Software Requirements Specification

for

My CookBook App

Version 1.0 approved

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Course Project

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Revision History:

Name	Date	Reason For Changes	Version

A. Project Blastoff

1. The Purpose of the Project

1a. Project Purpose

XYZ CookBooks has approached us with the following description:

Recipes can be difficult to find, organize, and use. People often reuse the same boring recipes over and over again. With busy schedules people don't have the time or energy to research recipes and plan meals. Without planning people tend to make unhealthy choices, getting their food from convenience stores or fast food restaurants. XYZ CookBooks are looking for an application that can be used to help users create and share their recipes.

1b. The Background of the Business

Our sponsor, XYZ CookBooks deals with printed and online cookbooks. They are looking to expand their business with a social media cookbook application. They are envisioning users creating and sharing their own recipes.

1c. Goals of the Project

Main Project Goal:

Purpose: To allow users to create and share their recipes.

Advantage: Users will be able to easily create and share a recipe.

Measurement: A user will be able to create a new recipe in under three minutes, share it in less than thirty seconds.

Secondary Project Goal:

Purpose: To help people create delicious, healthy meals.

Advantage: Users will be more likely to return if they enjoy these recipes.

Measurement: Eighty percent of all users will use the system twice.

2. The Stakeholders

2a. The Sponsor

      XYZ Cookbooks

2b. Interested Stakeholders

      Recipe Database Stakeholder

      IT Support (operational support)

      Core team:

            Project manager

            Analysts

            System Designer

2c. Other Stakeholders

      Consultants:

            Cookbook company marketing department

            Social media experts

            Technology experts

            Security experts

2d. The Hands-On Users of the Product

      Regular users (users, normal operators)

2e. Personas

      Abby, 27, Minneapolis:

            Abby regularly uses other social media applications and is comfortable posting things online. Like most people, she's busy during the work week and needs help planning and creating healthy meals. She's looking for an easy way to learn and share new recipes.

2f. Maintenance Users and Service Technicians

Software maintenance team (maintenance operators)

3. Constraints

3a. Solution Constraints

Relevant for version 1.0:

This product shall be operable on web browsers, Android, and iOS. This is

the current technology used for social media applications.

3b. Partner or Collaborative Applications

This product will collaborate with other social media applications such as

Facebook, Instagram, Twitter, and other as-yet undiscovered applications.

3c. Anticipated Workplace Environment

The user is expected to use either a computer or other internet-connected

device to use the system. The users may be in various settings including settings

with low light or outdoors.

3d. Schedule Constraints

Initial Project Schedule:

May				June			
W1	W2	W3	W4	W1	W2	W3	W4
		Proposal and Blastoff					
			Trawling/Design				
				Recipe Display			
				Add/Remove Recipe			
					Add/Remove Category		
					Edit Recipe		
						Connect to Social Media	
						Share Recipe	
							Cleanup
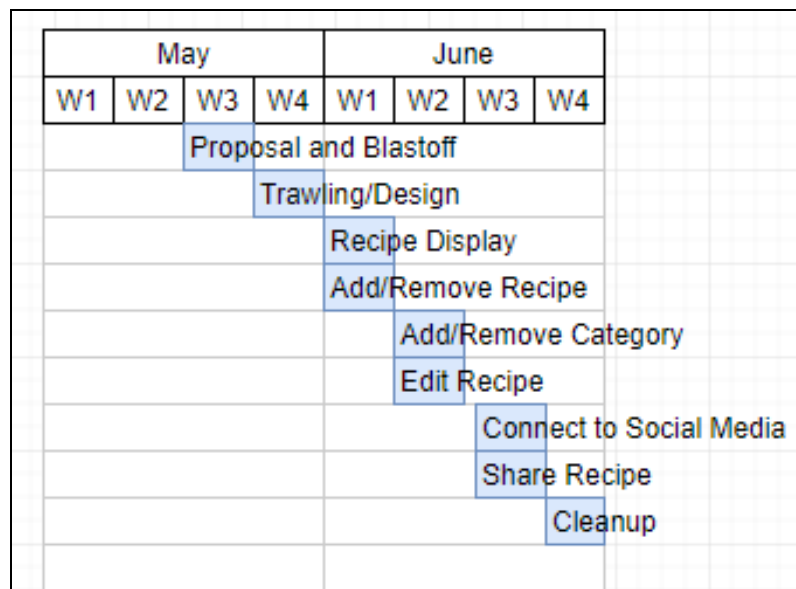
3e. Budget Constraints

The budget for the project is $25,000 paid for by XYZ Cookbooks.

4. Naming Conventions and Terminology

4a. Glossary of All Terms Used by Stakeholders Involved in the Project

Category: A general grouping of a type of recipe (dessert, side-dish, salad, etc.).

Cookbook: A collection of recipes.

Create: To produce a new category, cookbook, recipe, or ingredient.

Edit: To revise an existing category, cookbook, recipe, or ingredient.

Ingredient: An edible element of a recipe.

Instructions: A set of steps for making a meal.

Meal: Food served and eaten in one sitting.

My CookBook App: The finished application.

Recipe: A set of directions for making a meal. Includes instructions and a list of ingredients.

Share: To electronically distribute a cookbook or recipe to a social group.

Virtual Store: Where the customer downloads the product from.

B. Project Scope

5. The Scope of the Work

5a. The Context of the Work

The scope of the work involves the creation and editing of electronic recipes and cookbooks. Outside of the scope is the user, the person who interacts with the system. Also outside of the scope is the virtual store used to download the application, the database used to store recipe information, and the social media applications which the product interacts with.
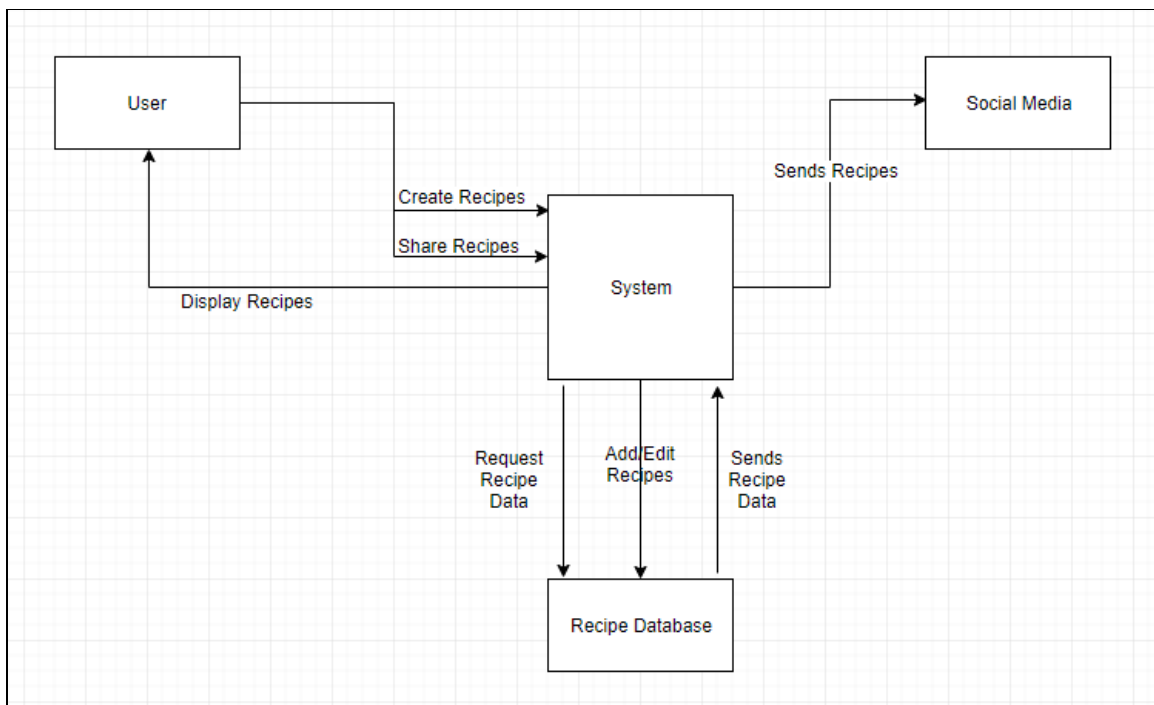
C. Business Use cases (BUCs)

6a. Work Partitioning

Major Business Events:

- Event Description: User downloads the application.

  Trigger: The user wants to try the product for the first time.
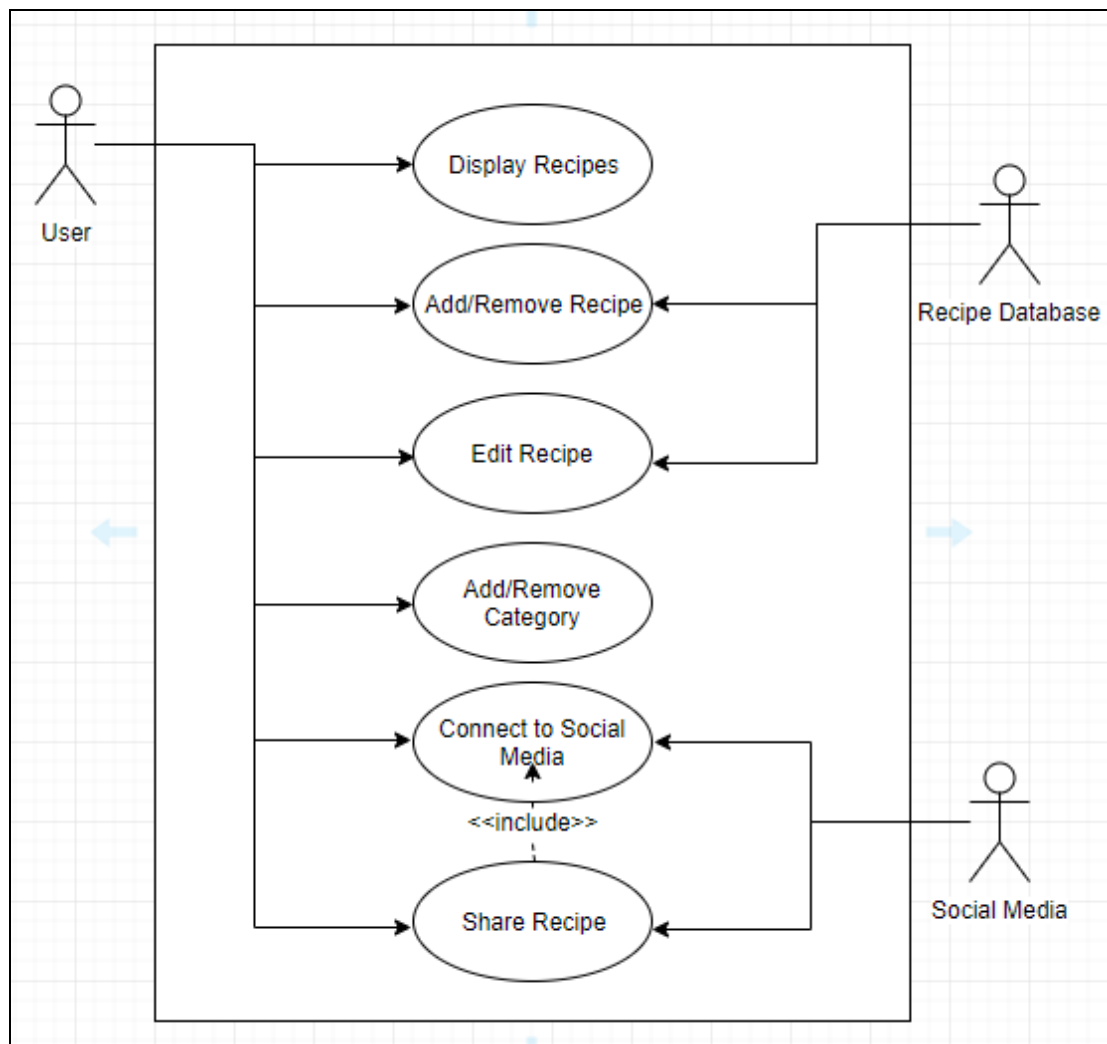
- Event Description: User adds a new category.

  Trigger: The user wants to create a new category for sorting their recipes.

- Event Description: User adds a new recipe.

  Trigger: The user wants to create and save a new recipe.

- Event Description: User displays a recipe.

  Trigger: The user wants to see an existing recipe.

- Event Description: User edits or deletes an existing category.

  Trigger: The user wants to edit or delete a category they already have.

- Event Description: User edits or deletes an existing recipe.

  Trigger: The user wants to edit or delete a recipe they already have.

- Event Description: User shares to social media.

  Trigger: The user wants to share content to their social media group.

6b. Business Use Cases (BUC):

Initial Use-Case Model:

Business use-cases based on the business events:

- Event Description: User downloads the application.

  BUC 1: Download the application

- Event Description: User adds a new category.

  BUC 2: Add a category.

- Event Description: User adds a new recipe.

  BUC 3: Add a recipe.

- Event Description: User displays a recipe.

  BUC 4: Display a recipe.

- Event Description: User edits or deletes an existing category.

  BUC 5: Edit a category.

- Event Description: User edits or deletes an existing recipe.

  BUC 6: Edit a recipe.

- Event Description: User shares to social media.

  BUC 7: Share to social media.

D. Techniques Used to Investigate the Work

7a. Investigation Techniques

7a. Investigation Techniques

To better understand the business events, we started by examining the context model. By looking at the data flows, we were able to determine the business events which caused them.

Once we determined the business events, we were able to identify the responding business use-case. The business use-cases were further elaborated by creating business use-case scenarios.

Using prototypes also enabled us to better understand the problem. The prototypes allowed us to examine some of the possibilities for our product.

E. Scenarios

8a. BUC Scenarios:

Business Event: User downloads the application.

Use-Case Name and Number: Download the Application, BUC #1

Trigger: The user wants to use the product for the first time.

Preconditions: The user must have an internet-connected device.

Interested Stakeholders: Sponsor

Active Stakeholders: User stakeholder, Virtual Store stakeholder

Normal Case Steps:

1. The user logs into their virtual store account.

2. The user searches for the application 'My CookBook App'.

3. Once the user finds the correct application, they select to download it.

4. The application is downloaded and installed to their device.

Alternatives: None.

Exceptions: E 1.1: The user does not have a virtual store account. They must have an account to search for and download the product.

E 1.2: The user does not have the required available memory. Installation is cancelled.

Outcome: The product is installed and able to be opened on the user's device.

Business Event: User adds a new category.

Use-Case Name and Number: Add a Category, BUC #2

Trigger: The user wants to add a new category for organizing recipes.

Preconditions:The application must already be installed.

Interested Stakeholders: Sponsor

Active Stakeholders:User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user requests to create a new category.

2. The user enters a category name.

   Alternative 2.2.1: The user may choose from predefined categories.

3. The user is adds an image for the category.

   Alternative 2.3.1: The user may choose from predefined category images.

4. The user saves the new category.

Alternatives: None.

Exceptions: The user fails to either enter a category name or select an image. The user is prompted to add the missing component before saving.

Outcome: A new category has been created.

Business Event: User adds a new recipe.

Use-Case Name and Number: Add a Recipe, BUC #3

Trigger: The user wants to add a new recipe.

Preconditions: The application must already be installed. A category must already exist for the new recipe to be placed in.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user requests to create a new recipe.

2. The user enters a recipe name.

3. The user enters the ingredients for the recipe.

4. The user enters the directions for the recipe.

5. The user selects an image for the recipe.

6. The user saves the recipe.

Alternatives: The user may add one or more ingredients for each recipe.

Exceptions: The user has failed to add a component. The product prompts the user for the missing component before saving the new recipe.

Outcome: A new recipe has been created and saved.

Business Event: User displays a recipe.

Use-Case Name and Number: Display a Recipe, BUC #4

Trigger: The user wants to view an existing recipe.

Preconditions: The application must already be installed. The recipe must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user opens the application.

2. The user selects the relevant recipe category.

3. The user selects the recipe that they want to see.

4. The requested recipe is displayed.

Alternatives: The user may select ingredients from the recipe to add to their shopping list.

Exceptions: None.

Outcome: The requested recipe has been displayed.

Business Event: User edits or deletes an existing category.

Use-Case Name and Number: Edit a Category, BUC #5

Trigger: The user wants to alter or delete a category.

Preconditions: The application must already be installed.The category must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders:User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user opens the application.

2. The user selects to edit a category.

3. The user edits the existing category.

    Alternative 5.3.1 The user may delete the category.

4. The recipe database is updated with the category changes.

Alternatives: None.

Exceptions: None.

Outcome: The category has been updated or deleted.

Business Event: User edits or deletes an existing recipe.

Use-Case Name and Number: Edit a Recipe, BUC #6

Trigger: The user wants to edit or delete a recipe.

Preconditions: The application must already be installed. The recipe must already

exist.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user opens the application and selects a relevant category.

2. The user requests to edit a recipe.

3. The user edits the existing recipe.

    Alternative 5.3.1 The user may delete the recipe.

4. The recipe database is updated with the recipe changes.

Alternatives: A user may edit one or more recipe components.

Exceptions: None.

Outcome: The recipe has been updated or deleted.

Business Event: User shares to social media.

Use-Case Name and Number: Share to Social Media, BUC #7

Trigger: The user wants to share their recipe to social media.

Preconditions: The application must already be installed and the recipe must already exist. The user's social media account(s) must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder, Social Media Stakeholder

Normal Case Steps:

1. The user opens the application.

2. The user selects the relevant recipe category.

3. The user selects the recipe that they wish to share.

4. The user selects the option to share their recipe.

5. The user selects which social media services to share to.

6. The user confirms their selections.

7. The selected recipe is shared to social media.

Alternatives: The user may choose to share to multiple social media services at the same time.

Exceptions: None.

Outcome: The selected recipe has been shared to social media.

8b. PUC Scenarios:

Product Use Case Name and Number: Download the Application, PUC #1

Trigger: The user wants to use the product for the first time.

Preconditions: The user must have an internet-connected device.

Interested Stakeholders: Sponsor

Active Stakeholders: User stakeholder, Virtual Store stakeholder

Normal Case Steps:

1. The user searches for the application using their virtual store account.

2. The user chooses to download the product from the virtual store.

3. The product is downloaded and installed onto the user's device.

Alternatives: None.

Exceptions: E 1.1: The user does not have a virtual store account. They must have

an account to search for and download the product. The virtual store will notify the

user if they do not have an account.

E 1.2: The user does not have the required available memory. Installation is paused.

Outcome: The product is installed and able to be opened on the user's device.

Product Use Case Name and Number: Add a Category, PUC #2

Trigger: The user wants to add a new category for organizing recipes.

Preconditions:The application must already be installed.

Interested Stakeholders: Sponsor

Active Stakeholders:User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user uses the product to request to create a new category.

2. The product prompts the user to enter a category name.

   Alternative 2.2.1: The user may choose from predefined categories.

3. The product prompts the user to add an image for the category.

   Alternative 2.3.1: The user may choose from predefined category images.

4. The product prompts the user to save the new category.

Alternatives: None.

Exceptions: The user fails to either enter a category name or select an image. The

user is prompted to add the missing component before saving.

Outcome: A new category has been created.

Product Use Case Name and Number: Add a Recipe, PUC #3

Business Event: User adds a new recipe.

Trigger: The user wants to add a new recipe.

Preconditions: The application must already be installed. A category must already exist for the new recipe to be placed in.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user uses the product to request to create a new recipe.

2. The product prompts the user to enter a recipe name.

3. The product prompts the user to enter the ingredients for the recipe.

4. The product prompts the user to enter the directions for the recipe.

5. The product prompts the user to add an image for the recipe.

6. The product prompts the user to save the recipe.

Alternatives: The user may add one or more ingredients for each recipe.

Exceptions: The user has failed to add a component. The product prompts the user for the missing component before saving the new recipe.

Outcome: A new recipe has been created and saved.

Product Use Case Name and Number: Display a Recipe, PUC #4

Trigger: The user wants to view an existing recipe.

Preconditions: The application must already be installed. The recipe must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user uses the product to select a relevant recipe category.

2. The user uses the product to select the recipe that they want to see.

3. The product displays the requested recipe.

Alternatives: The user may use the product to select ingredients from the recipe to add to their shopping list.

Exceptions: None.

Outcome: The requested recipe has been displayed.

Product Use Case Name and Number: Edit a Category, PUC #5

Trigger: The user wants to edit or delete a category.

Preconditions: The application must already be installed.The category must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders:User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user uses the product to select to edit a category.

2. The product prompts the user to edit the existing category.

   Alternative 5.2.1 The user may delete the category.

3. The product prompts the user to save their changes.

   Alternative 5.3.1 The user may discard the changes without saving.

4. The product updates the recipe database with the category changes.

Alternatives: None.

Exceptions: None.

Outcome: The category has been updated or deleted.

Product Use Case Name and Number: Edit a Recipe, PUC #6

Trigger: The user wants to alter or delete a recipe.

Preconditions: The application must already be installed. The recipe must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder

Normal Case Steps:

1. The user uses the product to request to edit a recipe.

2. The product prompts the user to edit the existing recipe.

   Alternative 6.2.1 The user may delete the recipe.

3. The product prompts the user to save their changes.

   Alternative 6.3.1 The user may discard the changes without saving.

4. The product updates the recipe database with the recipe changes.

Alternatives: A user may edit one or more recipe components.

Exceptions: None.

Outcome: The recipe has been updated or deleted.

Product Use Case Name and Number: Share to Social Media, PUC #7

Trigger: The user wants to share their recipe to social media.

Preconditions: The application must already be installed and the recipe must already exist.The user's social media account(s) must already exist.

Interested Stakeholders: Sponsor

Active Stakeholders: User Stakeholder, Recipe Database Stakeholder, Social Media Stakeholder

Normal Case Steps:

1. The user uses the product to select the recipe that they wish to share.

2. The user requests to share the recipe to social media

3. The product prompts the user to select which social media services to share to.

   Alternative 7.3.1 The user may choose to share to multiple social media services at the same time.

4. The product prompts the user to confirm their selections.

5. The product shares the selected recipes to social media.

Alternatives: None.

Exceptions: None.

Outcome: The selected recipe has been shared to social media.

F. Techniques Used to Understand the Real Problem

9a. Techniques for Understanding the Real Problem

To understand the real problem, we first needed to look for the essence of the business problem, the reason for building this product. We know that our sponsor, XYZ Cookbooks, is looking for a way to better serve their customers. They want to make it easier for cookbook users to create, edit, and share recipes.

By thinking about the problem in an abstract manner, we attempted to remove judgements and expectations. We especially wanted to remove ideas regarding technological solutions.

By applying systemic ways of thinking, we set out to view our product as an aggregation of parts. This allowed us to better see how different functions work together, laying the groundwork for a more efficient solution.

We also developed a persona for a typical user. Our persona, Abby, was created to aid us in decision making. As our use-case scenarios evolved, we were able to refer to our Abby persona to help understand the needs and wants of the typical user.

G. Techniques Used to Start the Solution

10a. Techniques for Starting the Solution

Starting the solution means we began to move away from thinking about our product in abstract terms and instead moved towards reality. This is the point at which we made decisions regarding the automation boundary of our product, the point at which a portion of the work becomes automated.

To find the best solution, we needed to determine the best way to achieve the desired outcome for each use-case. By examining the data flow for the use-cases, we were able to devise the best automation boundaries for our product.

At this point we returned to our user persona, Abby, to help us determine the boundary between the work and active adjacent systems (the users). Using Abby, we were able to determine which portion of the work needed to be included in our product scope.

H. Functional Requirements

11a. Functional Requirements

For Product Use Case Name and Number: Download the Application, PUC #1

Normal Case Steps:

1. The user searches for the application using their virtual store account.

- FR 1.1.1: The product shall be searchable in common virtual stores.

  Rationale: The is how social media applications are searched for.

  Fit Criteria: The product shall be searchable from virtual stores in accordance with the company's virtual store standards.

2. The user chooses to download the product from the virtual store.

- FR 1.2.1: The product shall be downloadable from common virtual stores.

  Rationale: The is how social media applications are installed on a user's device.

  Fit Criteria: The product shall be available for download in accordance with the company's virtual store standards.

3. The product is downloaded and installed onto the user's device.

- FR 1.3.1: The product shall be compatible with multiple operating systems including iOS, Android, Windows, and other systems as defined by company compatibility standards.

Rationale: The product will need to operate on different types of devices and on different operating systems.

Fit Criteria: The product shall comply with current company standards regarding system and device compatibility.

Exceptions: E 1.1: The user does not have a virtual store account. They must have an account to search for and download the product. The virtual store will notify the user if they do not have an account.

E 1.2: The user does not have the required available memory. Installation is paused.

- FR E 1.2.1: The product shall not be unnecessarily large.

  Rationale: Customers will not want a product that uses a lot of memory.

  Fit Criteria: The product will comply with company standards regarding memory requirements.

For Product Use Case Name and Number: Add a Category, PUC #2

Normal Case Steps:

1. The user uses the product to request to create a new category.

- FR 2.1.1: The product shall allow a user to create a new recipe category.

  Rationale: People use categories to organize cookbook recipes.

  Fit Criteria: The product shall be able to let the user create a new category.

2. The product prompts the user to enter a category name.

- FR 2.2.1: The product shall allow a user to enter a category name.

  Rationale: Users may want to use unique category names.

  Fit Criteria: The product shall be let a user enter a category name.

  Alternative 2.2.1: The user may choose from predefined categories.

- FR 2.2.1.A.1: The product shall allow a user to select from predefined categories.

  Rationale: Some recipe categories are standard (desserts, main course, etc.).

  Fit Criteria: The product shall let a user select from predefined categories.

3. The product prompts the user to add an image for the category.

- FR 2.3.1: The product shall allow a user to add their own category image.

    Rationale: People will want an image to represent the recipe category.

    Fit Criteria: The product shall let a user add their own category image.

- FR 2.3.2: The product shall support various types of images.

    Rationale: People may want to use different types of images (JPEG, gif, etc.).

    Fit Criteria: The product shall conform to company standards regarding image compatibility.

    Alternative 2.3.1: The user may choose from predefined category images.

- FR 2.3.1.A.1: The product shall allow a user to choose from predefined category images.

    Rationale: Users may want a more convenient option for selecting category images.

    Fit Criteria: The product shall let a user choose from predefined category images.

4. The product prompts the user to save the new category.

- FR 2.4.1: The product shall allow the user to save the new category.

    Rationale: The new category will need to be saved.

    Fit Criteria: The product shall let a user save their new category.

Exceptions: The user fails to either enter a category name or select an image. The user is prompted to add the missing component before saving.

- FR 2.E.1: The product shall prompt the user to add any missing components before saving a category.

    Rationale: Some category components may be missing.

    Fit Criteria: The product shall notify the user if they are missing category components.

For Product Use Case Name and Number: Add a Recipe, PUC #3

Normal Case Steps:

1. The user uses the product to request to create a new recipe.

    ●   FR 3.1.1: The product shall allow a user to create a new recipe.

        Rationale: People will want to create and save their own recipes.

        Fit Criteria: The product shall let a user create a new recipe.

2. The product prompts the user to enter a recipe name.

    ●   FR 3.2.1: The product shall allow a user to enter a recipe name.

        Rationale: The user will have their own recipe names.

        Fit Criteria: The product shall let a user enter a recipe name.

3. The product prompts the user to enter the ingredients for the recipe.

    ●   FR 3.3.1: The product shall allow a user to enter ingredients for their recipes.

        Rationale: Recipes use ingredients.

        Fit Criteria: The product shall let a user enter ingredients.

    ●   FR 3.3.2: The product shall allow the user to enter attributes for the

        ingredients including units and volume.

        Rationale: Ingredients will vary in unit type and amount.

        Fit Criteria: The product shall let a user enter attributes for ingredients.

4. The product prompts the user to enter the directions for the recipe.

    ●   FR 3.4.1: The product shall allow a user to enter recipe directions.

        Rationale: Recipes need directions.

        Fit Criteria: The product shall let a user enter recipe directions.

5. The product prompts the user to add an image for the recipe.

    ●   FR 3.5.1: The product shall allow a user to add an image for a recipe.

        Rationale: People will want to add a picture of their finished recipe.

        Fit Criteria: The product shall let a user add a recipe image.

6. The product prompts the user to save the recipe.

- FR 3.6.1: The product shall allow the user to save the new recipe.

   Rationale: The new recipe needs to be saved.

   Fit Criteria: The product shall let a user save their new recipe.

Alternatives: The user may add one or more ingredients for each recipe.

- FR 3.A.1: The product shall allow a user to add one or more ingredients for each recipe.

   Rationale: Recipes are comprised of one or more ingredients.

   Fit Criteria: The product shall let a user add one or more ingredients for each recipe.

Exceptions: The user has failed to add a component. The product prompts the user for the missing component before saving the new recipe.

- FR 3.E.1: The product shall prompt the user to add any missing components before saving a recipe.

   Rationale: Some recipe components may be missing.

   Fit Criteria: The product shall notify the user if they are missing recipe components.

For Product Use Case Name and Number: Display a Recipe, PUC #4

Normal Case Steps:

1. The user uses the product to select a relevant recipe category.

- FR 4.1.1: The product shall compile and display existing recipe categories.

   Rationale: The user needs to be able to view the recipe categories.

   Fit Criteria: The product shall be able to compile and display existing recipe categories.

- FR 4.1.2: The product shall allow a user to select from existing recipe categories.

  Rationale: The user needs to select a recipe category before viewing recipes.

  Fit Criteria: The product shall let a user select from existing recipe categories.

2. The user uses the product to select the recipe that they want to see.

- FR 4.2.1: The product shall allow the user to select from existing recipes.

  Rationale: People will choose individual recipes to view.

  Fit Criteria: The product shall let a user select from existing recipes.

3. The product displays the requested recipe.

- FR 4.3.1: The product shall display the requested recipe.

  Rationale: People will want to view their recipes.

  Fit Criteria: The product shall be able to display the requested recipe.

Alternatives: The user may use the product to select ingredients from the recipe to add to their shopping list.

- FR 4.A.1: The product shall allow the user to add selected ingredients to a shopping list.

  Rationale: People may want to make a shopping list based on recipe ingredients.

  Fit Criteria: The product shall let a user add ingredients to a shopping list.

- FR 4.A.2: The product shall allow the user to edit ingredients on a shopping list.

  Rationale: The shopping list may need to be updated.

  Fit Criteria: The product shall let a user edit their shopping list.

For Product Use Case Name and Number: Edit a Category, PUC #5

Normal Case Steps:

1. The user uses the product to select to edit a category.

- FR 5.1.1: The product shall allow a user to edit or delete an existing category.

    Rationale: Categories may change.

    Fit Criteria: The product shall let a user edit or delete a category.

2. The product prompts the user to edit the existing category.

- FR 5.2.1: The product shall allow a user to edit one or more components of a category.

    Rationale: There may be different parts of the category that the user wishes to change.

    Fit Criteria: The product shall let a user edit one or more components of a category.

    Alternative 5.2.1 The user may delete the category.

- FR 5.2.1A.1: The product shall allow a user to delete an existing category.

    Rationale: A user may no longer want an existing category.

    Fit Criteria: The product shall let a user delete an existing category.

3. The product prompts the user to save their changes.

- FR 5.3.1: The product shall allow a user to save their category changes.

    Rationale: The changes need to be saved.

    Fit Criteria: The product shall let a user save their category changes.

    Alternative 5.3.1 The user may discard the changes without saving.

- FR 5.3.1.A.1: The product shall allow a user to discard category changes without saving.

    Rationale: A user may not want to keep the changes that they made.

    Fit Criteria: The product shall let a user discard category changes without saving.

4. The product updates the recipe database with the category changes.

- FR 5.4.1: The product shall update the recipe database with the changes.

  Rationale: The changes will need to be saved to the database.

  Fit Criteria: The product shall be able to update the recipe database with the changes.

For Product Use Case Name and Number: Edit a Recipe, PUC #6

Normal Case Steps:

1. The user uses the product to request to edit a recipe.

- FR 6.1.1: The product shall allow a user to edit an existing recipe.

  Rationale: Recipes may change.

  Fit Criteria: The product shall let a user edit a recipe.

2. The product prompts the user to edit the existing recipe.

- FR 6.2.1: The product shall allow a user to edit one or more components of a recipe.

  Rationale: There may be different parts of the recipe that the user wishes to change.

  Fit Criteria: The product shall let a user edit one or more components of a recipe.

  Alternative 6.2.1 The user may delete the recipe.

- FR 6.2.1.A.1: The product shall allow a user to delete an existing recipe.

  Rationale: A user may no longer want an existing recipe.

  Fit Criteria: The product shall let a user delete an existing recipe.

3. The product prompts the user to save their changes.

- FR 6.3.1: The product shall allow a user to save their recipe changes.

  Rationale: The changes need to be saved.

  Fit Criteria: The product shall let a user save their recipe changes.

Alternative 6.3.1 The user may discard the changes without saving.

- FR 6.3.1.A.1: The product shall allow a user to discard recipe changes without saving.

  Rationale: A user may not want to keep the changes that they made.

  Fit Criteria: The product shall let a user discard recipe changes without saving.

4. The product updates the recipe database with the recipe changes.

- FR 6.4.1: The product shall update the recipe database with the changes.

  Rationale: The changes will need to be saved to the database.

  Fit Criteria: The product shall be able to update the recipe database with the changes.

For Product Use Case Name and Number: Share to Social Media, PUC #7

Normal Case Steps:

1. The user uses the product to select the recipe that they wish to share.

- FR 7.1.1: The product shall allow users to choose which recipes to share to social media.

  Rationale: People will want to choose which recipes to share.

  Fit Criteria: The product shall let users choose which recipes to share to social media.

2. The user requests to share the recipe to social media

- FR 7.2.1: The product shall allow users to share their recipes to social media.

  Rationale: People will want to share their recipes.

  Fit Criteria: The product shall let users share their recipes on social media.

3. The product prompts the user to select which social media services to share to.

- FR 7.3.1: The product shall be compatible with common social media services.

  Rationale: People will want to share their recipes to social media.

  Fit Criteria: The product shall be compatible with common social media services in accordance with the company's social media standards.

  Alternative 7.3.1 The user may choose to share to multiple social media services at the same time.

- FR 7.3.1.A.1: The product shall allow users to share to multiple social media services at once.

  Rationale: People may want the convenience of sharing to more than one social media service at the same time.

  Fit Criteria: The product shall let users share to multiple social media services at once.

4. The product prompts the user to confirm their selections.

- FR 7.4.1: The product shall confirm the user's choices before sharing.

  Rationale: People do not want to share things accidentally.

  Fit Criteria: The product shall verify the user's wants before sharing.

5. The product shares the selected recipes to social media.

- FR 7.5.1: The product shall share the intended recipes to the user's social media account(s).

  Rationale: Once the user has confirmed their choices, the recipes should be shared.

  Fit Criteria: The product shall share the recipes to social media after confirming the user's wishes.

I. Non-Functional Requirements

12a. Look and Feel Requirements

- NFR 1: The product shall use text that is visible across multiple devices.

  Rationale: The text must be visible for readability.

  Fit Criteria: Text used shall conform to the company's standards regarding visibility.

- NFR 2: The product shall use colors which are easy to read.

  Rationale: Some colors can increase eye strain and make it difficult to read information.

  Fit Criteria: The product shall be certified by the company's marketing department as being easy to read.

- NFR 3: The product shall use animations that are long enough to allow the user to read information, but quick enough so the user doesn't feel that they are waiting.

  Rationale: Users don't want to be rushed or waiting.

  Fit Criteria: The product shall comply with company standards regarding animation speed.

- NFR 4: The product shall use fonts that are not cursive or complicated.

  Rationale: Hard-to-read fonts are off-putting to people.

  Fit Criteria: The product shall use fonts which comply to company standards.

- NFR 5: The product shall be used by people with no training

  Rationale: Users will not be expected to train to use the product.

  Fit criterion: A user can create a recipe in under five minutes 90 percent of the time. It shall never take more than fifteen minutes to create a recipe.

- NFR 6: The product shall allow for multiple languages.

  Rationale: Users may speak different languages.

  Fit criterion: The product shall comply with the company's language standards.

- NFR 7: The product shall not require a user to re-enter data.

  Rationale: Users will get frustrated with a product that makes them re-enter information.

  Fit criterion: A user shall never have to enter the same data more than once.

12b. Usability and Humanity Requirements

- NFR 8: The product shall use a layout that is comfortable and expected.

  Rationale: People will want to feel comfortable using the product.

  Fit Criteria: The product shall conform to company standards regarding the product layout.

- NFR 9: The product shall look the same across multiple devices.

  Rationale: Our product should look the same no matter what device the user has.

  Fit Criteria: The product shall have the same user-interface look across multiple devices.

- NFR 10: The product shall be easy to navigate.

  Rationale: Users will be able to find what they want quickly. This will make them happy and be more likely to recommend our product to others.

  Fit Criteria: Ninety percent of the target audience will be able to navigate the system the first time without guidance.

12c. Performance Requirements

- NFR 11: The product shall be available for use 24 hours per day, 7 days per week.

  Rationale: People should be able to use the product at any time.

  Fit criterion: The product shall be available at any time.

- NFR 12: The product shall allow a user to save multiple recipes to their cookbook.

  Rationale: People will have more than one recipe to save.

  Fit Criteria: The product shall be capable of storing 500 recipes for each cookbook.

- NFR 13: The product shall seem fast.

  Rationale: People will not want to use a product that lags or stutters.

  Fit Criteria: There shall be no more than 3 seconds of wait time for each action.

- NFR 14: The product shall have a quick launch speed.

  Rationale: People don't want to wait for the product to launch.

  Fit Criteria: The product shall launch within 5 seconds ninety percent of the time. It shall never take more than 15 second for the product to launch.

- NFR 15: The product shall be expected to operate for a minimum of 2 years.

  Rationale: Our sponsor expects this product to function for at least 2 years.

  Fit criterion: The product shall remain operable for the next 2 years.

12d. Operational and Environmental Requirements

- NFR 16: The product shall be compatible with iOS, Android, Windows, and other common operating systems.

  Rationale: People may use different operating systems to run the product.

  Fit Criteria: The product shall be compatible with operating systems as defined by the company's operating system standards.

- NFR 17: The product shall be able to interface with human users to create recipes.

  Rationale: This is how the work is currently done.

  Fit criterion: The product shall be able to interface with human users.

- NFR 18: The product shall have a quick recovery time in case of an error.

  Rationale: People want a product that recovers quickly.

  Fit Criteria: In case of an error, the product shall recover in under 20 seconds ninety percent of the time.

12e. Maintainability and Support Requirements

- NFR 19: The product shall be entirely self-supporting.

  Rationale: This is the current plan for system support.

  Fit Criteria: The product shall not require outside system support.

- NFR 20: The product shall be maintainable by the sponsor, XYZ Cookbooks.

  Rationale: This is the current maintenance plan.

  Fit Criteria: The product shall not require any outside maintenance.

12f. Security Requirements

- NFR 21: The product shall protect itself from intentional abuse.

  Rationale: The system must be able to prevent data corruption.

  Fit criterion: The product shall conform to security standards regarding intentional abuse.

- NFR 22: The product shall reveal private information only in accordance with the organization's policy.

  Rationale: Customer information must be protected.

  Fit criterion: The product shall comply with company standards regarding customer privacy.

- NFR 23: The product shall protect itself in the event of malicious software programs such as worms, malware, and viruses.

  Rationale: The product must be resistant to common infections.

  Fit criterion: The product shall conform to security standards regarding common infections.

12g. Cultural Requirements

- NFR 24: The product shall not use any icons with religious or political meaning.

  Rationale: Polarizing icons may upset some users.

  Fit Criteria: The product shall be certified by the company communications

  department as being culturally acceptable.

12h. Compliance Requirements

- NFR 25: The product shall comply with applicable laws.

  Rationale: We do not wish to break any laws.

  Fit Criteria: The company legal department shall certify that the product is in

  compliance with any applicable laws.

- NFR 26: The product shall comply with the FDA and USDA regulations.

  Rationale: Our product deals with food goods, so these entities may be involved.

  Fit Criteria: The company legal department shall certify that the product is in

  compliance with any applicable FDA and USDA regulations.

J. Quality Gateway

13a. The Quality Gateway

Our quality gateway was designed to be a fast, easy method for testing our

project requirements. We wanted to ensure that each of our requirements passed

through the quality gateway before being added to the product specifications.

The first thing that we looked for was project scope, were any of our

requirements outside of the scope of the project? This could mean that the project

scope wasn't defined correctly, or that the requirement shouldn't be part of the

specification.

Once we knew the requirements were in scope, we tested them for relevancy.

Did the requirement contribute towards the project goal? We also looked for the

completeness of each requirement. Were they missing a description, rationale, or fit

criteria? This allowed us to check that each requirement was unambiguous and testable.

We also tested the viability of the requirements. Could the requirement actually be implemented in the manner that we want? Lastly, we looked for gold-plated requirements, requirements that don't really add any value to the product.

K. Techniques Used to Check Requirement Completeness

14a. Techniques for Checking Requirement Completeness

The first step we took to check requirement completeness was to evaluate the project scope. Looking at our context model, we determined if every data flow was represented by a business event and corresponding business use-case. This allowed us to look for any missing business events.

Next we looked to identify any non-events that might be a part of the work. We needed to be sure that every event and non-event was accounted for. From the events and non-events, we reviewed the completeness of our business use-cases.
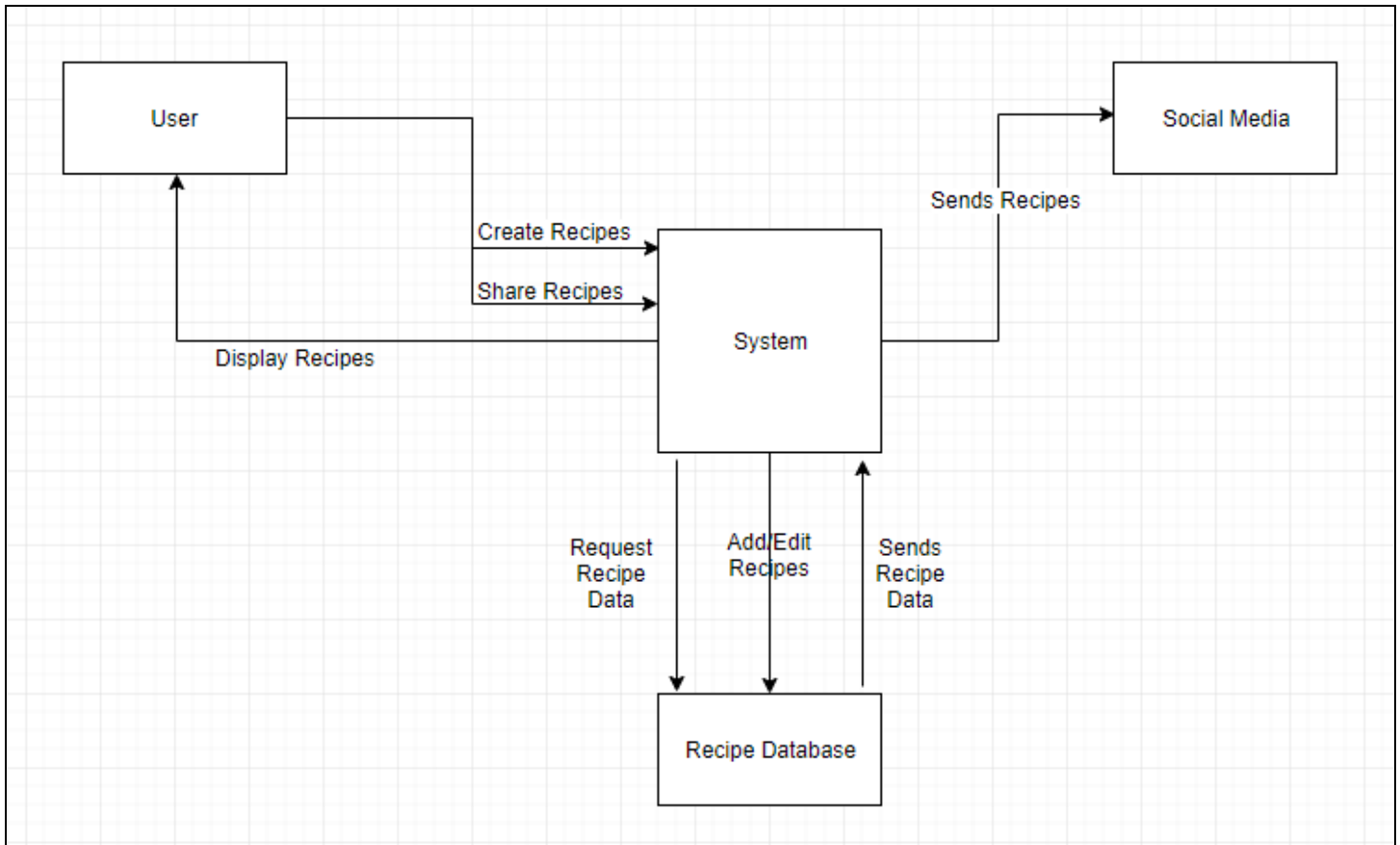
Looking at our class model gave us a better understanding of our use-case compleness. By doing a CRUD (create, reference, update, delete) check, we looked to see if we had classes that were referenced without being created or classes that were created without being referenced.

Lastly we looked for custodial processes, processes that are used for product maintenance. This allowed us to be sure that all of our data was being processed and updated as needed.
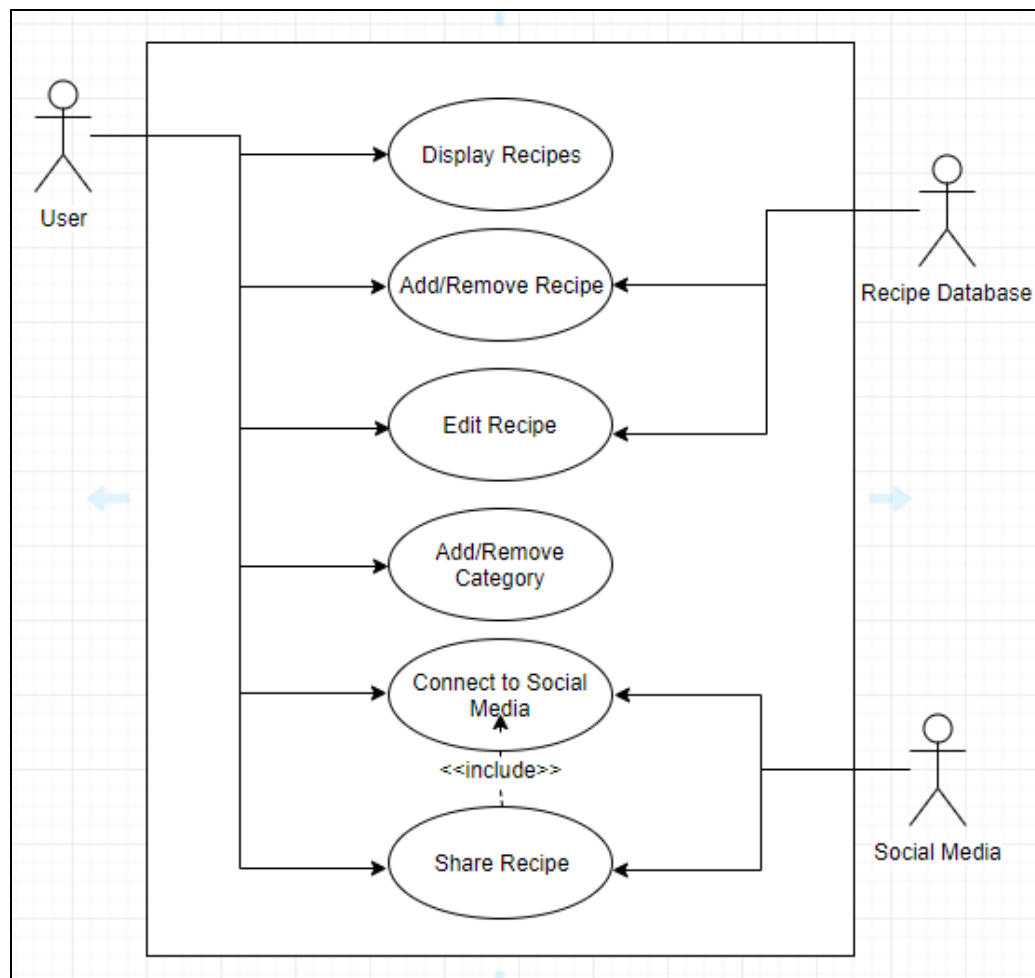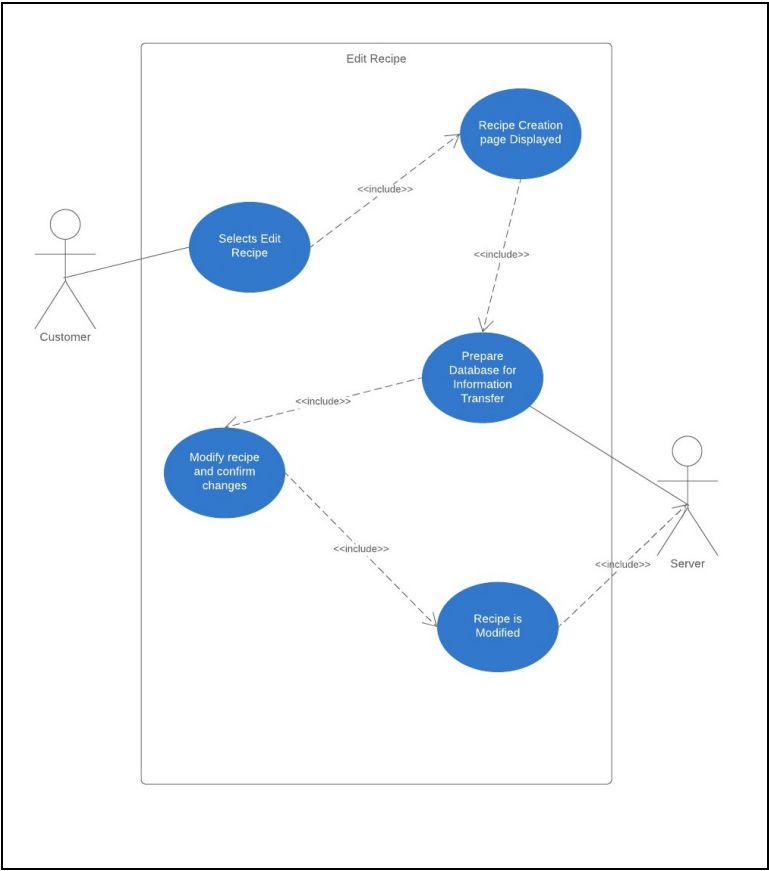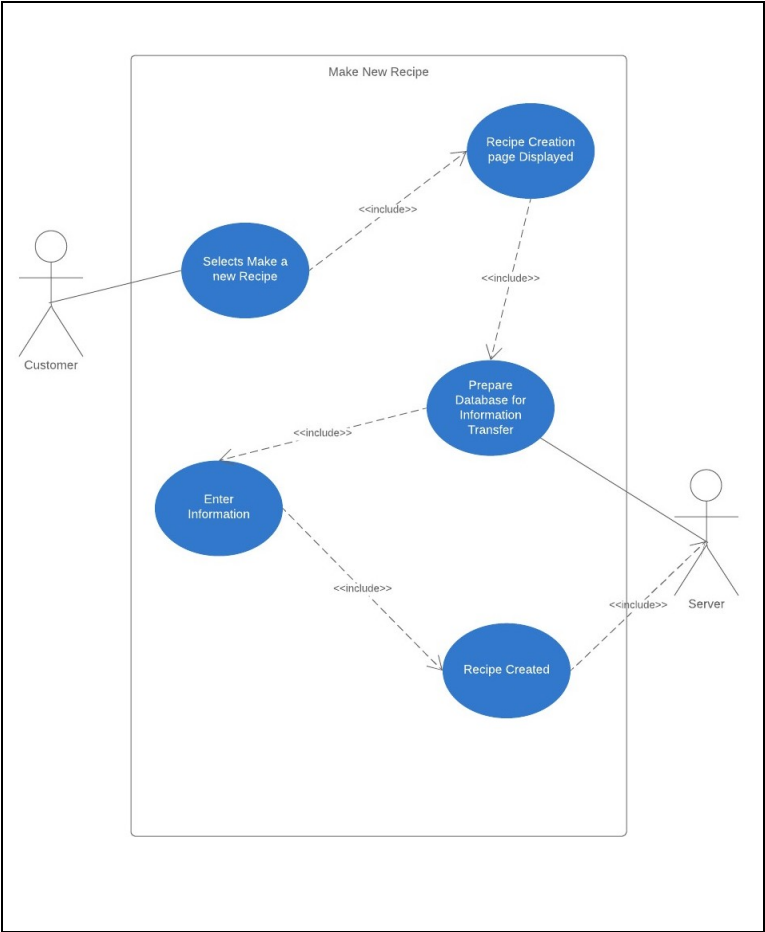
L. Models Used Throughout the Work

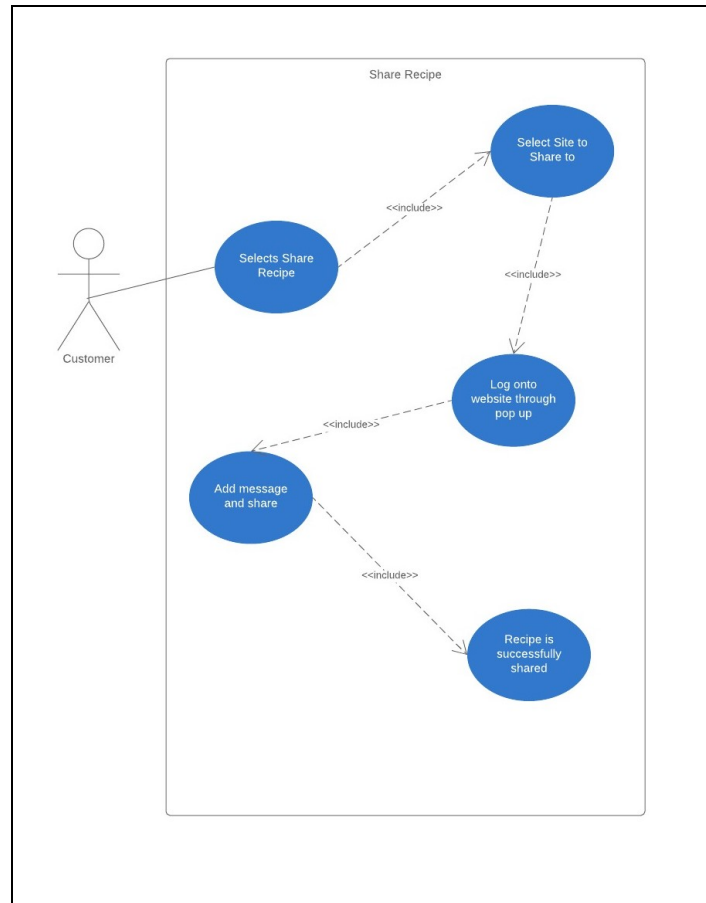### Appendix A: Analysis Models
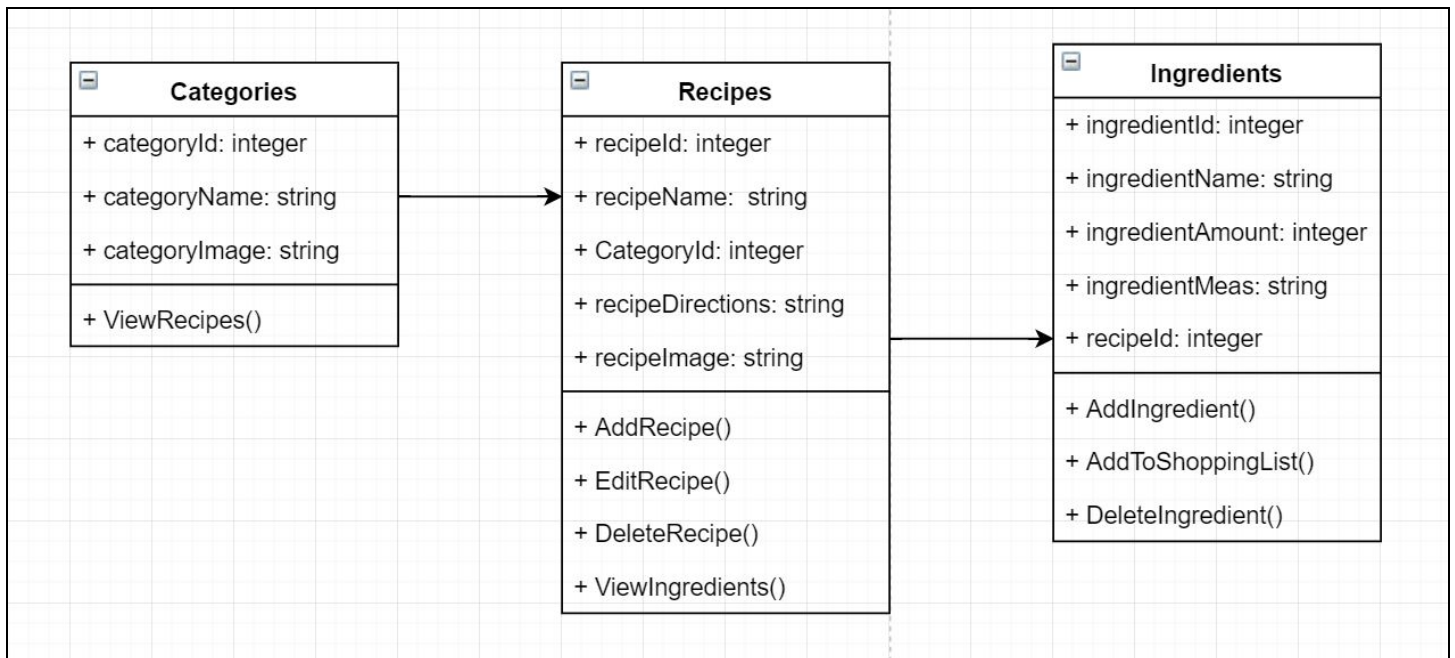
First Cut Context Model:

Use-Case Models:

Make New Recipe

Customer

Selects Make a new Recipe

<<include>> Recipe Creation page Displayed

<<include>> Prepare Database for Information Transfer

<<include>> Enter Information

<<include>> Recipe Created

<<include>> Server

Edit Recipe

Customer

Selects Edit Recipe

<<include>> Recipe Creation page Displayed

<<include>> Prepare Database for Information Transfer

<<include>> Modify recipe and confirm changes

<<include>> Recipe is Modified

<<include>> Server

Share Recipe

- Customer
- Selects Share Recipe
- Select Site to Share to
- <<include>>
- <<include>>
- Log onto website through pop up
- <<include>>
- Add message and share
- <<include>>
- Recipe is successfully shared

Create Account

- Customer
- Selects Make an Account in Application
- Enter Account Information
- <<include>>
- <<include>>
- Prepare Account Database
- <<exclude>>
- <<include>>
- <<include>>
- User information saved
- <<include>>
- Account Created
- <<extend>>
- Payment confirmed
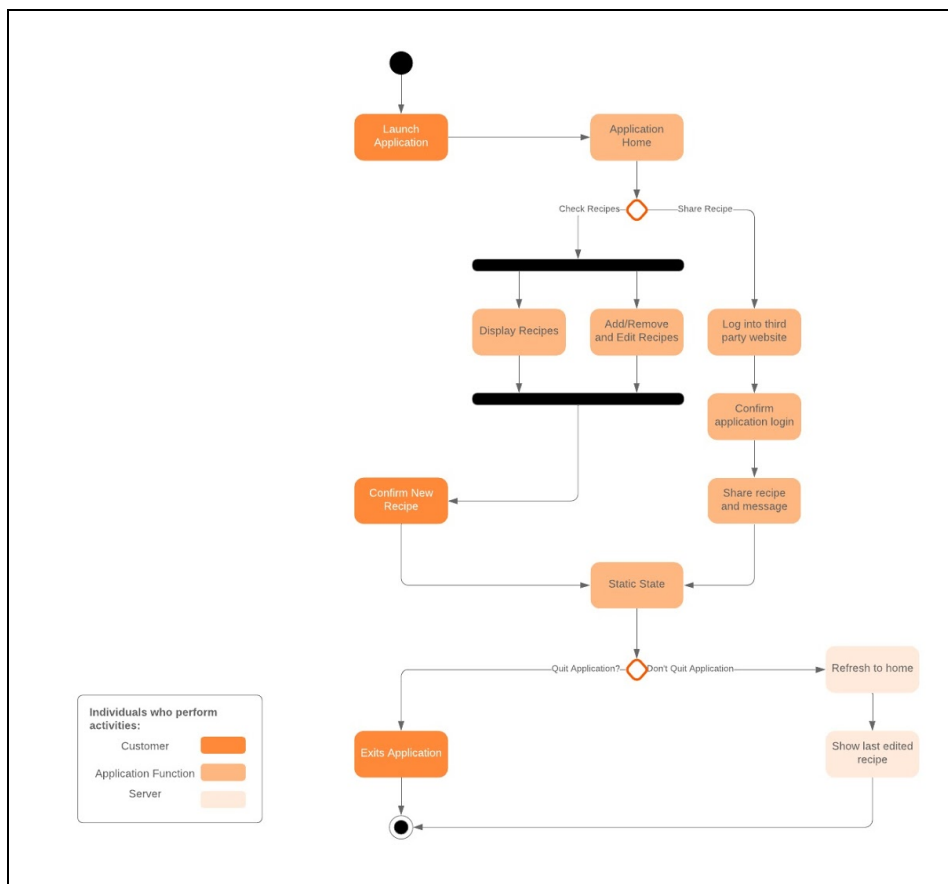- <<extend>>
- Check payment
- Server
- Credit card system

Initial System Class Model:

Activity Model:

Low-Fidelity Prototypes:
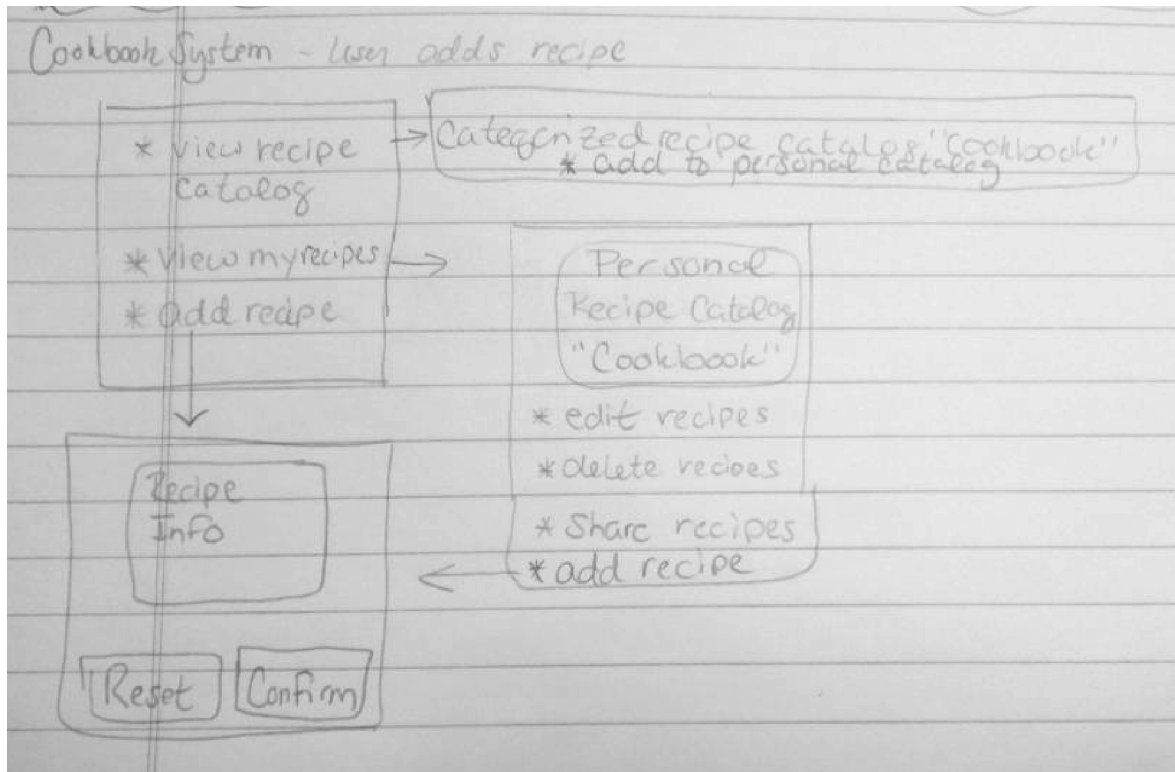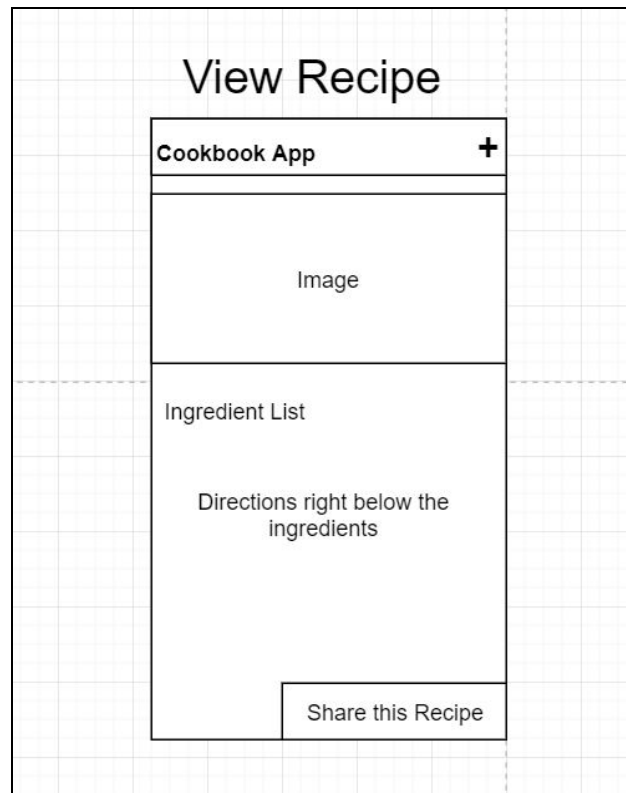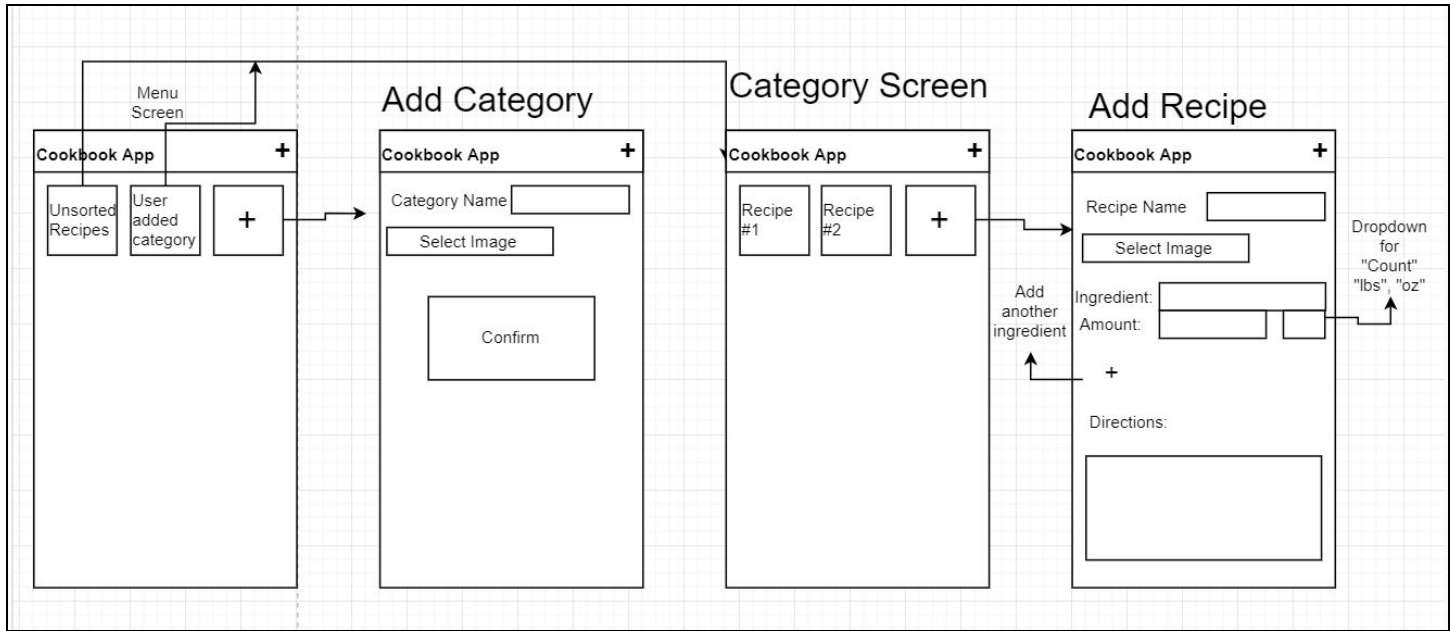
Cookbook System - User adds recipe

* View recipe catalog → Categorized recipe catalog "Cookbook"
* Add to personal catalog

* View my recipes → Personal Recipe Catalog "Cookbook"
* Add recipe
* edit recipes
* delete recipes
* Share recipes
* add recipe ←

Recipe Info

Reset   Confirm

Add Category

Cookbook App +

Menu Screen

Cookbook App +

Unsorted Recipes | User added category | +

Category Name [____]

Select Image

Confirm

Category Screen

Cookbook App +

Recipe #1 | Recipe #2 | +

Add Recipe

Cookbook App +

Recipe Name [____]

Select Image

Add another ingredient

Ingredient: [____]
Amount: [____] [____]

+

Dropdown for "Count" "lbs", "oz"

Directions:

[____]

View Recipe

Cookbook App +

Image

Ingredient List

Directions right below the ingredients

Share this Recipe

High-Fidelity Prototypes:

Add Recipe

Name

Toast

Ingredients

Ingred. Name

Bread

Ingred. Amount

1

Ingred. Measurement

Slice

+ Ingredient   - Ingredient

Directions

Toast bread in a toaster.

Image

Choose a File...

Save