



## CS361: Assignment 3: Project Plan, Sprint 1 Plan, and UI Design (for Milestone #1)

### Overview

Now that you've been introduced to the microservices concept, start planning your individual project. It's OK to change your plan later!

First, define the entire set of user stories for your individual project. The timespan for the user stories is this term but you don't have to finish implementing all the user stories this term. These user stories will need to go in a **Product Backlog** column/section/category of your task management system.

Next, move some of those user stories into a **Sprint Backlog**—these will be the user stories you WILL complete during this Sprint (for Milestone #1) and comprise your **Sprint Plan**. **Note these minimum requirements for Milestone #1:**

- Has a way for users to interact (e.g., provide input, push buttons, etc.)
- Reflects CSH
- Reflects three quality attributes you choose
  - Hint: If you choose “usability” or “inclusivity” as a quality attribute, your corresponding non-functional requirement can involve the CSH

Lastly, design your UI. This is NOT required to be graphical (e.g., could be text-based).

### Instructions

Complete each item below by replacing the highlighted text (**Usability note:** double-click the text to select it).

#### 1) Task Management System

Choose a task management system based on the spike you did previously.

**Which task management system** did you choose?

Air Table (my partner actually works for this company)

#### 2) Product Goal and Backlog

You'll be using some Scrum methods in this course. Unfortunately, the Scrum Master and Product Owner roles don't work well in this setting. You will, however, be experiencing Scrum Events and Artifacts.

- a) What is your **Product Goal** for your individual project?

Develop software to locate the nearest **available** milkshake without commuting, calling, or googling information.

The Scrum Guide (<https://scrumguides.org/scrum-guide.html>) doesn't give a detailed description of the Product Goal: “**describes a future state**”, “**long-term objective**”. Example Product Goal: “Develop software I can use to communicate with my dog when I'm on vacation.”

- b) In a **Product Backlog** column, section, or category of your task management system create **user stories** for your entire **individual project**. Use INVEST to guide you.

**Requirements for user stories:**

- Each has a **name**
- Each uses the “**As a... I want to... so that...**” format (see textbook)
- Total of at least **10** user stories (you will not have to implement all of these)
- As a set, must have **no obvious violations of INVEST**

	Name (e.g., “Login”)	As a... I want to... so that... format
1	Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.
2	No Wasted Time	As a commuter, I need to know if milkshake machines are operable so I don't waste my time driving from location to location.
3	The Best Shake	As a connoisseur, I want to know which milkshake is rated best, so I don't waste my taste on inferior products.
4	The Average Shake	As a regular consumer, I'm okay with getting an average milkshake so that I don't overspend when it isn't important to me.
5	The Worst Shake	As a skeptic, I want to see the worst rated milkshakes so I can judge the quality for myself.
6	Shake at a Glance	As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.
7	Date Shakes	As a romantic, I want to know the best date locations serving milkshakes, so I can share my shake with someone special.
8	Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.

9	Frugal Shake	As a frugal person, I want to see available coupons for milkshakes so I can get the best deal.
10	It's Shake Time	As a preoccupied person, I want to be told when the weather is good for enjoying a milkshake so my nice day can get better.

Enter these user stories into your task management system. Take a **screenshot** so that the grader can confirm you added the stories.

The screenshot shows a task management system interface with a red header bar. The header bar contains the text 'Interfaces' on the left and 'CS361' on the right. Below the header bar, there are several tabs: 'Alex - User Stories', 'Alex - Sprint Backlog', 'Definitions of Done', 'Jordan - User Stories' (which is selected), 'Jordan - Sprint Backlog', and 'Jordan - Definitions of Done'. Below the tabs, there is a toolbar with icons for 'VIEWS', 'Grid view', 'Hide fields', 'Filter', 'Group', 'Sort', 'Color', and 'Share view'. Below the toolbar, there is a table with the following columns: 'A Name', 'Notes', 'Attachments', and 'Status'. The table contains 10 rows of user stories, numbered 1 to 10. The user stories are: 1. Where to Go, 2. No Wasted Time, 3. The Best Shake, 4. The Average Shake, 5. The Worst Shake, 6. Shake at a Glance, 7. Date Shakes, 8. Shake Source, 9. Frugal Shake, and 10. It's Shake Time. The notes for each story are: 1. As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching. 2. As a commuter, I need to know if milkshake machines are operable so I don't waste my time driving from location to location. 3. As a connoisseur, I want to know which milkshake is rated best, so I don't waste my taste on inferior products. 4. As a regular consumer, I'm okay with getting an average milkshake so that I don't overspend when it isn't important to me. 5. As a skeptic, I want to see the worst rated milkshakes so I can judge the quality for myself. 6. As a busy person, I want to see fast selections for best, average, and worst milkshakes near me on the front page. 7. As a romantic, I want to know the best date locations serving milkshakes, so I can share my shake with someone special. 8. As an ethically conscious person, I want to see info of my milkshake's source and the business' ethical practices so I can feel g... 9. As a frugal person, I want to see available coupons for milkshakes so I can get the best deal. 10. As a preoccupied person, I want to be told when the weather is good for enjoying a milkshake so my nice day can get better.

Interfaces				CS361			
Alex - User Stories				Jordan - User Stories			
Alex - Sprint Backlog				Jordan - Sprint Backlog			
Definitions of Done				Jordan - Definitions of Done			
Jordan - User Stories				Jordan - Definitions of Done			
Jordan - Sprint Backlog				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			
Jordan - Definitions of Done				Jordan - Definitions of Done			

	for dates, additional info—sources, business practices), but not all of them want to see this info. In order to keep the interface simple and relevant it should be customizable.
Accuracy	Without accurate information, this software would be no better than guessing. Inaccurate information about milkshake availability would cause users to abandon the app.
Memorability	The app needs to be simple and easy to have memorized otherwise it would be tedious to use and users may opt to perform searches themselves.

- c) Convert your quality attributes to non-functional requirements. Must be testable. What are your three non-functional requirements? How would you test them? (1+ sentence each)

<b>Quality Attribute 1</b>	Customizability
<b>Non-functional requirement 1</b>	Users should be able to customize the app to view the features they want within 30 seconds.
<b>How you would test that the non-functional requirement is satisfied</b>	By having a variety of users test the software and select their desired features, timing the speediness of that action, and adjusting any “catching points”.

<b>Quality Attribute 2</b>	Accuracy
<b>Non-functional requirement 2</b>	Milkshake location results should be available 24/7, 7 days a week, once a user has input their home location during initial customization setup.
<b>How you would test that the non-functional requirement is satisfied</b>	By creating a system to deploy test users with various locations and checking that current milkshake locations are present to their customized location at all times (created during initial setup)..

<b>Quality Attribute 3</b>	Memorability
<b>Non-functional requirement 3</b>	The user should be able to make a milkshake selection within 10 seconds of opening the program.

<b>How you would test that the non-functional requirement is satisfied</b>	By either A) by using testers, and logging their “time-to-selection”, taking notes of any lingering pauses or roadblocks; or B) Logging user activity and documented instances of lengthy times spent selecting, then surveying those individuals for reasons why.
--	--

#### 4) Sprint 1 Plan (for Milestone #1)

a) What is your **Sprint Goal**?

Create the user interface for the Milkshake application

b) Next, select **at least three** user stories from your Product Backlog and move them to your **Sprint Backlog**. Choose what you think you can complete, but recall the minimum requirements (see Overview). Which user stories did you select?

As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.

As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.

As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.

c) Take a **screenshot** that shows you’ve moved these user stories into a **Sprint Backlog** in your task management system.

Views	Grid view	Hide fields	Filter	Group	Sort	Color	Share view
Tasks	Jordan - Use...	User Stories (from Jordan - User Stories)					
1	FE: Create functionality for user to enter location (initial setup)	Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.				
2	Research: Find API for restaurant listings	Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.				
3	BE: Alternatively, use "beautifulsoup4" python module for directed google search	Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.				
4	FE: Create interface to display results	Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.				
5	Create minimal and clear interface to quickly see the milkshake selections	Shake at a Glance	As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.				
6	BE: use location search to find nearby locs serving shakes	Shake at a Glance	As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.				
7	Find reliable database for ethical restaurants	Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.				
8	BE: I'll likely create a static database of the most ethical/unethical selections	Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.				
9	FE: Create UI interactive button to display ethics info from db	Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.				
10							

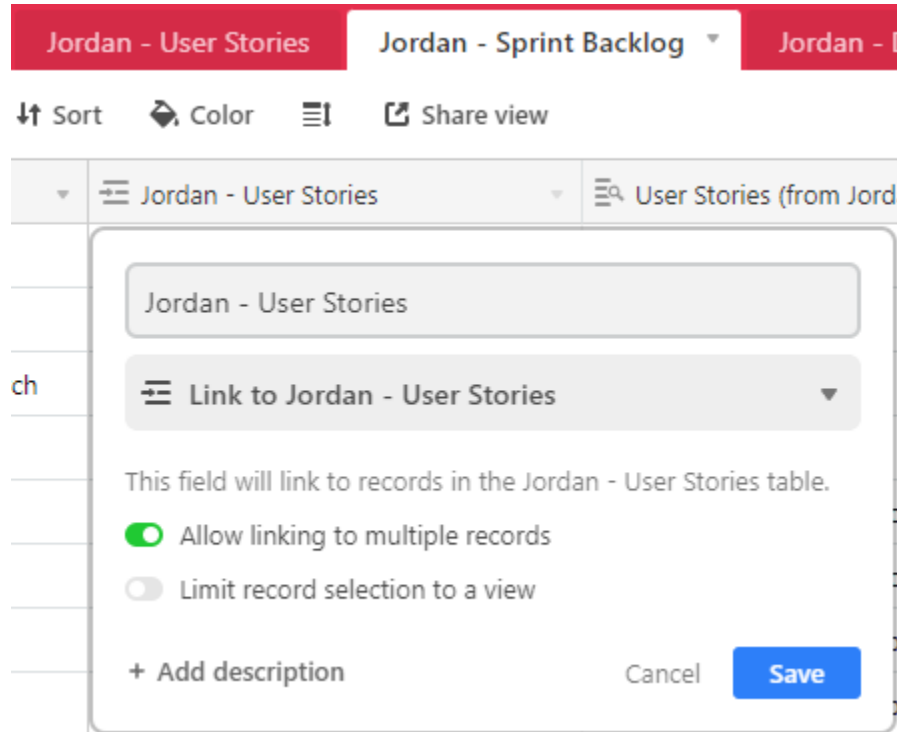
d) Now that you’ve selected your Sprint user stories, you will define several tasks for each user story—the tasks you’ll need to complete to complete the

user story. Add tasks to each user story and take **screenshots** showing each user story's tasks in your task management system. **Note:** It might work best to make your user story a task and your tasks subtasks of the user story.

1) User stories and backlog are in separate tabs



2) I have linked the user stories from tab 1 into the related tasks of the backlog in tab 2



3) The backlog is linked to the user stories so each task is connected to the related user story

<input type="checkbox"/>	Tasks
1	FE: Create functionality for user to enter location (initial setup)
2	Research: Find API for restaurant listings
3	BE: Alternatively, use "beautifulsoup4" python module for directed google search
4	FE: Create interface to display results
5	Create minimal and clear interface to quickly see the milkshake selections
6	BE: use location search to find nearby locs serving shakes
7	Find reliable database for ethical restaurants
8	BE: I'll likely create a static database of the most ethical/unethical selections
9	FE: Create UI interactive button to display ethics info from db
10	

3a) Linked stories and in the next column to right in the backlog view

Jordan - User Stories	User Stories (from Jordan - User Stories)
Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.
Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.
Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.
Where to Go	As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.
Shake at a Glance	As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.
Shake at a Glance	As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.
Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.
Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.
Shake Source	As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.

- e) Lastly, you'll need a **Definition of Done** for each user story. Figure out where to put this on your user story task in your task management system (e.g., in the task's description area).

#### Requirements for each Definition of Done:

- Placed with its user story
- Has at least four acceptance criteria
- Acceptance criteria should include checking that your **non-functional requirements** are met
- Acceptance criteria use the "Given... when..." format

Enter your Definitions of Done below and in your task management system.

### User Story Definition of Done 1

Which **user story** is this Definition of Done for?

As a milkshake enthusiast, I need to know where milkshakes are available in my town so I don't waste time searching.

What is its **Definition of Done**?

Acceptance criterion	For which quality attribute (if any)?
Given when a user enters their location, they will see a list nearby milkshake in their app	Accuracy



Given when a user presses the button for a location, the choice will be registered	Accuracy
Given when a user opens the app, they see the names of the restaurants	Memorability
Given when a user is looking at a location choice, they can see a “more info” button	Customizability

## User Story Definition of Done 2

Which **user story** is this Definition of Done for?

As a busy person, I want to see fast selections for milkshakes near me on the front page so I can choose quickly.

What is its **Definition of Done**?

Acceptance criterion	For which quality attribute (if any)?
Given when a user opens the app they see quick selections and can make a choice right away.	Memorability
Given when a user sets location they only get local results	Accuracy
Given when wants more options they can hit a button	Customizability
Given when a user makes a selection, they are taken to the pertinent page	Accuracy

## User Story Definition of Done 3

Which **user story** is this Definition of Done for?

As an ethically conscious person, I want to see info of my milkshake's source so I can feel good about my milkshake experience.

What is its **Definition of Done**?

Acceptance criterion	For which quality attribute (if any)?
Given when a user sets up their account they can check a box for it to display ethical info	Customizability
Given when a user clicks the info button they are sent to the info page	Accuracy
Given when a user views the choice locations	Memorability

they see an indicator symbol for “ethical choice”	
Given when a user is in the info page, they can see the ethical rating and summary	Accuracy

<input type="checkbox"/>	A Done Definition ▾	A Relevant Quality Attribute ▾	Relevant User Story ▾
1	Given when a user enters their location, they will see a list nearby milkshake in their app	Accuracy	Where to Go
2	Given when a user presses the button for a location, the page will show the choice	Accuracy	Where to Go
3	Given when a user opens the app, they see the names of the restaurants	Memorability	Where to Go
4	Given when a user is looking at a location choice, they can see a “more info” button	Customizability	Where to Go
5	Given when a user opens the app they see quick selections and can make a choice right away.	Memorability	Shake at a Glance
6	Given when a user sets location they only get local results	Accuracy	Shake at a Glance
7	Given when wants more options they can hit a button	Customizability	Shake at a Glance
8	Given when a user makes a selection, they are taken to the pertinent page	Accuracy	Shake at a Glance

## 5) UI Design with the CSH

Create a **paper prototype** of Milestone #1’s UI design. **Low-fidelity** is acceptable and appropriate. Make your UI design **reflect all the CSH**.

Requirements for paper prototype:

- Show **every** screen / **user-facing view**
- Indicate **what** users can interact **with** (Ex: make buttons look buttony)
- Indicate **how** users interact if it’s not obvious (Ex: arrows to show an element can be rotated)
- Indicate **what happens** when users interact (Ex: a modal appears)
- Must have **no obvious violations of the CSH**. Graders will look at your work but won’t spend all day scrutinizing it!

Doesn’t have to be a graphical user interface. Can be text-based / speech-controlled / a robot / etc. (but don’t design a robot if you can’t implement a robot during the remainder of this term!)

You can change your design later if you want to.

(a) Paste **scans / photos / screenshots** of your paper prototype below.



## Settings

*Back to Main*

*My Location* Albany,  
OR

*Search Distance* 25 mi

*Show Ethic Cow* ☒

*Weather Shake* ☒

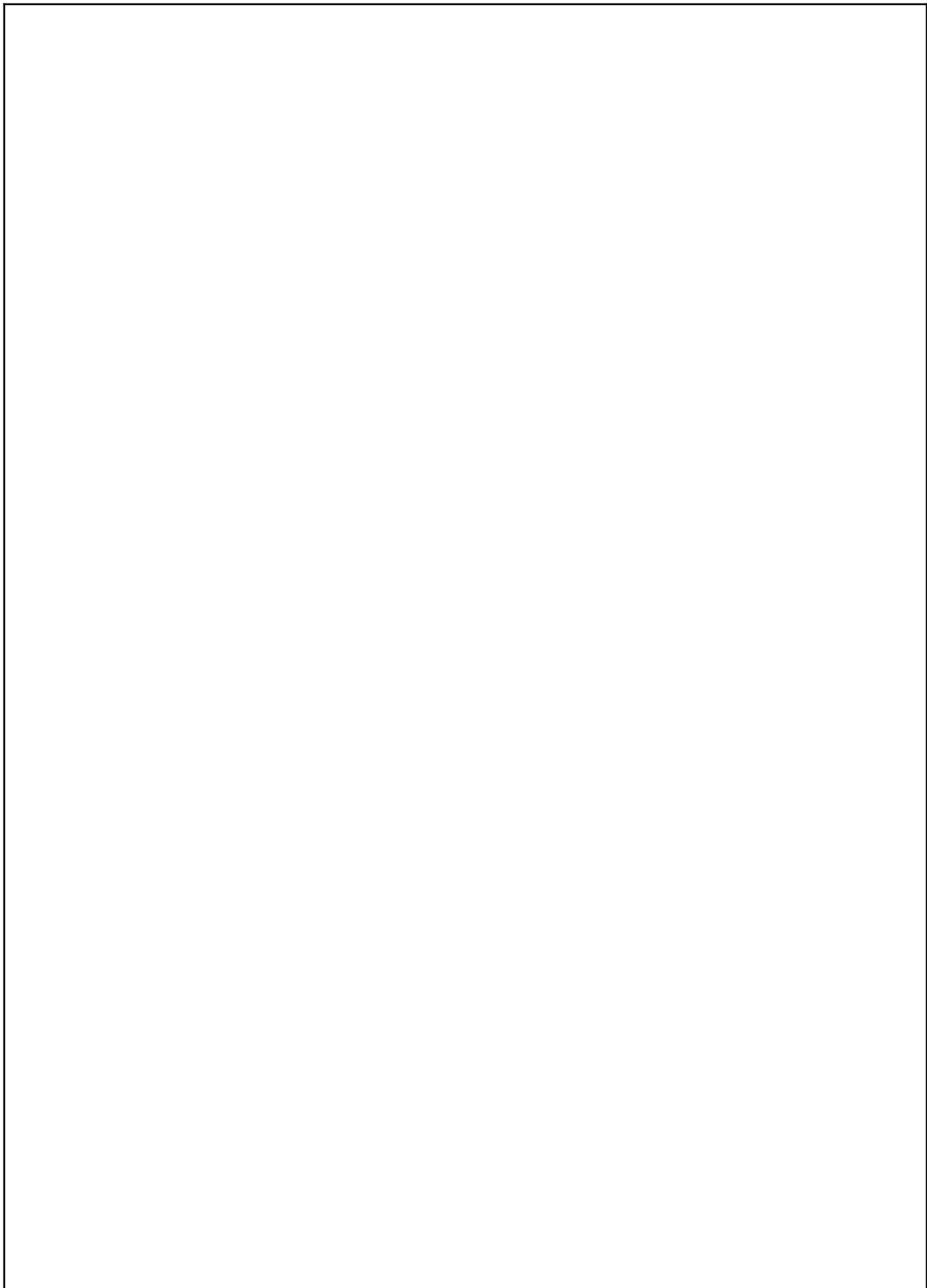
## Information

*Back to Main*

*Shake Shake*



*Shake shack sources all of  
their dairy products from  
happy cow farms!*



(b) How does your design **reflect each CSH**? (1+ sentence per CSH)

<b>CSH</b>	<b>How your design reflects it</b>
<b>1</b>	My app is very selective and suitable for the average Abi.
<b>2</b>	The benefits of my app are immediately obvious: get a milkshake quickly!
<b>3</b>	My app is very simple, but allows some customization for those who want more information.
<b>4</b>	The cost of my app is very minimal, you get the results you want in an easy to interpret interface.
<b>5</b>	My app has very familiar features, such as the cow that indicates an ethical selection. It will be easy to memorize and understand at first glance.
<b>6</b>	It's simple to go back to the main page, so users won't be worried to select new tabs.
<b>7</b>	The path through my app is very explicit and simple.
<b>8</b>	There are ways to try different approaches (select from larger list of restaurants rather than the top 3-4)

Now that you have a plan, begin implementation!

## **Submission**

PDF or Word format via Canvas.

## **Grading**

You are responsible for satisfying all criteria listed in the Canvas rubric for this assignment. You will be able to revise this assignment if you miss points.

## **Questions?**

Please ask via Ed so that others can benefit from the answer.