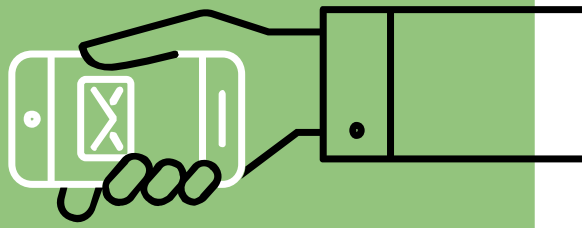
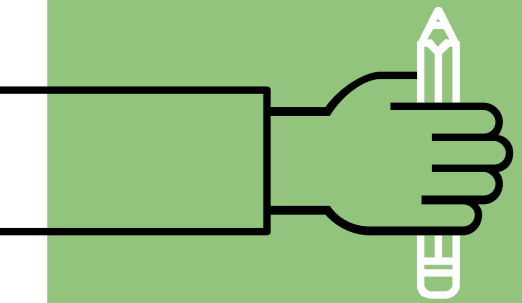
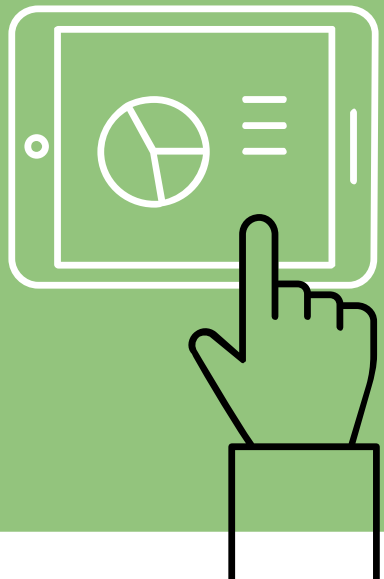


RecipEasy

A Hands-Free Recipe Helping Mobile Application





Anjali Murthy
Madeline Brode
Matthew Magnani

MEET

BACKGROUND

- Opportunities for people with cognitive & developmental disabilities
- Prepare food
- Maintain kitchen/ storefront

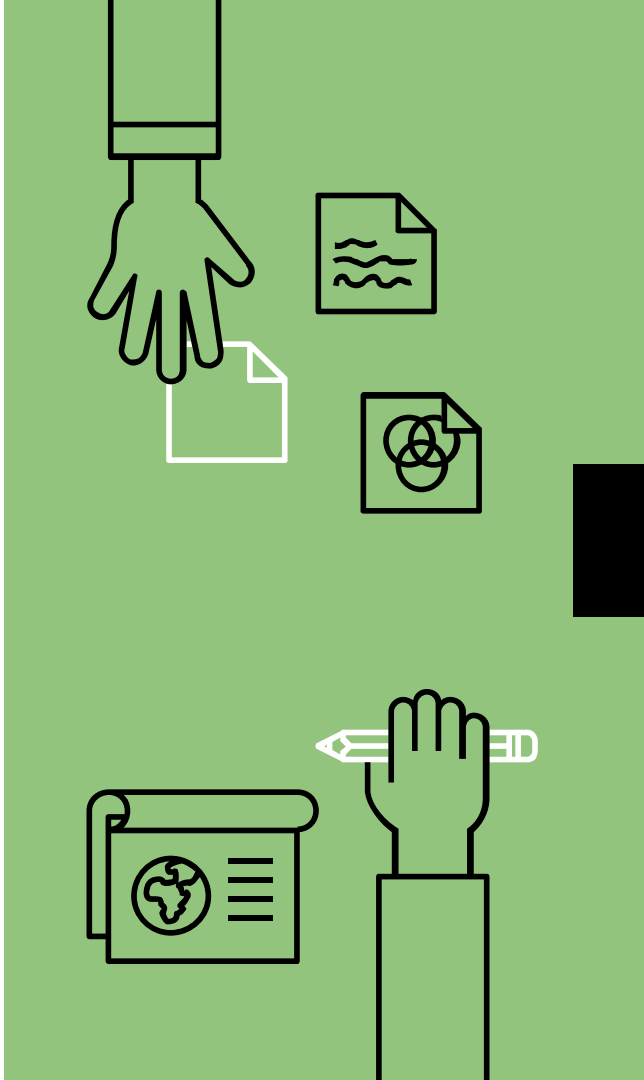
STEPHEN

Subject Matter Expert

- Makes salads & wraps (daily quota)
- Loves his job & cooking
- Loves to play basketball & sing/rap
- Person with a cognitive disability

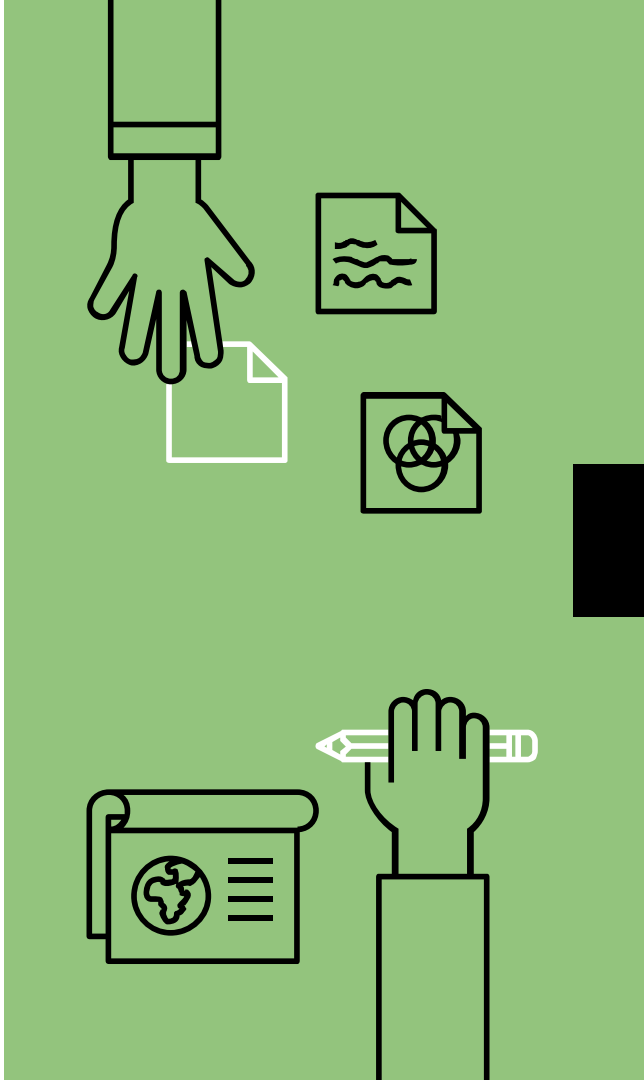
COGNITIVE/ DEVELOPMENTAL DISABILITIES

- Lifelong
- Physical, behavioral, language, learning
- Ex: Cerebral Palsy, Autism, Down Syndrome, etc.
- Vary from person-to-person
- Difficult think through and remember what they have to do

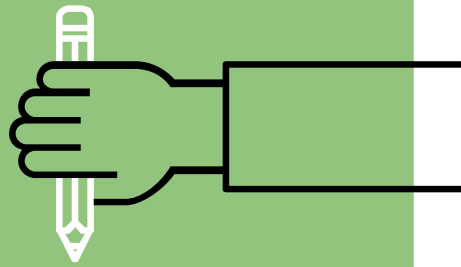


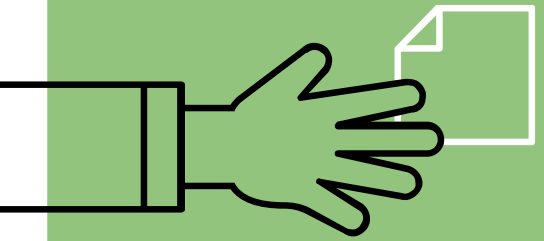
THE PROBLEM

- Remembering recipes' correct steps and ingredients
- Working independently and confidently



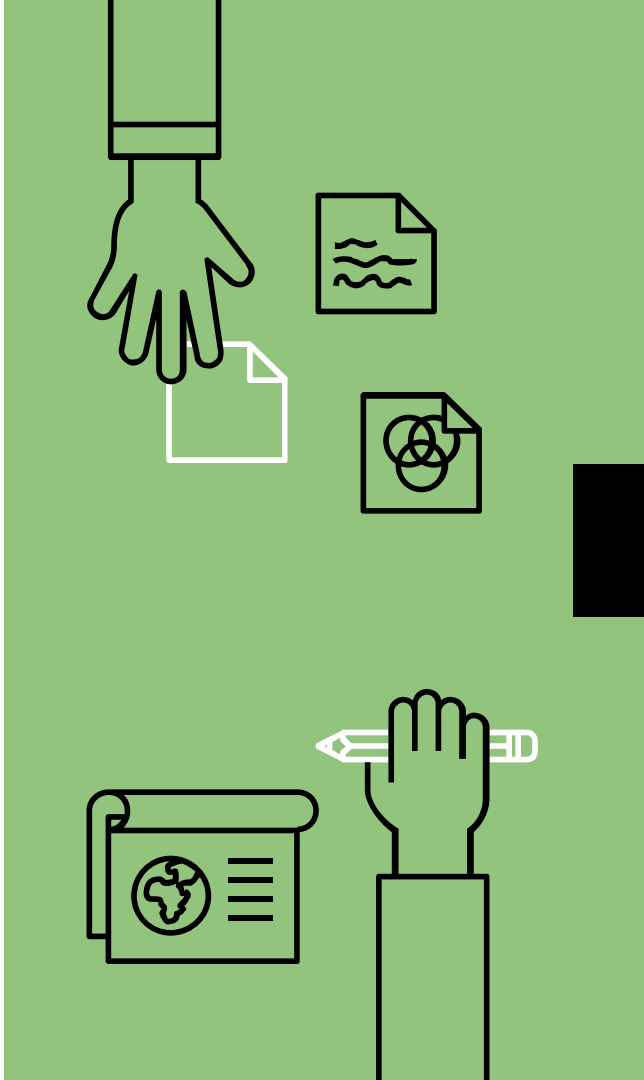
PROBLEM SOLVING





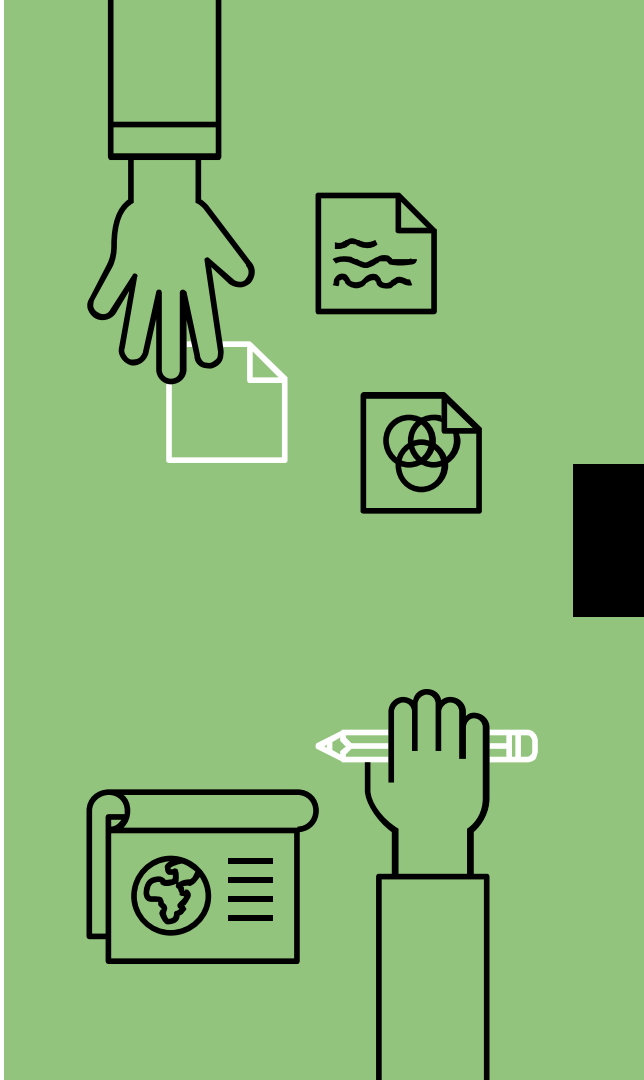
IDEAS

- Physical cards
- Visual color coding system
- Button activated app
- Audio activated app
- **Camera activated app**



DEVELOPMENT

- Used Xcode (Swift)
  - Formatted using storyboard
  - Coded screens to change between steps with spatula detection
- Received feedback and tested it
- Made modifications



MATERIALS

$0.00

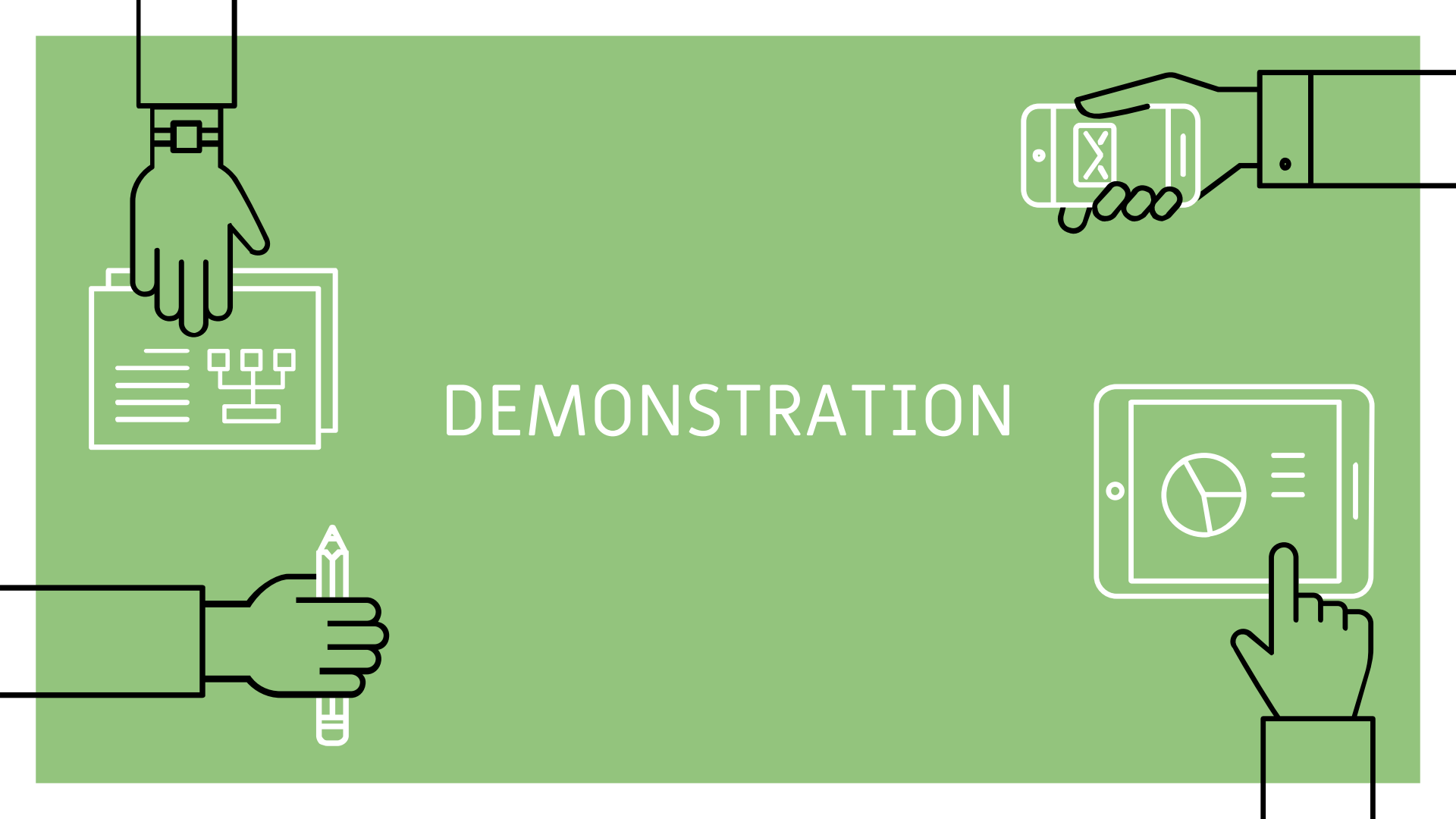
$0.00
(previously owned)

$35.00

$9.21

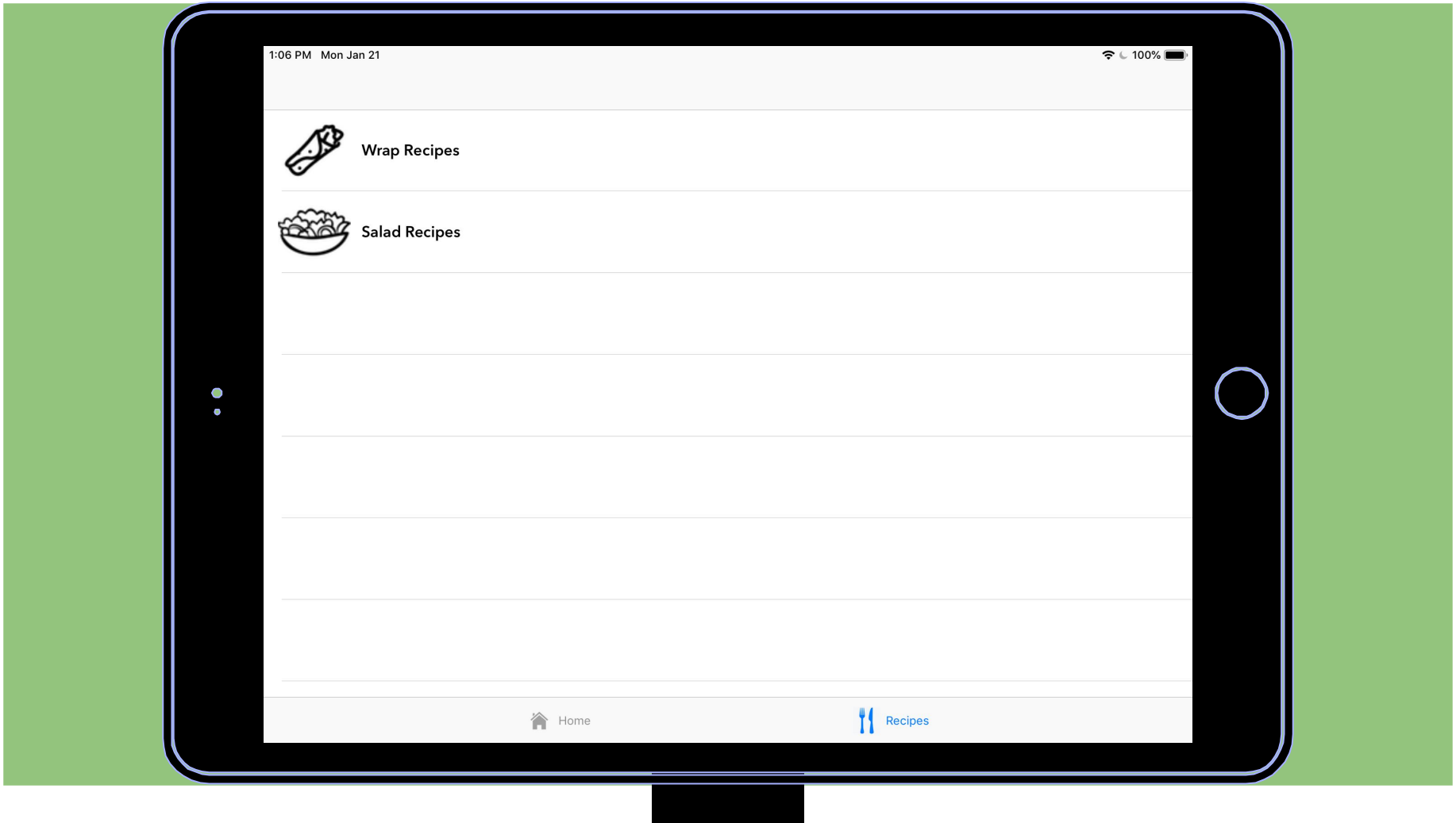
TOTAL COST:
$44.21

DEMONSTRATION



ICON

1:06 PM Mon Jan 21
100%
RecipEasy
that's wrap
Home
Recipes


1:06 PM Mon Jan 21
100%
Wrap Recipes
Salad Recipes
Home
Recipes

1:06 PM Mon Jan 21

100%

Back

Chipotle Wrap

Caesar Wrap

Banh Mi Wrap

Greek Wrap

Curry Wrap

Home

Recipes

8:53 PM Wed Jan 23

85%

Back

Ingredients for Chipotle Chicken Wrap:

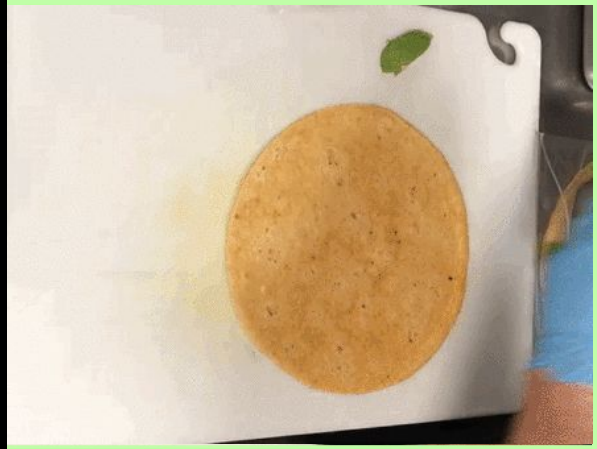
- Wheat tortilla
- Romaine lettuce
- Chipotle marinated chicken
- Black bean corn relish
- Mozzarella cheese
- Avocado halves
- Little box of Chipotle dressing

Home

Recipes

8:25 PM Wed Jan 23 85%

Back



Step 1:

Place lettuce on the wrap

Home Recipes

8:54 PM Wed Jan 23 85%

Back

All done!

Hold up the *spatula*
to *restart* this recipe

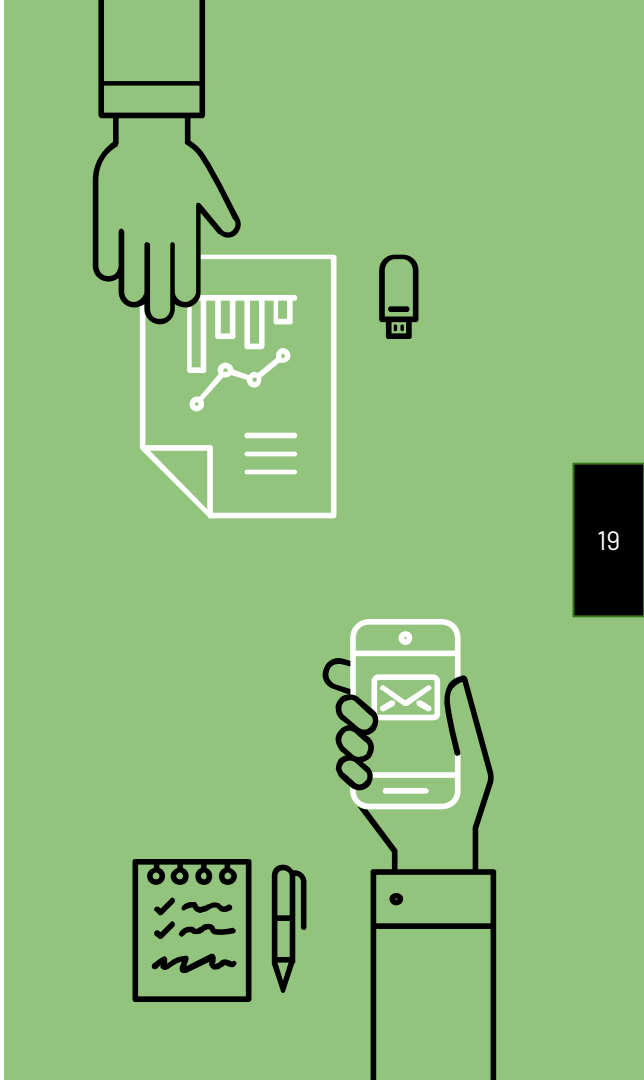
or

Click the *back* button to return to
the *recipes list* to pick a new one

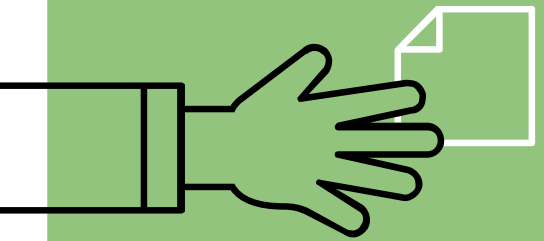
Home Recipes

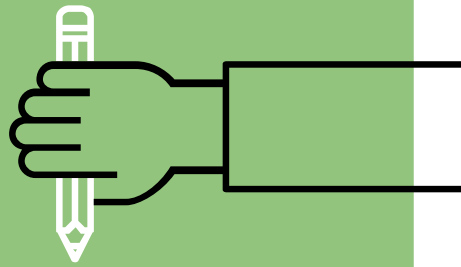
Average Improvements

Measure of Efficacy	Before	After	Overall Change
Assistance (#)	1.5	0.75	-0.75
Time (min)	2:35	2:43	+0:08
Mistakes (#)	0.25	0	-0.25
Ease (1-10)	9.5	10	+0.5



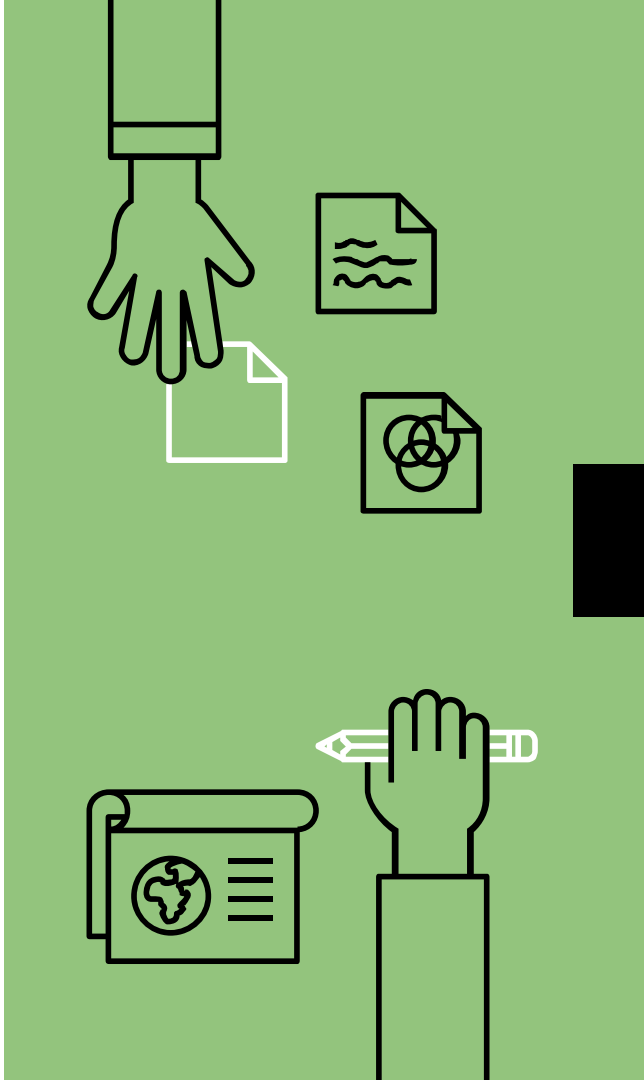
CONCLUSION





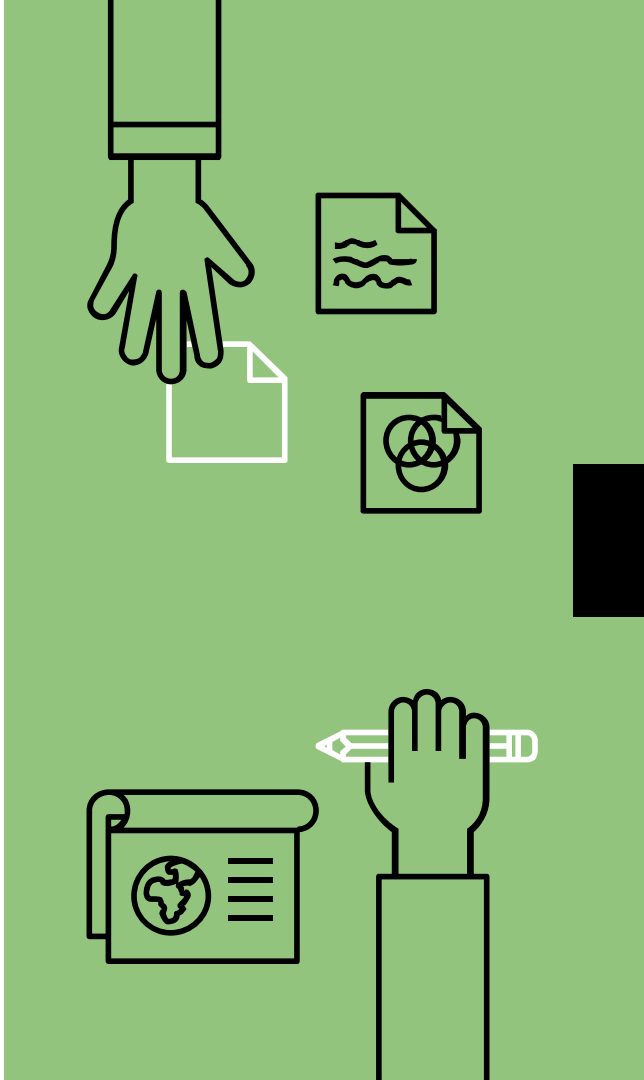
BENEFITS

- Helps access recipes without causing additional trouble
- Increases Stephen's independence, accuracy, and ease
- Hands-free
- Easy and fun to use and navigate
- Updatable



LIMITATIONS

- Could not implement the backwards function with the ladle
- Screen sometimes struggled detecting the spatula accurately (~7%)
- Slight overall increase in time (8s)
- Can be solved with further coding and if Stephen takes more time to get used to the app



COMMUNITY IMPACT

- Built a strong relationship w/ Stephen & Arnel
- Brought excitement to them and other employees
- Give Stephen confidence in the kitchen
- Increase the possibilities for many

EXPANSION

- Implement backwards function
- Make it customizable
  - Make accounts; recipe steps, visuals, personalization, choose objects
- For quotas: linked checklist that automatically updates as a recipe is completed

VIDEO

THANKS!

Questions?

Acknowledgments

That's A Wrap

Stephen Cowan

Adam Rast

Arnel Cervantes

Mr. Lee