Cut to the Chase: Get Hired Faster

The purpose of this project is to build a platform that allows users to find desired companies quickly and reach out to them by email in a personalized way.

Introduction/Background:

Tech recruiting is a game and the way you play it makes all the difference. Job/internship seekers are often told recruiting tricks by word of mouth to increase their chances of getting an interview. An uncommon but immensely effective strategy strays away from the traditional job application process via online postings; Put simply, cold emailing portfolio companies from various VC firms.

Although effective, this process is immensely time consuming since it involves several steps:

1) Sifting through various portfolios of VC firms to find those of interest
2) Learning about each individual company to then be able to craft a personalized response
3) Determining who to contact at the company
3) Finding out the valid email addresses of the intended recipient and verifying its legitimacy.

In short, this process is fragmented and immensely time consuming. Because of this, it unfortunately dissuades many from implementing this effective strategy.

The Solution:

A web application that consolidates these fragmented steps into one place, expediting the usually extensive process. This web application would allow users to query for portfolio companies from several VC firms based off several filters like funding, domain, location, year of founding, etc. This application would then allow users to aggregate target companies into one place. This application will also have a feature where a 'personalized' email template can be generated for each company selected, thereby allowing the user to simply send the generated 'personal' email for each company.

This would be an effective solution because it would parse through the portfolio companies of an extensive number of VC firms, allow users to select different email templates, and generate personalized emails at mass by extracting meaningful data from a company's description. It would significantly reduce the time needed to effectively complete this usually fragmented process.

The current high fidelity prototype is the result of two iterations in the second round of prototyping. The resulting prototype for this project is a website that has the front-end implemented but little to no back-end implemented. This latest prototype represents a website that has gone through major changes in regards to aesthetics and user-flow. The changes that were implemented are described in detail later in the report.

In the next iteration of this project, the goal is to implement the back-end for the many features within this project. In particular, this involves having the search and filters working (by using Elasticsearch). This also involves having the algorithm for generating email templates working properly as well. Lastly, this involves implementing an algorithm that finds the correct employee and email address for a company and returns that information to the user in the table.

The greatest challenge with this project will involve scaling. Overcoming this challenge will require determining a smart algorithm that accounts for several companies across several different platforms and updates its database often such that the database of companies that are provided for users is up-to-date, meaningful and robust.

Overview of changes that were implemented in this Iteration:

(Last iteration to High Fidelity Iteration 1)
    -Changed color scheme
    -Changed the structure of landing page relative to steps of the 'Application'
    -Added more information to the table in 'Step 3'
    -Progress bar design changed
    -Added a 'See Preview' Button

(High Fidelity Iteration 1 to Iteration 2)
    -Aesthetic design change with a new color scheme determined
    -Filters added to the search option
    -An improved 'Step 2' design to allow for a more intuitive design
            - Changing the location of the 'Add new template' button
                    - Creating a greater distinction between the example templates that are
            provided and the templates that have been created by a user
            - Creating a more descriptive templating form that allows a user to customize
    name and description
    - Feature to 'select all' companies so that a user does not have to do so manually

- Confirmation page with all the companies that emails were sent out to.

Iterations:

What led to the iteration for Prototype 1 (in Low Fidelity Prototype):

The changes that were implemented to produce the first iteration of the High Fidelity Prototype were added after taking into account the feedback from participants during the Low Fidelity Prototyping stage, and my own personal evaluation of the Low Fidelity Prototype.

Feedback from the Low Fidelity Prototype (from interviewees and personal evaluation):
(Vrinda, Talha)

Interviewees- Blue
Personal Evaluation- Black

Aesthetics	User-flow

1. minimalistic
2. simple
3. liked color scheme
4. mostly positive response
5. Found the Aesthetics overly simplistic
6. Did not like the feel of the application - found that it did not have a very professional look
7. Felt that the pairing of the font and the color scheme was not particularly thoughtful.
	1. Found the search feature tedious
	   a. There is little guidance provided in regards to what to search for, or about how to use the search tool.
	2. Found Step 3 frustrating in regards to the Templating feature
	   a. For example, if someone forgot which template was associated with each company-type, it would be particularly frustrating for someone to keep going back and forth between the second and third step.
	3. Did not like that there was no ability to see which companies are currently in the 'shopping bag.'
	4. Felt that there should be a shopping bag to see current companies that were added.

Prototype 1 Implementation

More than 5 major changes that were implemented as **Solutions:**

Problems	Feature Changes/Solutions	Priority
Found aesthetics underwhelming	Changed color-scheme	P1
Found the landing page (with the description) unnecessary to be a part of the Steps	Made the landing page (with the description) separate from the Steps	P1
Found it frustrating that the progress bar was not dynamic and only served a visual benefit	Progress bar style changed stylistically and implemented to be more dynamic	P1
On Step 3, found that there was very little information provided for each company, giving users very little contextual information about which company they were looking at.	Changed the table format such that it included more information about the companies that were selected, with information about the key people that would be contacted, their email address, and their position	P1
Did not like that there was no ability to preview the email that was generated before sending	Added a 'See Preview' Button in the table such that a user could have more assurance about the email that would be sent out.	P1

Prototype 2 Implementation:

The changes to iteration 2 were largely informed by feedback received from interviews more so than personal evaluation. *(See Annex A: Interviews for High Fidelity Prototype 1 Feedback)*

5 major changes that were implemented from Iteration 1 to 2 as **solutions:**

Problems	Feature Changes/Solutions	Priority
Step 2 confusing in regards to what the Existing Templates are and what they represent	Step 2 entirely redesigned with the bottom section removed and color coding implemented to better distinguish types of templates	P1

Search very limited with little guidance in regards to how to use it	Search Filters Added to help narrow the search of companies for a user and provide a user with meaningful ways to discover companies.	P2
Step 3 limited in that it doesn't allow a user to select several companies at once	Added a 'Select all' Check-box that selects all companies at once and adds it to the shopping bag.	P2
Frustrating that a user cannot see the current companies that he/he has implemented	Added a shopping bag button that upon clicking, allows a user to see what companies he/she had already selected.	P1
Users unable to see what emails they have already sent out	Confirmation page added at the end that displays the names of the companies that emails were sent out to.	P1

Process: Key Features:

Key Features for 1st Iteration of High Fidelity Prototype:

Last Iteration to 1st High Fidelity Prototype 1 (Implemented Features)
- Be able to separate landing page from the steps of the application so that one can refer to the landing page   - Jump to application upon clicking on 'Get Started'   - Be able to navigate through the different steps by clicking on 'Previous' and 'Next'   - Step 1:   - Be able to search for companies   - Be able to see Results with different companies and their descriptions   - Be able to 'Select' each company   - Step 2:   - Be able to see existing templates with their associated description   - Be able to 'Create a New Template'   - Step 3:   - Be able to see a table with all the selected Companies, the names of employees and their associated positions, their emails, and the ability to select which templates should be associated with each person.   - Have the ability to see a preview for each email that is generated

Key Features for 2nd Iteration of High Fidelity Prototype:
(The feature changes were considered as a result of Interviews that were conducted in regards to the first High Fidelity Prototype)
(The text in red describes features that were added in the second iteration)

Last Iteration to 1st High Fidelity Prototype 1 (Implemented Features)

- Be able to separate landing page from the steps of the application so that one can refer to the landing page
- Have more pointed Steps with less words
- Jump to application upon clicking on 'Get Started'
- Be able to navigate through the different steps by clicking on 'Previous' and 'Next'
- Be able to see a 'shopping bag' of the current selected companies such that one can at any point, see what contents are in the shopping bag
- Step 1:
    ○ Be able to search for companies
    ○ Be able to select different filters that help discover companies along with help find targeted companies
    ○ Be provided more information about the companies regarding industry, available positions, and website
    ○ Be able to see Results with different companies and their descriptions
    ○ Be able to 'Select' each company
- Step 2:
    ○ Be able to see existing templates with their associated description
    ○ Have preexisting templates that a user can use as reference
    ○ Change the location of 'Create New Template' so that an excess of space isn't used
    ○ Provide more guidance in regards to what to write for each template
    ○ Make Step 2 more clear about its purpose and intention
    ○ Be able to 'Create a New Template'
- Step 3:
    ○ Be able to see a table with all the selected Companies, the names of employees and their associated positions, their emails, and the ability to select which templates should be associated with each person.
    ○ Be able to mass send emails
    ○ Be able to select and send emails
    ○ Upon clicking 'Preview,' be able to send email from there
    ○ Have the ability to see a preview for each email that is generated
- Step 4
    ○ Be able to see the emails that were sent

Implementation:

The tools that were used were React.js, JavaScript, HTML, and CSS.
Description:

(implementation)

The React.js framework was used particularly because it provides a powerful structure that allows a user to reuse aspects of a website if necessary through the use of components, and makes it very easy to manage state in an application.

To start off using React.js, create-react app (https://github.com/facebook/create-react-app) was used since it doesn't require any build configuration. This set up the build up environment without me having to do any additional work.

When it came to getting started with React, I created separate components for any aspect of the website that had a separate function. For example, I created a separate component JavaScript file for all the different 'Steps,' the progress bar, the main page, the navigation controls bar with the 'Previous' and 'Next' Buttons. Each JS file had an associated CSS file as well.
The main JS file is where I rendered these several components. Once this was in place, this provided a strong structure for me to then work off of.

For all the CSS styling, I particularly used flex-box particularly because of its ability to be responsive. I used flex-box's features such as flex-direction, justify-content and align-items the most to effect proper positioning of the items on the webpage.

To implement the navigation controls with the previous and next buttons, I made use of 'state.' In React.js, state flows in direction (from parent to child). Rather than having each component have a state, I set the state of each next and previous button as a number (representing how many times it was clicked). Then, depending upon what the state of the next or previous button was, a different step was rendered. This function, renderStep() was called upon the previous and next button being clicked.

Timeline for full implementation:

Prototype 1:

3/11-3/16 - Have dynamic aspect of Prototype 1 Implemented
    ● Have the 'Previous' and 'Next' Buttons successfully working, allowing proper navigation through all the steps
3/18-3/23 - Have front end fully implemented with design changes
    ● Have all aesthetics and design implemented

Prototype 2:

3/24 - 3/28
    ● Have design changes implemented (from design feedback received from interviews)
3/28 - 4/2

- Have additional features added (from functionality feedback received from interviews)

3 main issues encountered / how they were solved:

Unsure how to use 'State' in React for Previous/Next Buttons:

Initially, I had a difficult time figuring out what the best way would be to implement the navigation. I started off by first making each component Step have a state. Essentially, I could set the state to some value and I could check the value of each Step's state after every click, and if it matched the correct number of clicks pressed on the 'Next' button, then I could display that Step. However, I realized that I was doing more work that I needed to be doing and I in fact was not making good use of React's functionality.

Proper Steps not Rendering:

Another issue that I encountered was that sometimes the next button would not render the correct step after I had clicked the previous button from 'Step 1.' I then realized that if the Previous button was pressed several times, the value would then become a negative number (such as -6). Then, when the next button was pressed, the value would increment but it would become -5 (which is not the value necessary to display the Step 1 component). This explains why I was not able to see the 'Step 1' upon clicking the next button. I then realized that I needed to keep the value at 0 when 'Previous' was pressed so that the value did not become negative when 'Previous' was pressed.

Pop-up window for template was not properly positioning itself

Another issue that I encountered was that the pop-up window to "Create a New Template' was not overlaying above the current view, but rather was getting appended to the bottom of the website. I had a difficult time understanding how to position the pop-up window that this would not be the case. I then realized that I couldn't necessarily rely as much on flexbox here. This taught me that I should not be overly reliant on flexbox and that I should consider using the various capacities in CSS for styling. I then realized that I needed to be setting the position as absolute to ensure that the pop-up window was getting overlayed on top of the website. From there, I could set the position of the pop up window normally.

Prototype 1:
Below, the mocks-ups for Prototype 1 are included along with accompanied description specifying the different features for each step, how the features work, how much they work, why they were chosen. It also specifies which ones are not working.
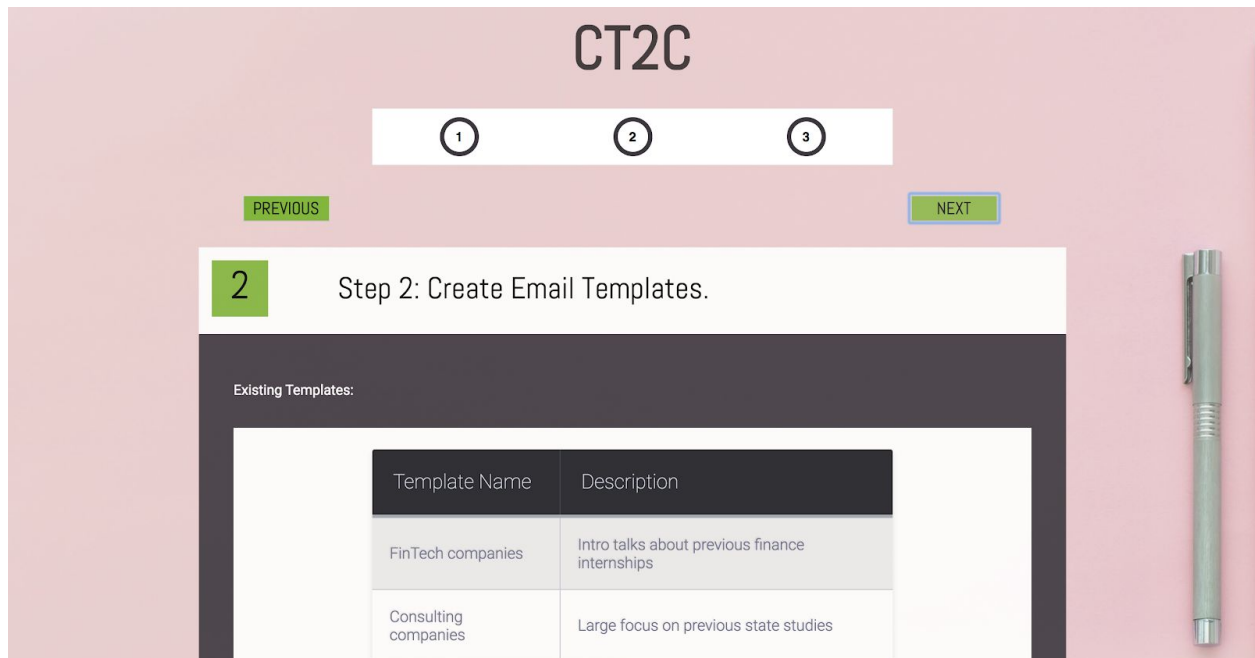
Features:

- 'Get Started' Button (Partially implemented)
    - Upon clicking, the view quickly scrolls down to the 'Steps' page shown below. This does this by jumping to the id of the Step 1 page below.
    - A 'smooth scroll' feature to the 'Steps' page has not yet been implemented.
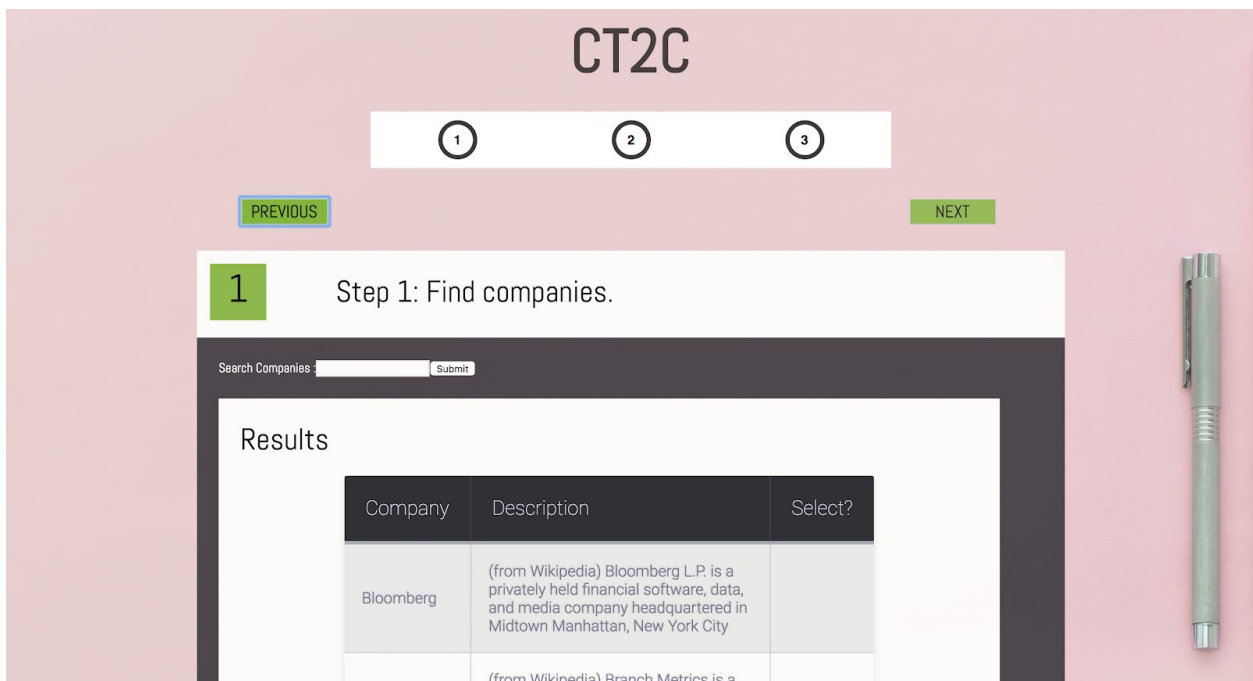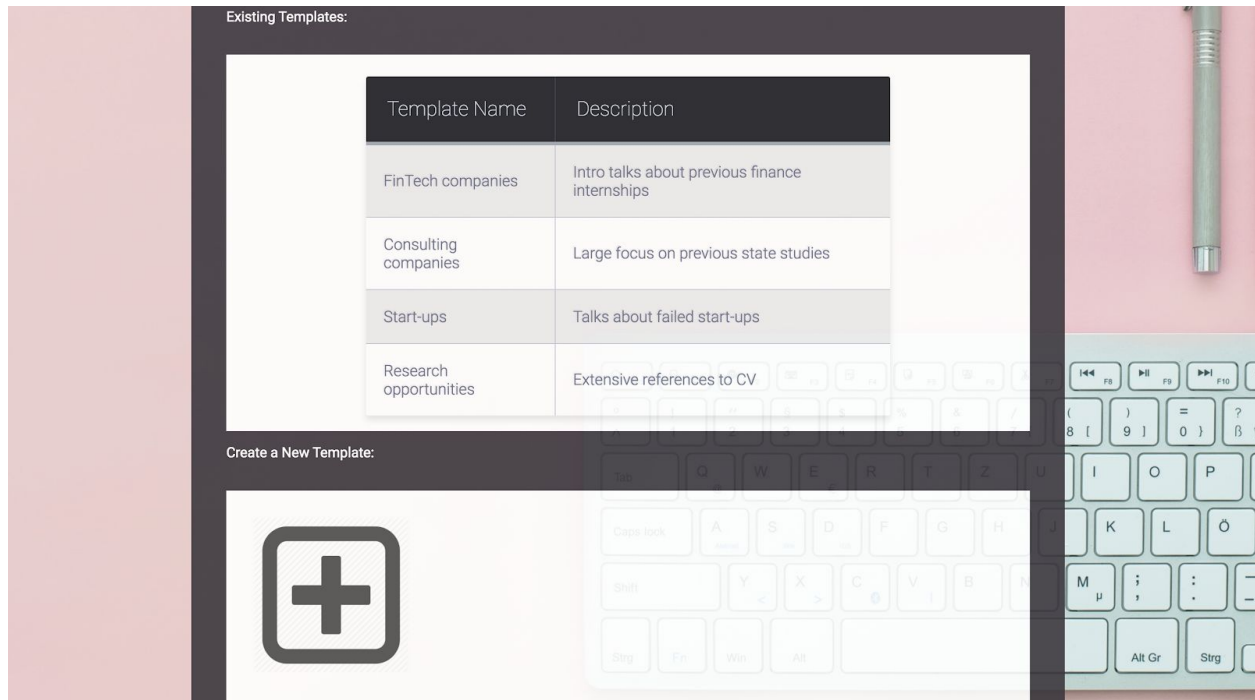

Features:

- 'Previous'/ 'Next' Buttons: Upon clicking 'Previous on Step 1, view will not change here. Upon clicking next, page will show step 2 (Fully implemented)
- 'Search Companies Search Bar': Back-end of search not implemented. Intended function is to return 'Company results' after clicking 'Submit' (Partially implemented) **(Time estimate: 1 week)**
- Progress bar
    - Upon finishing Step 1, Step 2, and Step 3, each respective circle would get filled up. (Not implemented) **(Time estimate: 1 day)**

Features:

- 'Previous'/ 'Next' Buttons: Upon clicking 'Previous on Step 1, view will not change. Clicking previous from here will show Step 1. Upon clicking next, page will show step 2. (Fully implemented)
- Given that there is no login implemented for a user, the current version of the prototype, would not be able to remember what templates a user already created in 'Existing Templates'. Rather, the view here simulates what it would look like if a user has already created several templates. The already-created templates would show up in the 'Existing Template' section with the name and description. (Not completely implemented) **(Time estimate: 3 - 4 days)**
- Upon clicking each 'Template' entry in 'Existing Templates,' a user would be able to see the 'template' that they already created. (Fully implemented)

Features:
- Upon clicking the 'Plus' Button under 'Create a New Template', the green pop-up window (next picture) shows up, where a user can then create a personalized email template. (Fully implemented)

Features:
- Under the four headers listed, a user an write his/her responses in the text area.
- Upon clicking 'Submit,'

- the entries entered in the four fields are saved (not implemented)
- A template email is generated (not implemented) **(Time estimate: 3 days)**
- The saved template email is saved in 'Existing templates' (not implemented)
    - **(Time estimate: 4 hours)**

Features
- The table shown in Step 3 simply simulates what a user would see were they to have 'Selected Companies' on the first page.
- In the table, the recommended contact people are listed under the 'Name of Employee'.
    - The portal would find these names by scraping the Company's website to determine the appropriate person to contact (Not implemented)
    - **Time estimate: 1 week**
- In the table, each contact person's position is listed under the column that says 'Position.'
    - The portal would find these positions by seeking information about the contact person on the company's website (Not implemented)
    - **Time estimate: 1 week**
- In the table, the 'Select Template' column allows a user to select which template they want associated with each 'Company' selected with a drop-down menu (Fully implemented)
    - This dropdown menu should also update upon the creation of a new template (Not implemented) **(Time estimate: 3-4 hours)**
- In the the table, the 'Email' column displays the correct email associated with each contact person.
- In the table, the 'See Preview' column allows a user to see the emails generated by the algorithm (Not implemented) (**Time estimate: 3-4 days**)

- Upon clicking the the magnifying glass,' a user would be shown a pop-up window with the generated email.

CT2C

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PREVIOUS   NEXT

4   Step 4: Send

You are all set.

Features
- The header 'You are all set' would be displayed (Fully implemented)

Prototype 2:

Below, the mocks-ups for Prototype 2 are included along with accompanied description specifying the different features for each step, how the features work, how much they work, why they were chosen. It also specifies which ones are not working.

*All the features listed out below are features that are added on top of the features listed for the Prototype 1. While some features have been entirely amended (and they are noted as such), some have been maintained from the previous iteration.

Features:
- Changes:
    - Redundant words were removed from the header, the font was increased in size, and the background color/color scheme was improved to resemble a more 'professional' feel.

Upon clicking 'Get Started'
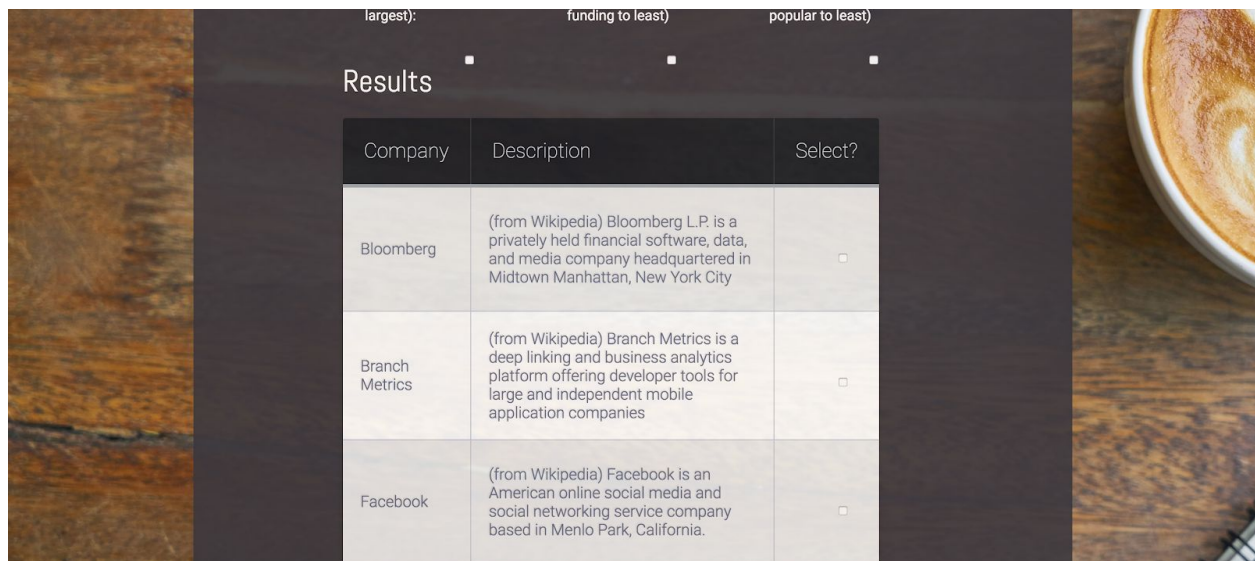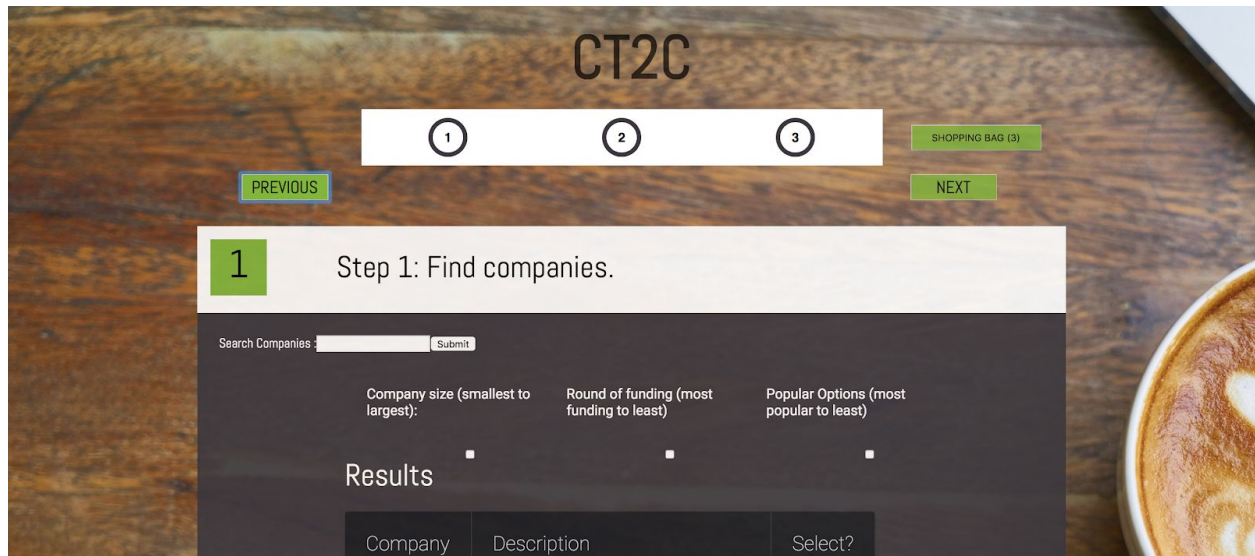
Features:
- A 'shopping bag' button was added which displays the number of 'companies' that have been selected. (Partially implemented)
    - This shopping bag will by dynamic and will increase in size as more companies are selected.
    - Upon clicking the button, a drop down menu will appear, displaying the different companies that have been selected. (Not yet implemented)
    - **(Time estimate 1-2 days)**
- Search filters were added (partially implemented)
    - Filter: Company size (smallest to largest)
        - Filters companies from the smallest sized ones to the larger ones
    - Filter: Round of funding (most funding to least)
        - Filters companies by how much funding they have received

- Filter: Popular Option (most popular to least)
    - Filters companies based off popularity on the website itself
- Although the filter options have been added, the back-end that actually does the filtering' has not yet been implemented.
    - **Time estimate: 1-2 days**
- 'Search Companies Search Bar': Back-end of search not implemented. Intended function is to return 'Company results' after clicking 'Submit' (Partially implemented)
    - **Time estimate: 4 days**
- Progress bar
    - Upon finishing Step 1, Step 2, and Step 3, each respective circle would get filled up. (Not implemented)
    - **Time estimate: 4 hours**
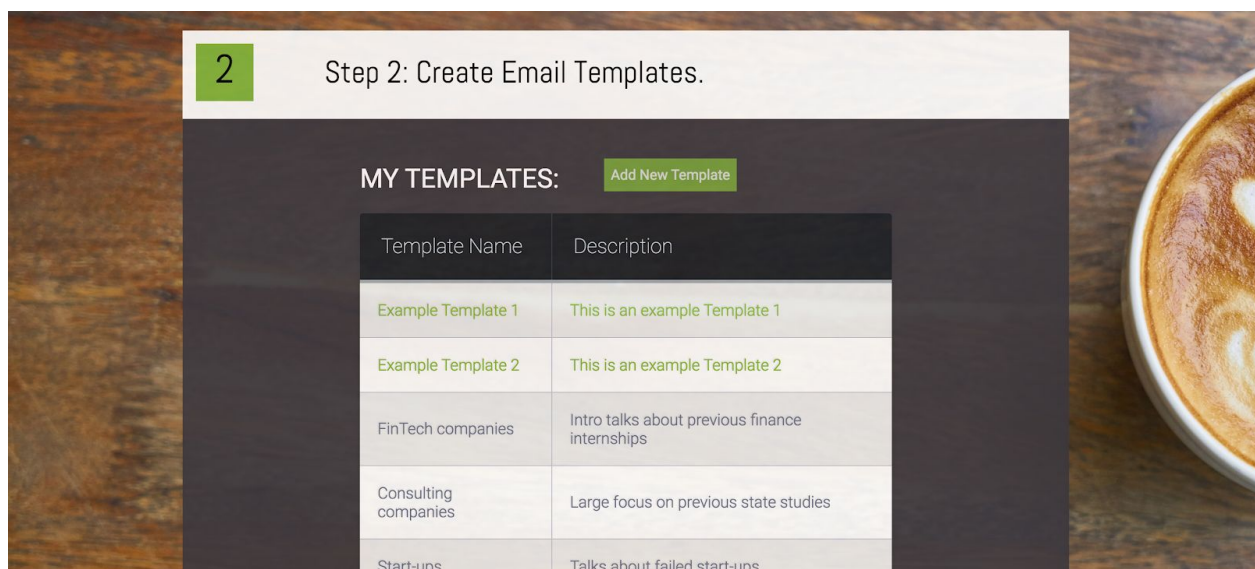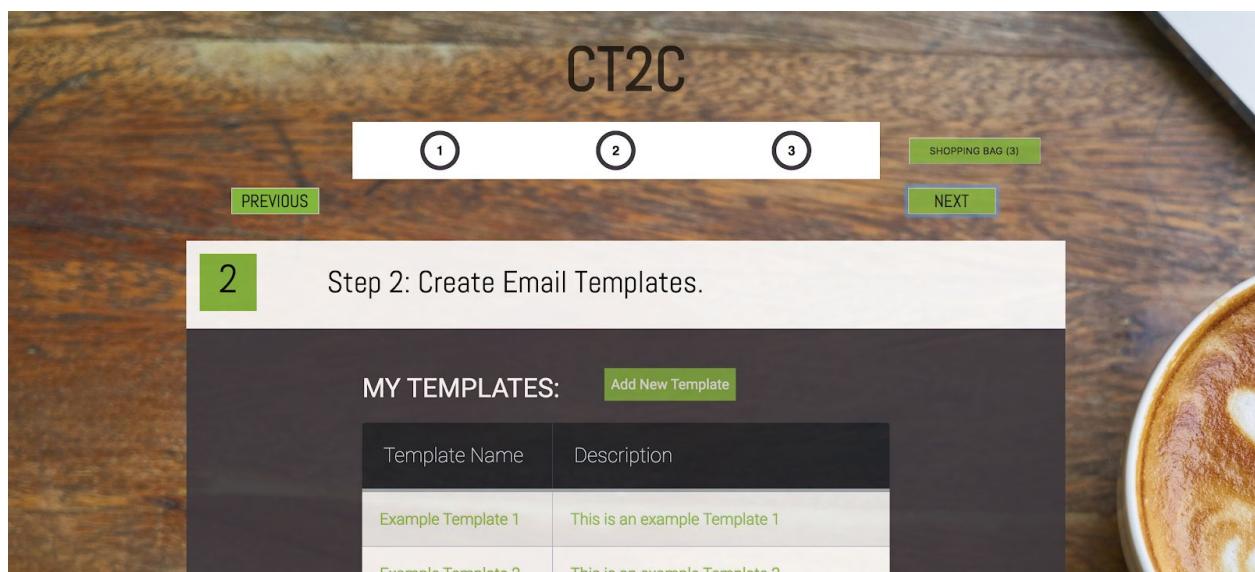
Features:

- The design was entirely changed for this page, after feedback from the interviews (Fully implemented)
- The previous second section where one could add a new template was replaced by a smaller button 'Add New Template' at the top bar to better maximize space (Fully implemented)
    - Upon clicking on this button, the user would be shown the next view
- The table also distinguishes between templates provided by the application and templates that the user created since that was a source of confusion for several users. (Partially implemented)
    - By highlighting the already existing example templates, the goal is to help users to identify which ones are simply examples and which ones they created themselves.
    - Although the front end is implemented, the application isn't able to automatically determine which entries should be highlighted green and which ones black.
    - **Time estimate: 3 hours**

Features:
- This pop-up window was also modified to account for more necessary fields
- The 'Name your template' field was added
- 'Write your description for your template' was also added.
    - The purpose was to allow users to understand how they would be able to identify each template.

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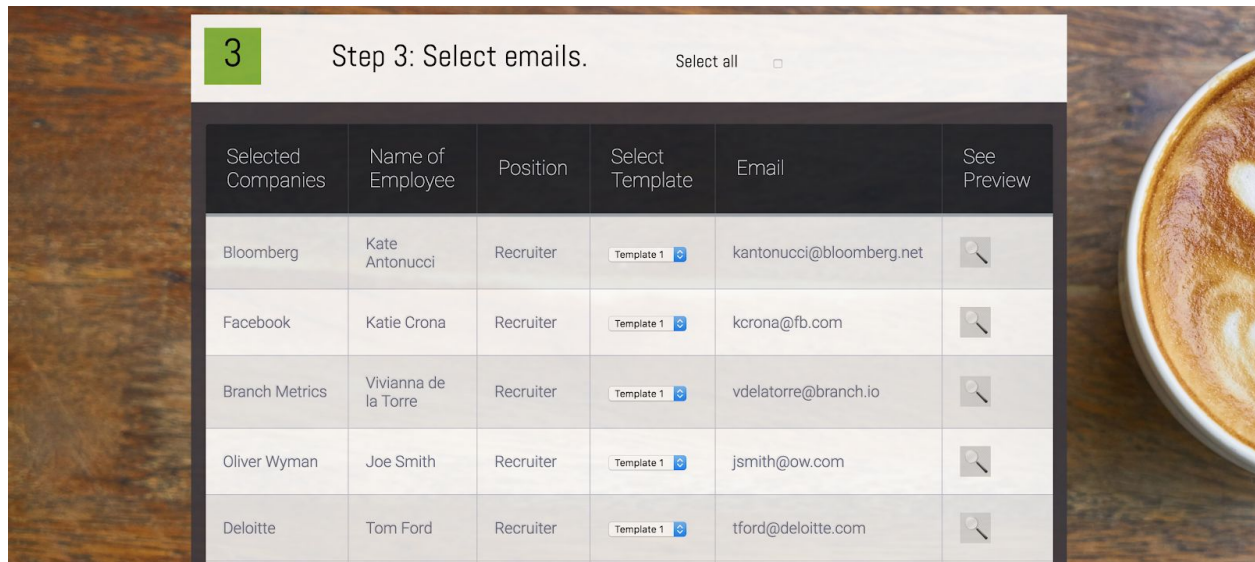
Features:
- The 'select all' checkbox was added so that users could select all emails with their current template configurations as well. (Partially implemented)
    - This makes it easier for a user to be able to select all emails at once if he/she knows that he wants all emails to be sent.
    - Although the front-end has been implemented, the back-end has not yet been. The next step would involve having all companies 'selected' upon clicking on 'Select all' immediately, and having them added to the 'Shopping bag.'
    - **Time estimate: 3-4 days**
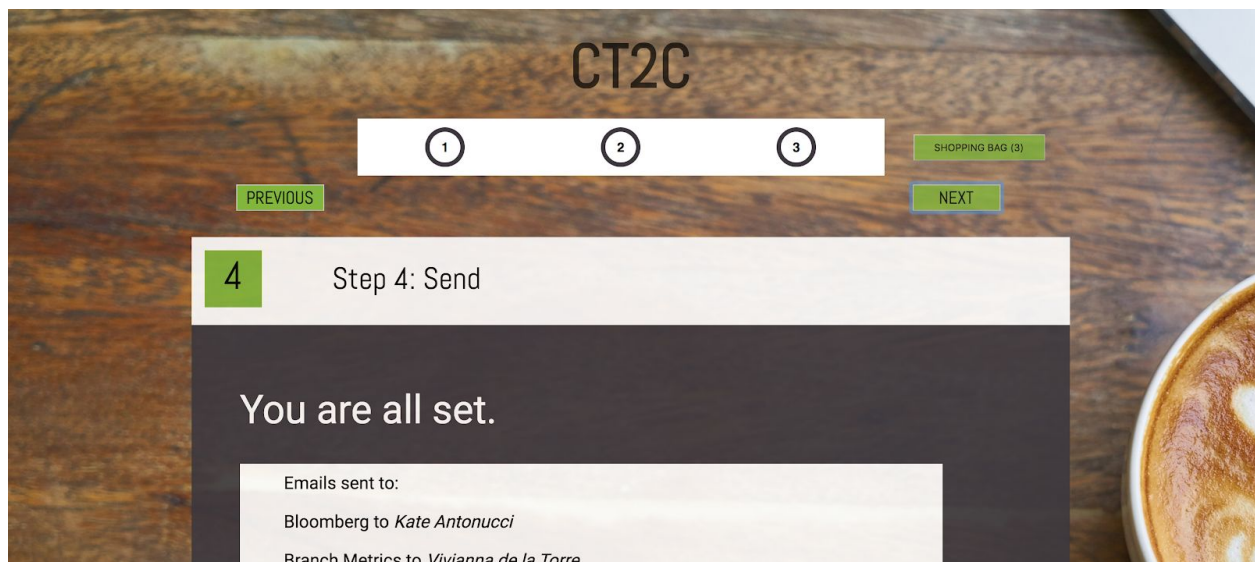
Features:
- The confirmation page was added with notes on who the emails were sent to. (Partially implemented)
    - Although the front-end is implemented, the back-end is still not.
        - The application still needs to be able to identify which items are in the shopping bag and accordingly list out the email recipients.
        - **Time estimate: 2 days**

Prototype (Evaluation)

Method for evaluation: Interview

The interviews for the first iteration of this high fidelity prototype were conducted across the time-span of a week and were approximately 30 minutes in length. This duration was chosen to ensure that participants were not tired during the interview process but still able to explain their perspectives on the product with ample time. The participants interviewed were selected because of their different class years. Additionally, one participant in particular (Talha) was selected because he was interviewed for the Low-Fidelity Prototype as well.

General feedback: Most feedback from the participants focused on two main aspects of the website: the aesthetics and the templating step (Step 2). While some individuals found the aesthetics pleasing and professional looking, others suggested that the color scheme was inconsistent and jarring. Some did not particularly find it appropriate for a job application portal. Although most individuals liked the font appearance, one participant found that the font did not look appropriate for a website.

Every participant interviewed suggested confusion with the second templating step. Several were unsure whether the 'Existing Templates' were templates provided from the system itself or if they were templates that the user created himself/herself. Additionally, several participants were unsure about how the templating worked and how the email generation would work. Here, there was several feedback provided in regards to the user flow/understanding of the second step.

Additionally, some users expressed concern over the third Step in regards to how a template could be selected for each company. Some users expressed that it would be a hassle to go back and forth between the second and third step to determine which template was which. Thus, they expressed concern with the user-flow between the second and third step.

As a whole, users did find the overall flow of the application intuitive and easy to understand. Although the main source of confusion was the second step, users found the overall premise simple to catch on to.

Annex A: Interview Notes

Participants:
- Pratyush More
- Gregory Teo
- Pragya Sethi
- Talha Farooqui

Interview Questions: (about Prototype 1)

Plan:

-Have the interviewee walk through application and play around with it for about 2 minutes

-Ask the following question:

1. Could you explain to me the purpose of this application? What is your understanding?

- Then, explain the premise of the application, clarify misconceptions and then ask the following questions:

1. How intuitive do you find this application to use?
2. What did you find difficult about this application?
3. What did you like about this application?
4. What do you wish you could change about this application?
5. What are your thoughts on the design/look/feel
    a. -Color
    b. -Font
    c. -User Flow
6. Does this feel like an application for finding jobs (does it feel professional?)

Pratyush (senior)
- Aesthetics

- ○ Felt that the font on the first page could be bigger
- ○ Felt that the progress bar could be made dynamic
- ○ Felt that the color pink should be replaced
- User flow/functionality
  - ○ Felt that the existing templates should be made more prominent
  - ○ Didn't see the 'Create new template' section and felt that it should be at the top
  - ○ Felt that the templates in step 3 should be named
  - ○ Felt that a smooth scroll should be added to the form, rather than a rapid transition
  - ○ Felt that perhaps previous and next could be at the bottom
  - ○ Felt that there should be a mass send button
  - ○ Step 2 was not intuitive, but the rest of the application was
  - ○ Felt that the third step was poorly designed since a user would not be able to remember which templates he/she created.
  - ○ Felt that there should be some sort of shopping cart.

Greg (sophomore)
- Aesthetics
  - ○ Didn't pay any attention to the name
  - ○ Didn't like the transition from the first landing page to the second one
  - ○ Felt that pink was not a good color
  - ○ Felt that font could be improved
  - ○ Did not like the white header
- User flow/ functionality
  - ○ Found the user-flow intuitive
  - ○ Felt that the 3rd step was confusing
  - ○ Felt that there should be a shopping bag to save 'selected companies'
  - ○ Felt that the 'Create New template' section was too far down
  - ○ Unsure about how much a user would be able to find small companies on this portal

Pragya (junior)
- Aesthetics
  - ○ Found the initial landing page very 'corporate' in nature
  - ○ Found the pink color a bit jarring, but liked the combination of pink, green and grey
- User flow/ Functionality
  - ○ Felt that the progress bar should be dynamic and should let you go from place to place
  - ○ Found the 'search' concept confusing
    - ■ 'What should one search by? Industry? Job position?'
  - ○ Found the descriptions of companies not very meaningful
    - ■ Hoping that they would give you more insight

- ○ Was hoping there were more filters near the search bar to help narrow the search
- ○ Felt that there should be some preexisting templates but the created ones should be distinguished from a user's own created templates
- ○ Wants to be able to edit the generated email in the preview button so she has more control
- ○ Wants to be able to send a great number of emails at once and finds it tedious that one has to select emails individually.

Talha (freshman)
- ● Aesthetics
  - ○ Liked the pastel color
  - ○ Liked the color scheme
  - ○ Found the design straightforward
  - ○ Didn't have any particular preference for the fonts
- ● User-flow
  - ○ Didn't automatically see the option for 'Creating a Template' at the bottom
  - ○ Didn't understand the need to have so many templates
    - ■ Found the page itself a bit confusing
  - ○ Wanted to understand how you can get different types of templates
  - ○ Found the overall user-flow intuitiv
  - ○ As a novice, didn't find the concept difficult to grapple with
  - ○ Found Step 2 Confusing