 2012 - present

REFERENCES:

Will give upon request

Betty Lopez

Score 98 %

[Send Interview Request](#)

[Reject](#)

Applicant submits an interview request:

OptiScorefy / Recruiter

Betty Lopez



Christine Sumner
Email: christine.sumner@university.edu

ACHIEVEMENTS:
President's List Every semester 2010-2011 (VOC)
Dean's List Every semester 2010-2011 (PPG)
Award for Superior Academic Excellence 2010-2011 (PPG)
Participated in the University's Research Project on Creative (PPG); Data Computer Analysis
Placed 2nd in a sprint Marathon in August 2011

WORK EXPERIENCE:
2010 - Present: Physical Therapist Assistant - January 2010
Helping taking care of special needs and mobility-impaired adults.
Mentored younger students in the department. August 2011
Worked in the Physical Therapy Department assisting patients and helping assist in the treatment of the

Request Submitted ✓

EDUCATION:
Bachelor of Arts in Psychology - January 2009 - August 2010
Graduate Certificate in College Counseling - September 2010 - August 2011
Bachelor of Arts in Psychology - 3.75 GPA Major GPA: 3.75
University of California, Berkeley - Fall 2008 - Spring 2009
Bachelor of Science in Interdisciplinary Studies with a major in Pre-Health Sciences and Life/Biomedical Sciences - Fall 2009 - Spring 2010
Honors:
Research Assistant working in the Applied Human Factors and Psychiatry's Office:
Bachelor's in Medical Research and Psychiatrist's Office: August 2011 - March 2012
Major: Psychology

EXPERIENCE:
Private Tutor - High School Math and Sciences & College level Sciences
- 2010 - Present
Instructional Support Specialist (Science) at Seminole State College
- 2010 - Present

REFERENCES:
Will be provided upon request

Score 98 %

Interview **Reject**

Notifications
Maria Ramos failed

Accepted
Jane Howard

Rejected
Maria Ramos

Mary Smith



Different scoring from different job applicants:

The image displays three separate screenshots of the OptiScorify platform, each representing a different job applicant profile:

- Screenshot 1 (Top Left):** Shows a profile for "John Smith" with a "Score" of 90%. Below the score are two buttons: "Interview" (green) and "Reject" (red).
- Screenshot 2 (Top Right):** Shows a profile for "Emily Kupic" with a "Score" of 78%. Below the score are two buttons: "Interview" (green) and "Reject" (red). This screen also includes a detailed sidebar with sections for Personal Skills, Soft Skills, Hard Skills, Languages, Education, and Additional Activities.
- Screenshot 3 (Bottom Center):** Shows a profile for "Gary G. Garrison" with a "Score" of 38%. Below the score are two buttons: "Interview" (green) and "Reject" (red). This screen also includes a detailed sidebar with sections for Personal Skills, Soft Skills, Hard Skills, Languages, Education, and Additional Activities.

Applicant interface:

The image shows the OptiScorify Applicant Login interface:

- Header:** "OptiScorify/ Applicant Login"
- Form:**
 - Icon: User icon
 - Input field: "Enter your email"
 - Action button: "Next"
- Text Block:**

Don't have an account ?
Click here try to sign up for a free trial or [Sign up for a free trial](#)
- Call-to-Action:** "Learn More" (with a small image of three diverse people)
- Blog Post Preview:**
 - Icon: Blog post icon
 - Image: Three diverse people icons
 - Title: "Introducing the Diversity and Inclusion Center"



Job Seeker interface:

OptiScorify

Welcome Abby! My account

Serch Jobs

Popular Jobs In Your Major

- Junior IT Systems Analyst - Microsoft - Product Hunt - Little Ferry, NJ
- Java Full Stack Developer - Google Inc. - Watertown, Ontario

P **G+**

APPLY **APPLY**

New Request

Senior Engineer Microsoft

Microsoft City, NY

Full-time | Apply before Jan 1, 2020

APPLY

Description
About the Role
The Senior Account Manager (SAM) is a technical resource who advocates for designated customers and provides technical support to them. The SAM manages across all offerings, including services, products, and managed services. The SAM prioritizes customer technical issues and product feedback, communicates the status of services and products to the customer, works closely with the product manager, and provides input into the development process.
The person will provide customers with status updates on the product, answer technical questions, manage the upcoming release schedule, license bending, upgrade requirements, and provide support for the company's successful programs. This role will also require On overall relationship with assigned end users, customers, and partners, and provide regular reports and satisfaction.

Provide leadership for customer impact initiatives, including leadership for customer impact initiatives, Customer Support, R&D, Product Management and Customer Success. The SAM must have extensive Microsoft current functional and technical knowledge of the product.

Provide the customer hands-on support with initial installations, troubleshooting, configuration management, routine system health checks, watchdog monitoring, and other tasks required to maintain the infrastructure for Windows Product Suite. Provide support to customers in various simultaneous client engagements.

Provide timely and accurate feedback to product management teams based on customer needs.

Document best practices in developing and deploying software solutions for enterprise environments.

Function as a front-line technical resource for "best practice" discussions with customers, and provide alternative technical solutions to customer business problems.

Interview Request

No Request Currently

Applied

Technical Specialist Apple Inc

Summary
Do you have a desire to encourage others? As a Specialist, you help create the unique experience that makes the Apple Store products, providing the right guidance and assistance to our customers. You understand that the Apple Store is dedicated to making sure that every customer feels at ease, unlike any other. It starts with you discovering individual needs and interests, and helping your store team members, you match those needs with the right products. This may be an opportunity for you to land another Apple Store position in the future.

In this role, you could work full-time, part-time, or per-project temporary-like modeling or

Technology Analyst Goldman Sachs

Location New York, New York
Shift/Day Day (United States of America)
Description
Join the Information Technology team at New York Office as a Technology Analyst II. The Information Technology Analyst II position is a critical role in this office. This is your opportunity to prove your world class technical skills and demonstrate how you can help improve the quality of patient's life. The Hospital Information System (HIS) is the Hospital Information Technology is at the forefront of patient care. This is a great place to work and give you the opportunity to develop your career and make a difference in the lives of others. If you're looking for a challenging environment that will improve the welfare of others, if growing your career in technology while

When applicant applies for a new role:

OptiScorify

Abby Porter X

Senior Engineer

Microsoft

New York City

5+ years experience

Company Website

Upload Resume

Upload Documents

Submit Application

THE ROLE:

We are looking for passionate backend engineers who care about data and system performance. As a Senior, you will help lead the engineering team and be a key member of the technology strategy. You will be working on a system that consists of both backend and frontend engineers on a daily basis to develop and maintain a scalable and robust infrastructure that supports user-facing functionalities and social experiences. You will also be leading large projects, collaborating with team members on assessing project needs, setting milestones, as well as identifying project risks and dependencies.

THE IDEAL CANDIDATE WILL HAVE:

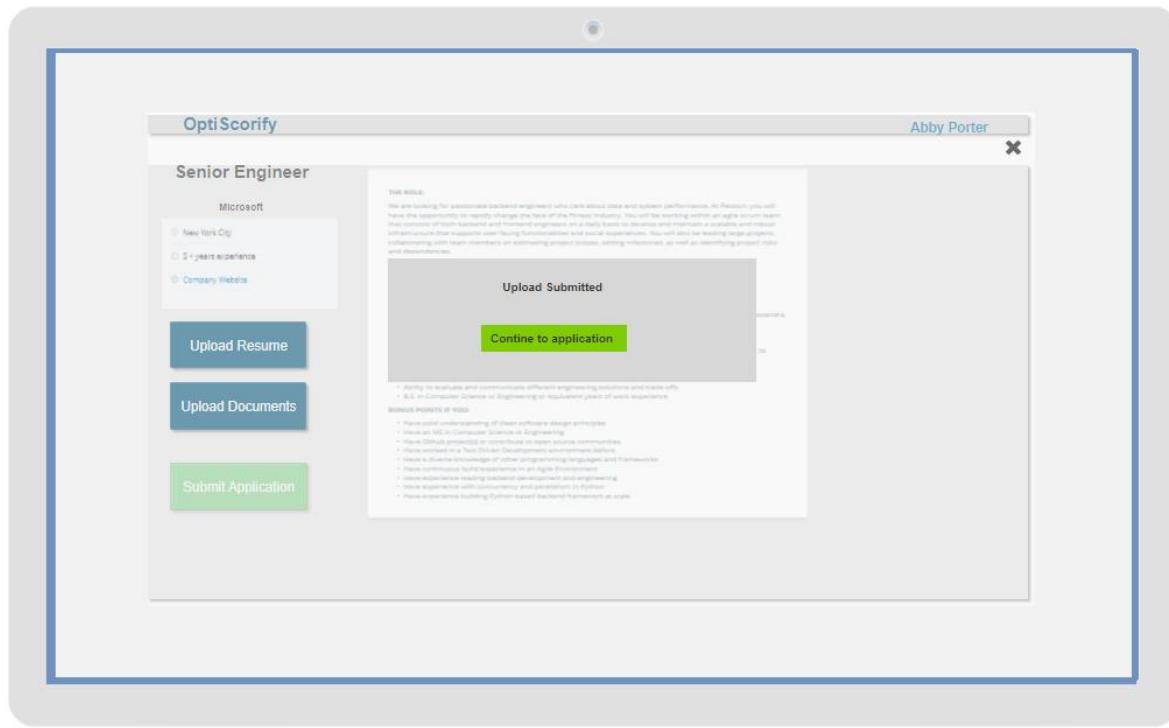
- Passion for building scalable Backend Frameworks that supports a rapid growing user base
- 5+ years in Backend development experience
- Experience with developing RESTful API
- Experience with working on service oriented architecture and RPC design
- Experience with data modeling and at least one database engine (MySQL, PostgreSQL, Redis, MongoDB, Cassandra, etc)
- Experience developing with test driven methodology
- Experience with CI/CD pipelines and automation
- Ability to own and deliver and be a full-fledged developer from design/architecture, to implementation, to testing, to production release and monitoring
- Ability to work independently or as part of a team
- Ability to manage multiple tasks simultaneously and work closely with product owners
- Ability to evaluate and communicate different engineering solutions and trade-offs
- A.S. in Computer Science or Engineering or equivalent years of work experience

REQUIRED BY 11/15/2023:

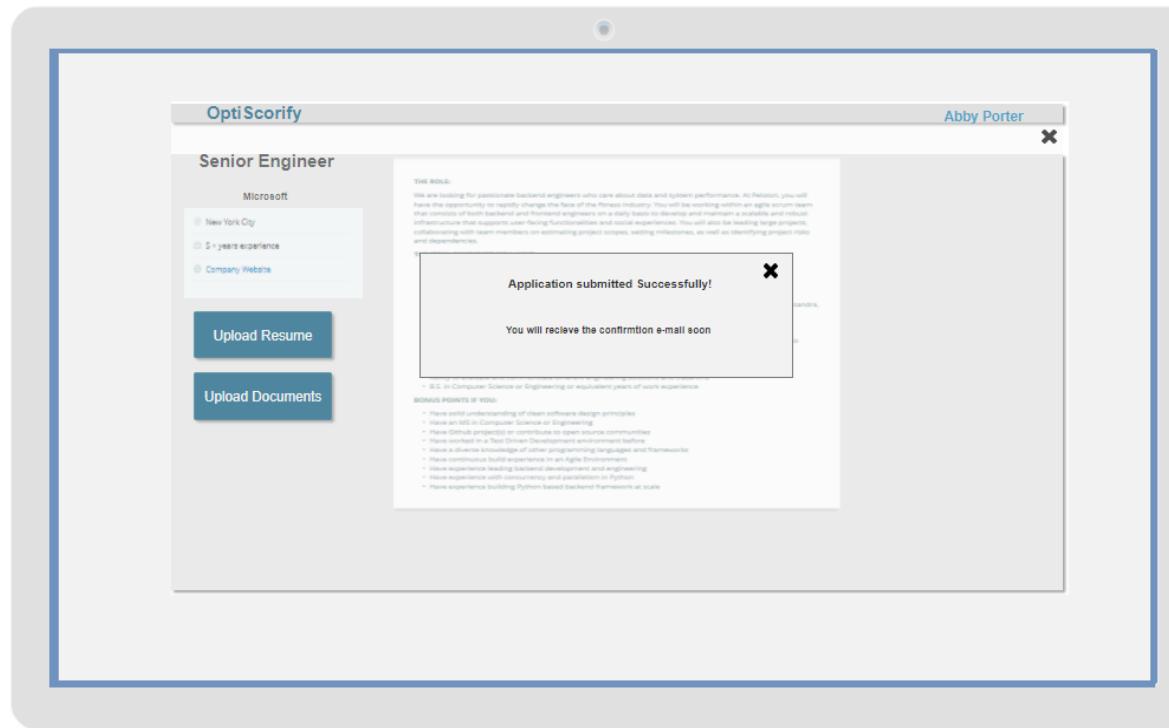
- Have solid understanding of clean software design principles
- Have an M.S. in Computer Science or Engineering
- Have GitHub profile or contribute to open source communities
- Have strong communication skills and ability to work effectively in a team
- Have a diverse knowledge of other programming languages and frameworks
- Have continuous build experience in an Agile Environment
- Have experience with distributed systems and microservices
- Have experience with concurrency and parallelism in Python
- Have experience building Python based backend framework at scale



Resume Upload:



Submitting an application:





Taking a job assessment:

Introduction
Your First Challenge

This is an introductory challenge to help you get familiar with one of the most basic coding environments. Complete the function `addTwoInts()` to compute the sum of two integers.

Function prototype:
`int addTwoInts(int a, int b);`

where:
• `a` is the first integer input.
• `b` is the second integer input.

Returns values:
• sum of the above two integers

Sample Input
2
3

Sample Output
5

Explanation
The sum of the two integers is and it is computed as: $2 + 3 = 5$.

```
1 // #include <iostream>
2 // #include <cmath>
3 // #include <vector>
4 // #include <limits>
5 // #include <string>
6 // #include <algorithm>
7 // #include <stack>
8 // #include <queue>
9 // #include <functional>
10 // #include <map>
11 // #include <set>
12 // #include <list>
13 // #include <array>
14 // #include <vector>
15 // #include <functional>
16 // #include <memory>
17 // #include <utility>
18 // #include <random>
19 // #include <chrono>
20 }
```

Run Code

Next

Submitting the exam for correction:

Introduction
Your First Challenge

This is an introductory challenge to help you get familiar with one of the most basic coding environments. Complete the function `addTwoInts()` to compute the sum of two integers.

Function prototype:
`int addTwoInts(int a, int b);`

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13 // #include <memory>
14 // #include <utility>
15 // #include <random>
16 // #include <chrono>
17 // #include <map>
18 // #include <set>
19 // #include <list>
20 }
```

Run Code

Finish Attempt



II. Cost and Benefit Analysis

A cost benefit analysis was performed: see attached spreadsheet for details. *OptiScorify®* will have a rough beginning patch of time but will be able to bring in good profits after the Break-even Point

ROI over one year: -6.02%

NPV: Break-even occurs in 5 years

Intangible Costs and benefits:

- Improved employee placement
- Better matched company to employees
- Higher quality work turn out

The system will be built in-house by our developers and will be launched to the public by running in-house purchased servers. The cost for the servers will pay for themselves in time.

Our clients would fit into our system reasonably well since they would already be accustomed to similar online services that already exist. The learning curve will be quite small for both the potential employee and the company.

Our system is more in depth for both the company and the applicant. This is so that there is a higher quality match between employee and company. Not only that but finding the proper job and being able to fill in a job with an employee that knows what they are doing is worth its weight in salt.

The potential risks involved are as follows:

- Not having enough applicants – no business will care to be on a site that has no potential people on them
- Not having enough businesses – same as not having enough applicants. No one will use a site that has nothing to offer

Our business is to improve other businesses by providing competent and over-achieving applicants. This takes the strain off of the human resources department from looking for quality employees with our system.



We also provide a similar service for the applicants by providing great opportunities and reducing the strain of trying to find a job.

	2019	2020	2021	2022	Total
Benefits					
Services	\$60,000	\$70,000	\$80,000	\$210,000	
Subscription	\$60,000	\$65,000	\$70,000	\$195,000	
Advertisement	\$9,600	\$12,000	\$17,000	\$38,600	
Bank Loan	\$100,000	\$100,000	\$100,000	\$300,000	
Total Benefits	\$229,600	\$247,000	\$267,000	\$743,600	
Development Costs					
2 Servers at \$1,000 each	\$2,000	\$0	0	0	\$2,000
Software License	\$12,000	\$0	0	0	\$12,000
Computers at \$700 each	\$700	\$700	0	0	\$1,400
Office Space	\$3,000	\$3,000	\$3,000	\$3,000	\$12,000
Total Development Cost	\$17,700	\$3,700	3000	\$3,000	\$27,400
Operational Cost					
Administrator	\$35,000	\$35,000	\$35,000	\$105,000	
Developer	\$75,000	\$75,000	\$75,000	\$225,000	
Marketing	\$45,000	\$45,000	\$45,000	\$135,000	
Documentation Specialist	\$40,000	\$40,000	\$40,000	\$120,000	
Financial Accountant	\$50,000	\$50,000	\$50,000	\$150,000	
Customer Service	\$12,000	\$12,000	\$12,000	\$36,000	
Total Operational Cost	\$257,000	\$257,000	\$257,000	\$771,000	
Total Cost	\$17,700	\$260,700	\$260,000	\$260,000	\$798,400
Cumulative Net Cash Flow	(\$17,700)	(\$31,100)	(\$13,000)	\$7,000	(\$54,800)
Return on Investment	-6.02%				
Break-even Point	5 years				

Use Case Specification

OptiScorify® System:

Designing a Tech Recruiting Platform

~ Job seeker applying for a job: Use Case Specification ~

Version 1.2

19-Nov-19

Designing a Tech Recruiting Platform	Document Version: <0.1>
Use Case Specification	Date: 20-Nov-19
Job seeker applying for a job: Use Case Specification	Template Version: 0.1

Revision History

Date	Version	Description	Author(s)
18-11-19	1.0	This use case describes the job seeker applying for a job	Ruben Rojas
19-11-19	1.1	This use case describes the job seeker applying for a job	Ruben Rojas

Document Approval

Date	Approved / Rejected	Approved/Rejected By	Signature (indicate if electronic approval)
	Rejected (send for rework)	<i>Piyushkumar Gandhi</i>	
11/20/2019	Approved	<i>Piyushkumar Gandhi</i> <i>Reda Mastouri</i>	P.G. 19-11-19-6-00-EST

Designing a Tech Recruiting Platform	Document Version: <0.1>
Use Case Specification	Date: 20-Nov-19
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10 ADDITIONAL INFORMATION 8

10.1- Challenges

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Use-Case Specification: Job Seeker Applies for Job

1 Brief Description

This use-case is on the job seeker applying for a job on our services which turns them into applicants to their desired company. The actors in the use case are the applicants (the focus) and the company. The company will already have job post on the service which is available to all users on the service. The applicants will apply for the job which best suits for them and gives them the opportunity to get a job in said company. Whether they succeed or fail in the scenario are the existing conditions described further in the use case. Applicants will need to follow necessary steps in order to apply to the company which will further continue the process of applicants getting chosen.

2 Actor Catalog

#	Actor Name	Brief Description of Actor
1	Applicant	They are the users from the service that desire to apply for jobs from on job postings by the company
2	Recruiter	They have a position in their employment that is needing to be filled by a proper applicant that is suitable for the position

3 Preconditions

- **Signed up for the service**
- **Personal information has entered/updated into the system**
- **Available resume**

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Job seeker applying for a job: Use Case Specification	Template Version: 0.1

4 Basic Flow of Events

1. Job Posting Browsing

-Applicant browses through job posting on OptiScorify

2. Apply for position

-Applicant finds suitable job then applies to company's job posting

3. Enters Information/U�ploads Resume

-Applicant enters the necessary information and uploads their resume

4. Acceptance/Denial

-After finishing required steps applicants waits on response from company

5 Alternative Flows

1. Specific Job Searches

-Jobs posting can be narrowed down to specific fields and requirements by using search feature

2. Information

-Required fields of information is needed to complete the process but additional information is optional and submitting blank/no resume is an option

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6 Sub flows

1. Search Features

-In job posting tags can be checked for specific openings and requirements (I.E Applicants looks for management position, clicks on management positions and applicable criteria's, then are given management jobs)

2. Necessary Information

-Basic information is necessary in order to contact the applicant such as: Name, Address, Age, Telephone Number, and Email Address. This is all important for the company to contact the applicant in any possible way to notify them in the result.

3. Response

-After everything is done applicant will receive an answer from company of acceptance or denial. In an acceptance the company will send an offer letter displaying the information of the job and salary. Denial by the company will either send the applicants a thank you letter or no response.

4. Login

-When user login in and unsuccessful attempt they can reset password the attempt again, otherwise it will then be necessary to contact OptiScorify customer support

7 Key Scenarios

Successful Scenario

1. Applicant applies for job posting
2. Submits proper information
3. Job seeker uploads Resume

Designing a Tech Recruiting Platform	Document Version: <0.1>
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- 4. Job seeker passes Exam/s
- 5. Job seeker fulfills all requirements
- 6. Company hires applicant for position

Failure Scenario

- 1. Applicant doesn't find desired job posting
- 2. Enters wrong information leading to disqualification
- 3. Job seeker doesn't have a resume
- 4. Job seeker fails exam
- 5. Job seeker forgets to submit application before deadlines
- 6. Company denies applicant

8 Postconditions

- 1. Applicant is unable to get a job from using the service
- 2. Applicants is unable to have a passable score
- 3. Applicant doesn't not fulfill requirements for the job and doesn't receive a response or denial from the company
- 4. Applicant successfully passes exam and is offered a job
- 5. Applicant is redirected to a better fitting job opportunity

9 Special Requirements

- 1. Applicant needs to already have form of degree or certification
- 2. Applicant needs to have experience in proper field
- 3. Applicant needs to have salary expectation

Designing a Tech Recruiting Platform	Document Version: <0.1>
Use Case Specification	Date: 20-Nov-19
Job seeker applying for a job: Use Case Specification	Template Version: 0.1

- 4. Applicant needs to have resume updated and ready
- 5. Applicant needs to have references ready

10 Additional Information

Challenges

-The scenario where applicants are unsuccessful may be due to user error or system error

-A low success rate for applicants can affect view of the service

**Use Case Specification
OptiScorify® System:
Designing a Tech Recruiting Platform**

~ Actors responding to exams: Use case specs ~

**Version 1.1
19-Nov-19**

OptiScorify® LLC: Designing a Tech Recruiting Platform	Document Version: 1.1
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17-Nov-19	1.0	In this version we will describe how the actors respond to exams.	Melanie Rosado, John & Ruben
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Use-Case Specification: Job Seeker takes Exams

1. Brief Description

This Use case describes how the recruiting exams are taken. There are 3 actors in this usecase. The recruiter, the system administrator and the job seeker. The recruiter is going to be sending the criteria to the system administrator. Once the system administrator has received the criteria from the recruiter, the system administrator breaks it down and creates questions for an exam. After the system administrator creates questions for the exam, the system administrator posts the exam on the website. Once the exam is posted the job applicant takes the exam and he is given a score. The score and the exam results are sent to the system administrator.

2. Actor Catalog

#	Actor Name	Brief Description of Actor
1	Recruiter	The Recruiter is hired by the company to fill in a role for a position that
2	Job Seeker	The job seeker is a person that is looking for employment within the company
3	System Administrator	The system administrator interacts with the recruiter and the job seeker. The system administrator helps the recruiter find a applicant to fill in the role in the company.

3. Preconditions

3.1 Their needs to be a role in the company that needs be filled

3.2 Their needs to be requirements for the role that needs to be filled

3.3 The Job seeker needs to take the exam associated with the job posted

3.4 The Job seeker needs to be qualified for the job posted

3.5 The recruiter needs to pick an applicant from the system administrator results from the job posting

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4. Basic Flow of Events

4.1 Recruiter sends criteria to system admin

4.2 System admin confirms delivery

4.3 System admin breaks criteria down into sections

4.4 System admin creates questions for an exam

4.5 System admin posts exam

4.6 Job seeker finds job opening

4.7 Job seeker takes the exam

4.8 System admin analyzes results of the exam

4.9 System admin sends the top 10 applicants to the recruiter

4.10 Recruiter acknowledges receival

4.11 Recruiter reviews results and sends the job seeker a final interview or job offer.

5 Alternative Flows

5.1 No criteria to make an exam

1. The recruiter doesn't have enough or any information to send to System Administrator
2. Recruiter simply tells System admin the job and position
3. System Admin acknowledges
4. System admin issues a standardized exam based on the job position
5. Job seeker finds job opening
6. Job seeker takes the standardized exam
7. Results are sent to the System admin
8. System admin sends results to recruiter
9. Recruiter acknowledges receival

5.2 Criteria is not suited for normal examination methods

1. Recruiter sends criteria to the system administrator
2. System Administrator acknowledges delivery
3. System Administrator finds no way to turn criteria into a normal exam
4. System Administer makes a virtual practical test
5. System Administrator posts exam

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6. Job seeker takes virtual practical test
7. Recruiter receives results detailing how the job seeker did

5.3 Job applicant fails an exam

1. Recruiter sends criteria
2. System Administrator acknowledges delivery
3. System Administrator makes an exam based on criteria
4. System Administrator posts exam
5. Job seeker takes the exam
6. Job seeker fails exam leading to an immediate message that he isn't qualified for the position
7. Recruiter does not receive exam results

5.4 Recruiter does not accept any applicants

1. Recruiter receives exam results and does not accept any of them
2. Recruiter creates a new set of criteria
3. Recruiter sends new criteria to System Administrator
4. System Administrator creates a new exam based off of feedback and new criteria from the recruiter
5. Job seekers take a new exam
6. Recruiter receives the results of the new exam

6 Key Scenarios

6.1 Success Scenarios

- System Administrator is able to make an exam that procures a qualified job seeker
- The stock exam is able to procure a qualified job seeker
- The virtual practical exam is able to produce results that satisfies the recruiter

6.2 Failure Scenarios

- The recruiter is unable to find a qualified applicant
- There are no job seekers for the position the recruiter is looking for

7 Subflows

7.1 Creating an exam based on feedback and criteria

- Recruiter sends System Administrator feedback from a failed attempt at recruitment
- Recruiter sends new criteria to System Administrator
- System administrator analyses problems from the previous exam to feedback
- System administrator adds and subtracts from the original exam based on new criteria
- System Administrator reconfigures questions based on feedback from the recruiter

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- System administrator issues a new exam

7.2 Job Applicant fails an exam

1. Job seeker takes and fails an exam
2. Job seeker gets a message stating that they are not qualified for the position
3. Job seeker gets redirected to a new page with similar job positions that may fit them better

7.3 Criteria is not suited for normal examination methods

1. Recruiter sends criteria to System Administrator
2. System Administrator finds that the criteria are not suited to normal examination methods
3. System administrator develops a virtual practical exam
4. System Administrator tailors the exam to closely represent the recruiter criteria
5. System Administrator issues the exam

8 Postconditions

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8.1 The recruiter doesn't like any of the applicants that scored high on the exams

8.2 No one scored high enough on the exam for the system admins

8.3 The Job Applicant doesn't want to take the job that was offered to him.

8.4 Everyone that took the exam scored high

9 Special Requirements

9.1 The Job applicant needs to have the experience and knowledge to take the exam

9.2 The system needs to be able to lock the applicant to the perspective window and monitor the applicant to prevent cheating

9.3 The system needs to be able to catch the applicant trying to cheat and automatically fail them if they attempt to

9.4 The systems need to be able to allow the applicant to re-enter the exam if there is a power failure issue

9.5 The system needs to be able to analyze the scores and rank them from highest to lowest

10 Additional Information

10.1 Cheating – Analyzing all the possible ways that a job seeker can cheat and to prevent that from happening.

Use Case Specification
OptiScorify® System
Designing a Tech Recruiting Platform

~ Hiring firms posting job opening: Use case specs ~

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User Case Specification: Recruiter Post the Job Opening

1 Brief Description

This use case describe how Recruiter can post the job opening with OptiScorify System.

2 Actor Catalog

#	Actor Name	Brief Description of Actor
1	Recruiter	The Recruiter is hired by the company to fill in a role for a position that
2	Job Seeker	The job seeker is a person that is looking for employment within the company
3	System Administrator	The system administrator interacts with the recruiter and the job seeker. The system administrator helps the recruiter find a applicant to fill in the role in the company.

3 Preconditions

- The recruiter must be register with OptiScorify.
- Their needs to be a role in the company that needs be filled
- Their needs to be requirements for the role that needs to be filled
- The Job Posting option must be available to post the job.

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4 Basic Flow of Events

- 4.1 **Recruiter log in in to OptiScorify System**
- 4.2 **The system will authenticate the recruiter to use the system services (sub flow 6.1)**
- 4.3 **System will return the home page**
- 4.4 **The recruiter select the job posting option.**
- 4.5 **System will pop up the acknowledgment message**
- 4.6 **User acknowledge the terms and condition**
- 4.7 **System will display form to fill out**
- 4.8 **Recruiter fill out the form**
- 4.9 **Recruiter will select the save option each time when they go one page to next page to fill out information (sub flow 6.2)**
- 4.10 **Recruiter will review information he/she entered in the system**
- 4.11 **Recruiter select the POST option to post the job on OptiScorify System**
- 4.12 **System will pop up acknowledge message for successfully submitting job posting.**

5 Alternative Flows

- 5.1 **Recruiter Fail to login in to system**

5.1.1 **The username and password entered by the recruiter is not valid.**

1. Recruiter will re-enter the user name and password to login in to our system and if successful flow is resumed to Basic flow.
2. If recruiter attempt more than allowed attempts to log in to our system, the authentication attempt is abandoned and Basic Flow is resumed at Use Case Ends.
3. Recruiter can select option to change the password to log in to our system, after successfully change the password the basic flow will resumed.
4. The user subscription has been expire. Recruiter must have to re-subscribe to resume the basic flow other user case will end.

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5.2 ***User cannot create the new instance of job opening***

- 5.2.1 User may experience a network connectivity issue. Start the instance at letter time to access the job posting and resume the basic flow.
- 5.2.2 The system is under maintenance and currently some features are not available when user try to create a job posting. User can try another time to create the job posting and basic flow will continue.
- 5.2.3 Technical issue prevent the recruiter from job posting. Recruiter can contact the system administration to resolve the issue to continue basic flow.

5.3 ***After filling the necessary information, recruiter cannot post the job***

- 5.3.1 Recruiter did not fill out required information. The missing required information will highlight in red to complete before posting of job. User can update the missing information and continue to Basic flow.
- 5.3.2 The recruiter did not acknowledge the terms and condition for job posting. System will prompt the message to read and acknowledge the terms and condition to recruiter to continue the basic flow.
- 5.3.3 User may experience a network connectivity issue. Start the instance at letter time to access the job posting and resume the basic flow.

6 Sub flows

6.1 ***Validate User Identity***

1. The system prompts user to enter the User ID and password.
2. User enter the User ID and Password
3. The system checks if the user Id and password combination match in the system database.
4. The basic flow will continue.

6.2 ***User exit the system without posting the job.***

1. User select the exit button to leave the current page.
2. System will prompt message about whether user wants to save the information that already enter or want to leave without saving any changes.
3. If user select save option, user can continue with their job posting where they left when they return to finish up job posting.
4. If user exit without saving, he/she must start from beginning to create the job posting.

7 Key Scenarios

7.1 ***Success Scenario:***

1. ***The recruiter able to post the job opening with the OptiScorify System.***
2. The recruiter able to save the information entered in the system before existing the system

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7.2 Failure Scenarios:

1. User fail to login to system
2. The user subscription has been expired
3. User has been locked out of accessing the system due to more than allowable fail attempts to login to system.
4. User exit the system without saving the information he/she entered
5. User fail to provide required information to post the job

8 Postconditions

- 8.1 ***After posting the job, system will sends the information to system administration for review***
- 8.2 ***The system administration verify all the information and post the job opening to public database for jobseeker to view and apply for the job.***
- 8.3 ***Before posting in public database, system will assign unique ID for each job posting.***
- 8.4 ***The job posting is available in public database.***

9 Special Requirements

- 9.1 ***There must be assign a unique Job ID to each job posting before publishing it to public domain.***
- 9.2 ***The minimum required information must be fill out in order to post the job.***
- 9.3 ***Each job posting must be review by system administrator before publishing to public domain for error prevention.***