Algorithms

**addItem**

1. Create two String variables called newItem and userUnit
2. Create two double variables called newQuantity and convertedQuantity
3. Prompt user to enter an item
4. If fridge is full
   1. Tell user
   2. Print the last item that was stored
5. Else store item in newItem
6. Prompt user to enter a unit
7. If unit in fridge is not the same type as entered unit
   1. Prompt user to enter a valid unit
8. Else store in userUnit
9. If unit in fridge is same type but different units
   1. Convert units using InputAndTools
10. Else store in userUnit
11. Prompt user to enter a quantity using positive numbers only
12. Store in newQuantity
13. Print to console what was stored

**removeItem**

1. Create two String variables called removeItem and userUnit
2. Create two double variables called removeQuantity and convertQuantity
3. Set removeQuantity and convertQuantity to zero
4. Prompt user to enter an item
5. If item in fridge does not exist
   1. Warn user that the entered unit cannot be found
   2. Prompt user to enter a new item
6. Else store in removeItem
7. Prompt user to enter a unit
8. If unit type in fridge does not match entered unit
   1. Prompt user to enter a valid unit
9. Else store in userUnit
10. If entered unit is same type but different units
    1. Convert to proper units using InputAndTools
11. Else store in userUnit
12. Prompt user to enter a quantity using positive numbers
13. While quantity being removed is larger than what is stored in fridge
    1. Warn user they are removing more than they have
    2. Prompt them to enter a new amount
14. Store in removeQuantity
15. Print to console what was removed

**exportFridge**

1. Prompt user to type a file name for the exported list
2. If file already exists
   1. Warn user
   2. Prompt user to enter in a new file
   3. Repeat a and b until file name is valid
   4. File name is valid when the file does not already exist
3. Export only quantities greater than one

**printMenu**

1. Print menu options to console
   1. Print “add item to fridge”
   2. Print “remove item from fridge”
   3. Print “Display all contents of the fridge”
   4. Print “Enter a recipe
   5. Print “Remove all items”
   6. Print “Enter file”
   7. Print “Exit the fridge”

**printFridge**

1. Print contents of fridge
2. If fridge is empty
   1. Print “Your fridge is empty”
3. Else print contents

**selectionSort**

1. Create int variable called i
2. Set i equal to zero
3. While i < n-1, Repeat:
4. For an array of length j
   1. Set k equal to minimum value in array
   2. If k < i
      1. Swap positions k and i in array
5. Increment i

**enterRecipeMenu**

1. Print recipe menu
2. While the user does not select “return to main menu”
   1. If addRecipe selected
      1. Go to addRecipe method
   2. Else if deleteRecipe selected
      1. Go to removeRecipe method
   3. Else if printRecipe selected
      1. Go to printRecipe method
   4. Else if getMissingItems selected
      1. Go to getMissingItems

**printRecipeMenu**

1. Print “Add Recipe”
2. Print “Delete Recipe”
3. Print “Display Recipe”
4. Print “See outstanding items from recipe”
5. Print “Cook recipe”
6. Print “Return to main menu”

**addRecipe**

1. Prompt user to enter a file name without the extension
2. Create a recipe folder called filename
3. Create two String variables called currentItem and currentUnit
4. Create a double variable called currentQuantity
5. Prompt user to enter the name of an item
6. Store in currentItem
7. Prompt user to enter a unit
8. Store in currentUnit
9. Prompt user to enter a quantity
10. Store in currentQuantity
11. Ask user if they are done entering recipe

**deleteRecipe**

1. Prompt user to type a file name with no extensions
2. Ask if they are sure they want to delete it
3. Check if recipe exists
   1. If it does not exist prompt user to enter a new one
4. Delete file
5. Check to see if file was deleted
   1. If not deleted, tell user file was not deleted

**printRecipe**

1. Prompt user to enter the file name of a recipe
2. If file does not exist
   1. Prompt user to enter a new file name
3. Else print recipe until end of file

**getMissingItems**

1. Prompt user to enter a recipe they want to check from
2. Prompt user to enter a recipe they want to make
3. Import file selected by user
4. If file does not exist
   1. Warn user that file does not exist
   2. Prompt again
5. Check fridge for ingredients in recipe
6. If ingredient missing
   1. Print missing ingredient to console
7. Else dispense ingredient
8. If quantity of ingredient not enough
   1. Subtract required amount of ingredient from amount stored in fridge
   2. Take the absolute value of the result
9. Print complete list of missing ingredients

**importFile**

1. Create String variables called newUnit and newItem
2. Create doubles variable called newQuantity and convertedQuantity
3. Retrieve item name
4. Store in newItem
5. Concatenate items with multiple words
6. Remove comma from string if there is one
7. Check to see if item already exists in fridge
8. Check to see if there are units
9. If there are units check to see if unit types match
10. If they match
    1. Store in newUnit
11. Else convert units
    1. Use InputAndTools to convert to unit stored in fridge