# Team #10 - Statistics on unemployment

## ITSC 3155 Final Project Report

**Prepared by: Cream Frogs**

**Date: 5/2/2022**

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# 1 Introduction

To combat the struggles of new college graduates searching for jobs, we designed a product called Job Finder. This product allows job seekers to upload their resume, search and apply for jobs, and network with colleagues and potential employers. We hope to assist these new graduates in their employment search by limiting their time spent searching for open positions. We also hope to give them a more user-friendly platform to chat with colleagues and potential employers in an effort to facilitate higher salaries and more meaningful professional connections.

## 1.1 Product Vision

We hope to allow all of our users to find a job more quickly and efficiently. Many younger people are finding it increasingly difficult to find a job, the goal of the product is to use historical data such as unemployment rates to help alleviate some of the problems graduates face.

## 1.2 Customer Description

Our target customers are recent college graduates or those that might be graduating soon and need to find employment.

## 1.3 Project Scope and Objectives

Getting back into the workforce can be a difficult task. Whether you're a first-time professional, exploring a career shift, or have a graduation approaching, finding the perfect job and preparing for a first interview can be a stressful undertaking for some. When looking for a job in today's fast-paced corporate environment, every advantage counts.

## 1.4 Ethical concerns

Some ethical concerns are Recruiting unskilled employees, Changing some of the job’s responsibilities after hiring and Requesting an application fee from all applicants. Recruiting non-skilled employees such as Many recruiters are guilty of rushing the hiring process in order to meet the company's management deadline. Such "under-pressure" recruiters end up picking substandard individuals since all components of inspection and common sense are eliminated. Also Requesting an application fee from all applicants, Although it is uncommon for businesses or recruiters to charge job candidates an application fee, some companies do so to supplement their own finances. This immoral behavior is widespread in places where unemployment and indiscipline are rampant.

# 2 Project Resources

## 2.1 Group Members

1. Patrick Bardsley
2. Logan Hasty
3. Nicolas Izquierdo
4. Aaron Hill
5. Achraf Nachet

## 2.2 Data

Our data source comes from https://www.bls.gov/cps/cpsaat01.htm. This data represents the unemployment data in the United States from 1940 to 2010. In our linked source code, we have implemented a Python visualization implemented with Plotly, a Python graphing library. Within this visualization, the user can interact with the bar graph to explore the unemployment rates for each year within the given time frame.

## 2.3 Hardware and Software Resources

In order to complete the project, we needed to implement Python and it's respective graphing library, Plotly, for the data visualization. HTML was used to display the content of the website.

## 2.4 Special Resources

Plotly was used to represent the interactive bar chart. For the data used in our visualization, we derived our dataset from the following page: https://datahub.io/core/employment-us

# 3 Plan

This section contains is a list of tasks and deliverables associated with the project, a Gantt chart depicting task durations, dependencies and completion dates, and a summary of resource requirements and assignments for each task.

## 3.1 Timeline Chart

- Milestone 1 (April 13):  Come up with app idea
- Milestone 2 (April 20): Collect information
- Milestone 3 (April 25): Sketch
- Milestone 4 (April 27): User test
- Milestone 5(May 2): Deadline

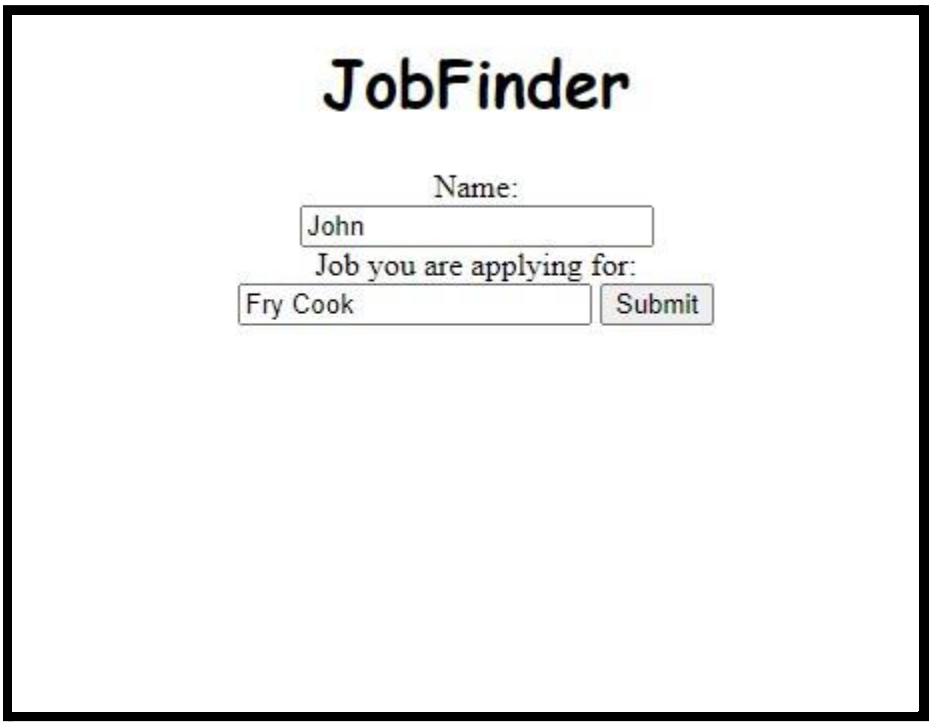
## 3.2 Task/Milestone Descriptions

Milestone 1 - We must have a concrete idea of what we making by this date
Milestone 2 - We must've collected all necessary information by this date:
Milestone 3 - We sketched our idea in Draw.io
Milestone 4 - We meet with other teams and users to test our product.
Milestone 5 - We made the final touches and submitted the product.

## 3.3 2.3 Resource Table

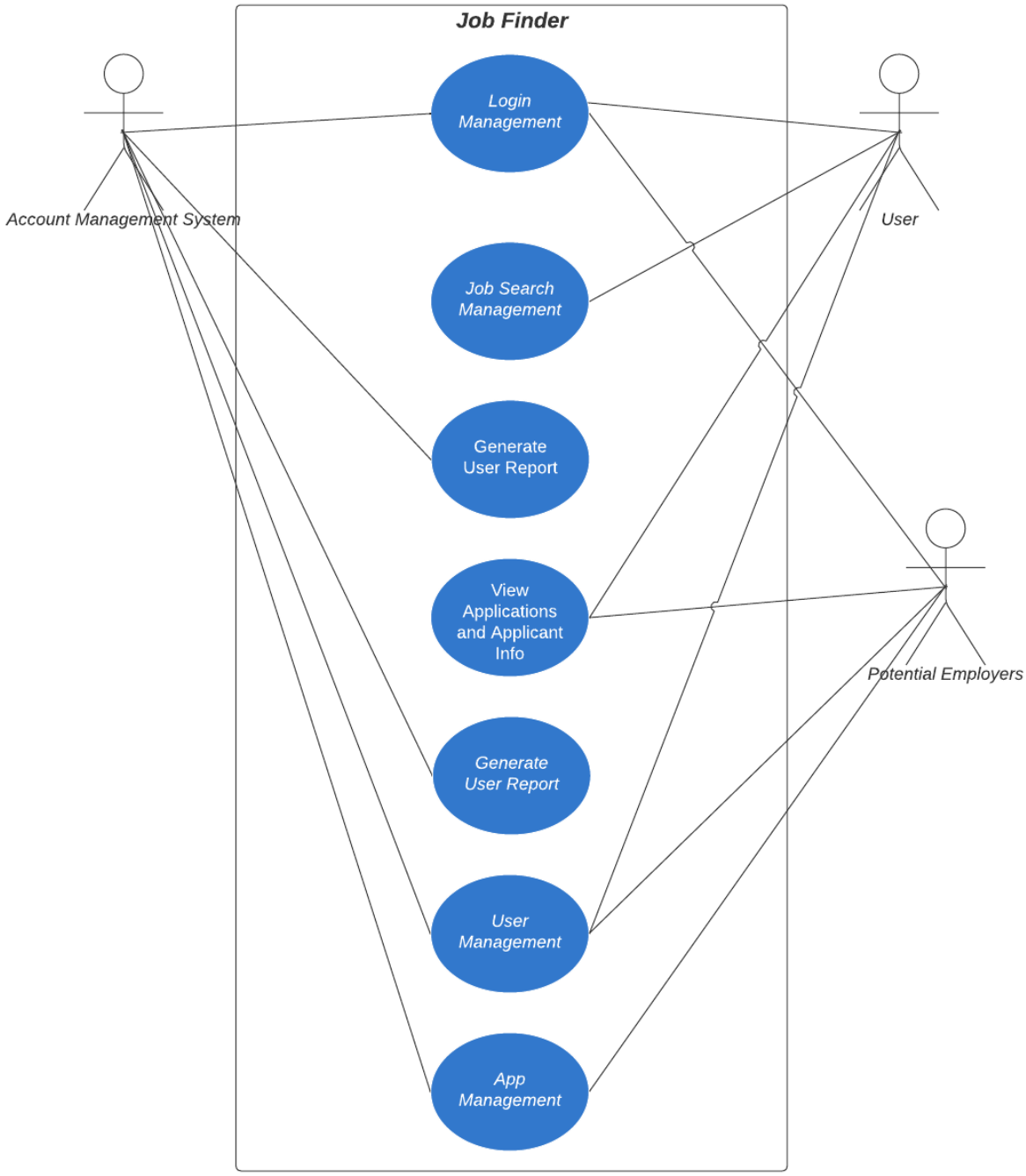
| Task | People |
|---|---|
| **HTML content and data sourcing, report contributions** | **Patrick Bardsley** |
| **Python code to generate data visualization, report contributions, communication lead for group collaboration** | **Logan Hasty** |
| **Data sourcing for tables and lead document organizer** | **Nicolas Izquierdo** |
| **User stories and sketches along with finalized report and HTML** | **Aaron Hill** |
| **DFD diagram, Storyboard, report contributions and Project Presentation** | **Achraf Nachet** |

# 4 System Design

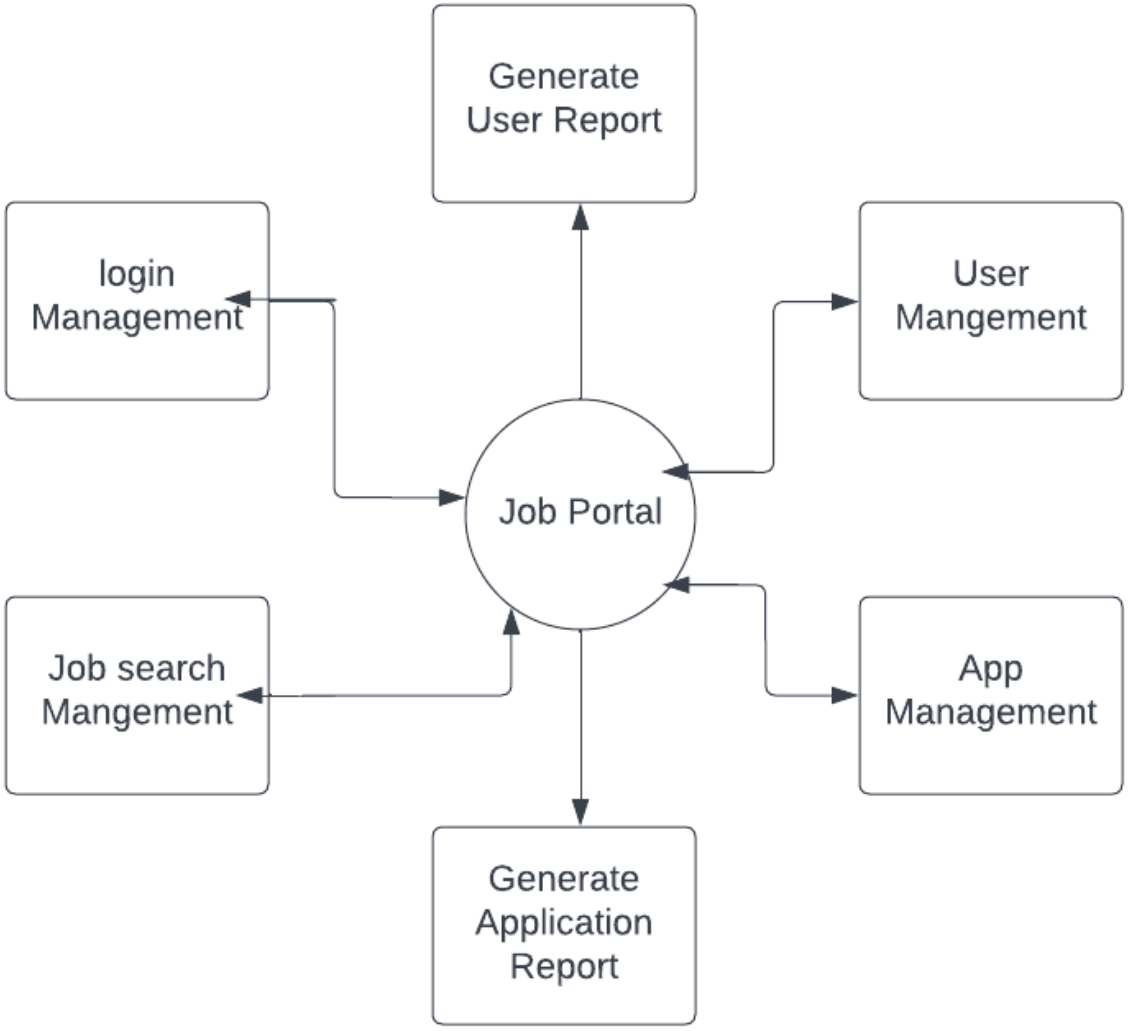



## 4.1 Use Case Diagram

(See below)


Job Finder
Login Management
Job Search Management
Generate User Report
View Applications and Applicant Info
Generate User Report
User Management
App Management
Account Management System
User
Potential Employers

## 4.2 DFD diagram




## 4.3 User Stories

(See below)

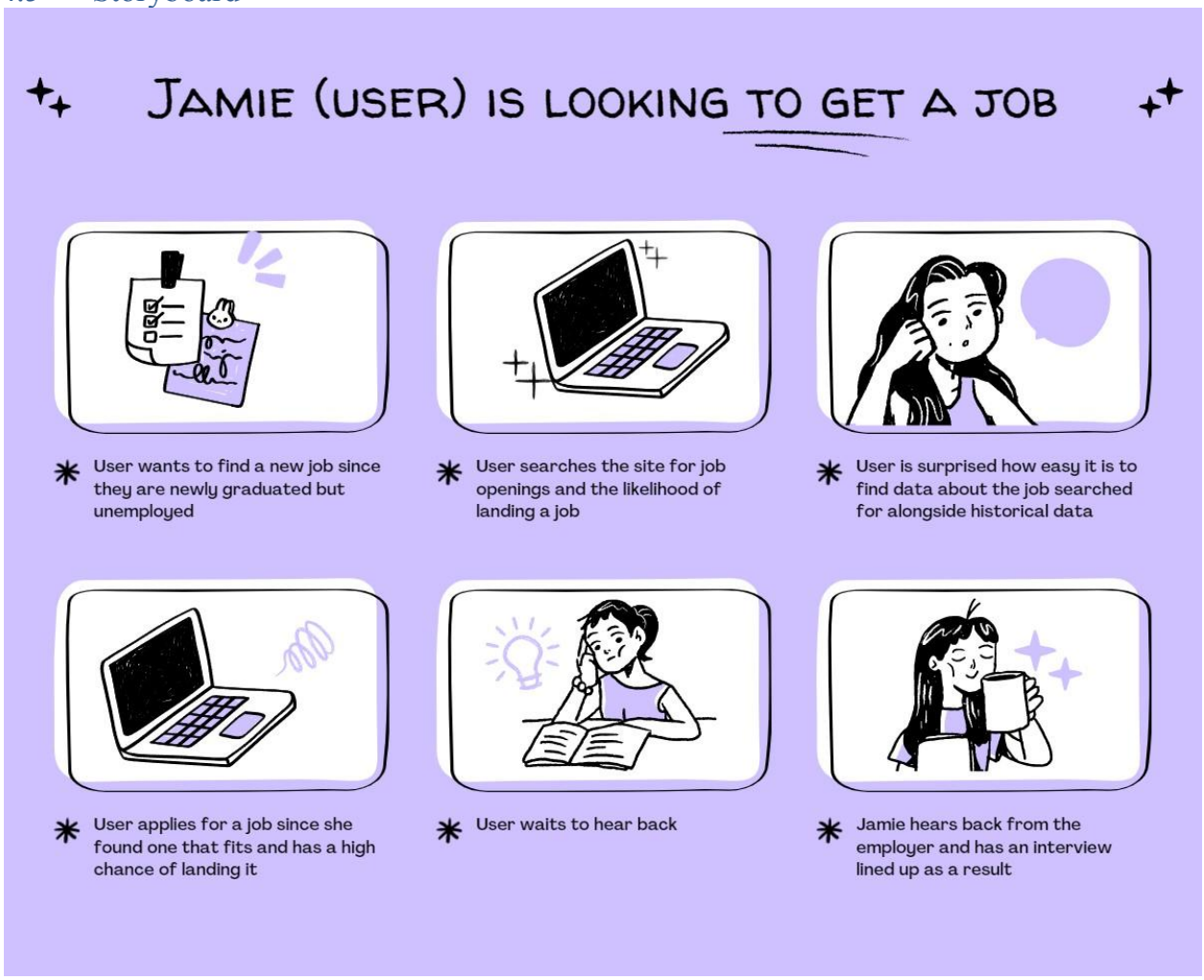
| Title: Job Finder | |
|---|---|
| **User story**<br>**As a** job seeker,<br>**I want to** search for a job<br>**so that I can** advance my career. | |
| **Acceptance criteria**<br>**Given that** I graduate,<br>**when** right out of college<br>**then** I should be able to get a job. | |

| Title: Job Finder | |
|---|---|
| User Story:<br>As a student nearing graduation,<br>I want to search for employment opportunities<br>so that I can start making a living within three months of graduation. | |
| Acceptance criteria:<br>Given that I am graduating soon,<br>then I should be able to be employed within three months of graduating. | |

## 4.4 Feature List

Company Filter: Allows the user to filter the companies that are willing to hire them and choose the best fit.
Data graph showing the unemployment rate by year.

## 4.5 Storyboard



# 5 User Tests

## 5.1 Test procedure

We had the other team test our product and give constructive feedback. We did not explain what the page was about, hoping that the context clues were enough to get the point across.

## 5.2 User Test and Results

The other team suggested we made it a little more accessible, which we did. They also suggested we make a graph to show the data we collected. In addition, they suggested that we include a statement of purpose on our landing page. We let it be known that we appreciated their feedback and we decided to implement these features.

## 5.3 Conclusion

In conclusion, we managed to better understand our target audience and make a better product as a result of the other group's feedback. We realized that we needed to do a better job of displaying what our product was designed to do and we also needed to do cite our source.

## 6 Lessons Learned

We learned that the key to designing a useful and effective application was to better understand our target audience. We also learned that any app is only useful if the user has a clear understanding of what the app is trying to solve and/or implement. Due to these lessons learned, we were able to improve upon our app and deliver a product that is clear in its intent.

## 7 Future work

In the future we plan to create an app that allows the user be more involved in the job search process, and hopefully deliver a product that will exceed their expectations and streamline the job application process.

## 8 Appendices

## 8.1 Team Charter

### Final Project: Team Charter - Individual

**Chosen Group Name**: Cream Frogs

**Group Members**: Aaron Hill, Patrick Bardsley, Logan Hasty, Achraf Nachet, Nicolas Izquierdo

**Communication Channel:** Discord

**Trello Board/Github Project Boards:** https://trello.com/creamfrogsgroup10

**Github Repo:** https://github.com/nizquier/Cream_Frog

**What is the lowest grade your group will be satisfied with?** B

**Our agreed time-management strategy will be to:** We will work a few days ahead of deadlines to ensure completion and maximize our product quality.

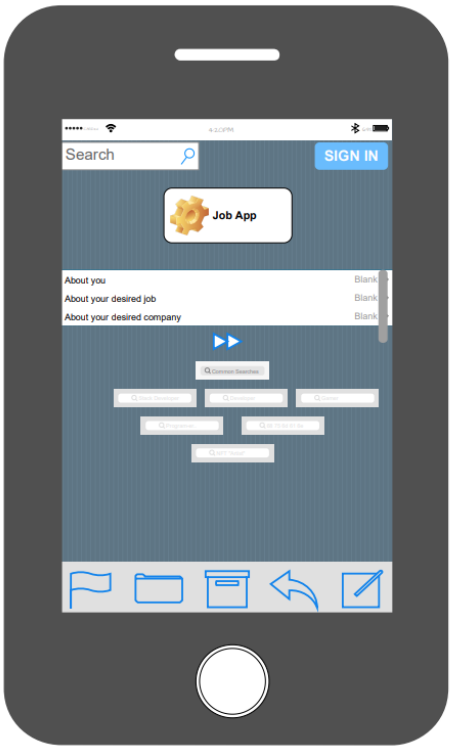
**Describe how you will handle your team leadership.** Each group member will be responsible for his/her equal share of the workload. We will rotate responsibilities so that we all get practice doing various tasks related to the completion of the project.

**How do you plan to handle the situation if someone does not meet expectations? Has everyone agreed to this strategy?** We will reach out to the individual and try to figure out the best way to maximize equal contributions.

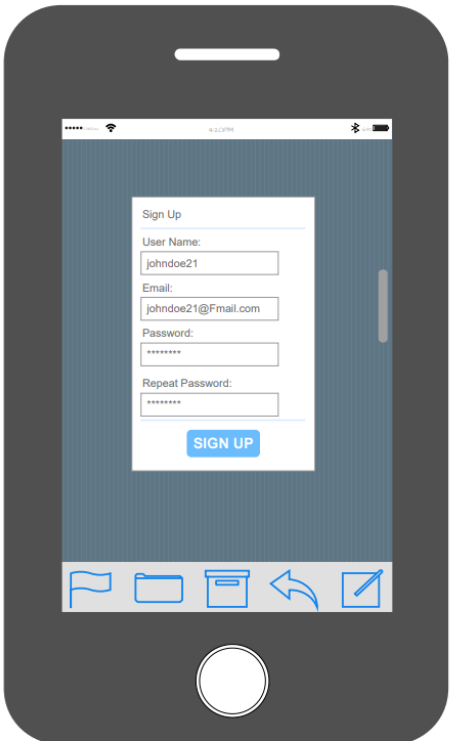
**List your project roles:**

1. We will all work together to complete the project.
2. We will communicate effectively to deliver a great project and spread responsibilities equally.

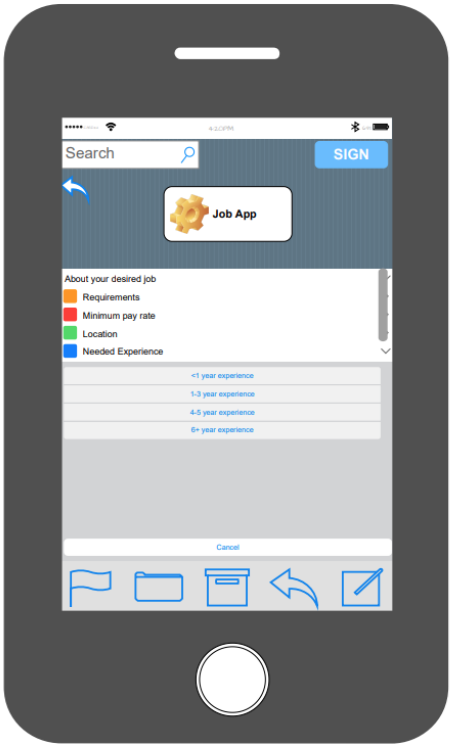
## 8.2 Sketches

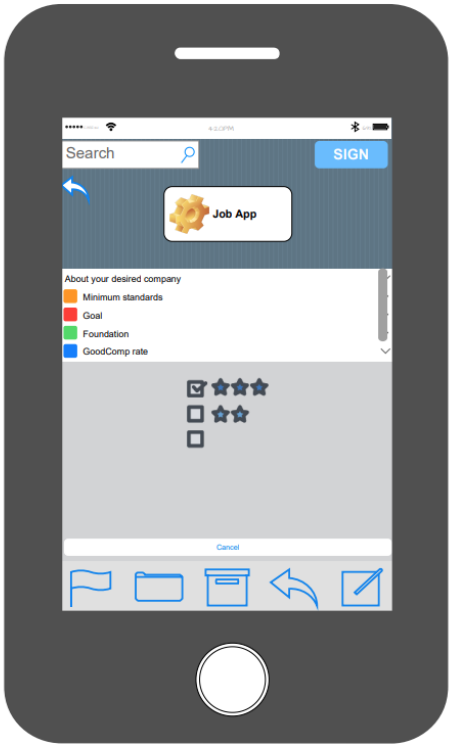

Search
SIGN IN
Job App
About you
About your desired job
About your desired company

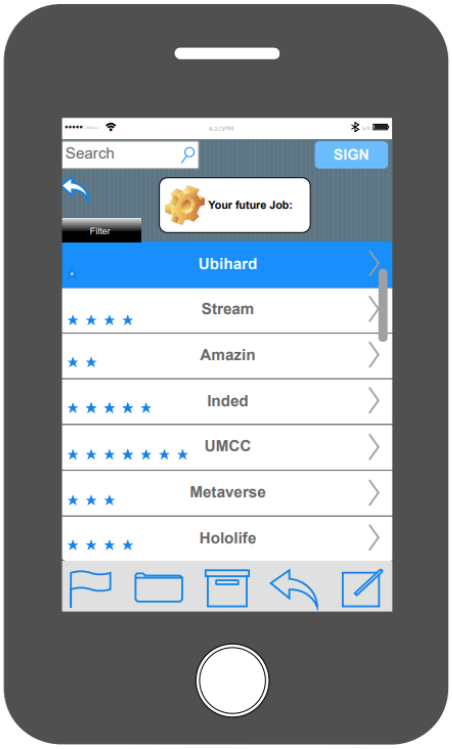

Sign In
User Name:
johndoe
Password:
SIGN IN
Forgot Password?
New User
SIGN UP

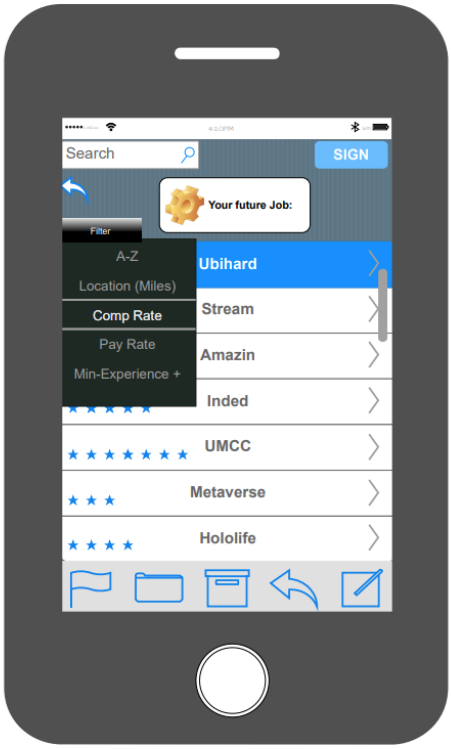

Sign Up
User Name:
johndoe21
Email:
johndoe21@Fmail.com
Password:
Repeat Password:
SIGN UP


Search
SIGN
Job App
About you
100 Push ups, 100 sit ups, 100 squats and a 10km run. Do it every single day.!




## 8.3 Software Repository

https://github.com/nizquier/Cream_Frog

## 8.4 WBS Tool

Used Draw.io and Lucidchart for sketches

## 8.4 Meeting notes

**Team Name: Cream Frogs**
**Trello Board: https://trello.com/b/MkEchbqO/final-project**
**Github: https://github.com/nizquier/Cream_Frog**
**Final Project Proposal/Report:**
**https://docs.google.com/document/d/1jagbeGGi1dzCTV3vAbcavSRhWJuLaKlj9Dv6EABAFWs/edit?usp=sharing**

**4/20/2022**
Members present: All members
Mode of communication: Zoom breakout room
Met with Group 20:
Discussed our plan for designing our product and creating a visualization
Action items: Patrick will create a basic HTML landing page by 4/30/22. Logan will create the Python visualization for unemployment data by 5/1/22. All other members will contribute to the final report by 5/1/22 so we can polish it up and make it deliverable.

**5/2/2022**
Members present: All members
Mode of communication: Zoom and Discord
Items discussed and Takeaways: Met with Group 20 to get and deliver feedback on both projects
Action items: We will expand upon our landing page by creating a summary of our issue we're trying to tackle and include source citation for our visualization.
Meeting notes: Group 20 made visualization charts based on air pollution in the United States. Sorted by year and state. We stated that their product looked very well thought out just suggested that they make sure their intent was clear.