

Heuristic Evaluation

For: Clark is Superman

By: Chelsea, Heather, Jianhan, Kyle

Overview Evaluation:

We felt the overall interface was very clean and straightforward. It was an improvement on the current system with minimal learning curve to start using it. Many of the usability violations we diagnosed have to do with clarity in button functions, placement of elements on the screen, or overall visual design.

Usability Violations:

1. [H2 Match between system and the real world] (Severity 2)

The main check-out screen has a button on it that just says "produce". This button name was ambiguous and I couldn't tell what it would do until I clicked on it and saw the next page.

2. [H4 Consistency and standards] (Severity 2)

On the main check-out screen, the three grocery items all have x icons next to them. The orange's x icon had a different functionality from the other groceries' x buttons. Maybe this difference should be indicated by the symbol.

3. [H4 Aesthetic and minimalist design] (Severity 1)

The screen for other purchasing options had two buttons that allowed the user to go back. First, the standard back button. Then there was also a button that specifically said 'Back to Previous Options'. This seemed superfluous and confusing as the standard back button was still available.

4. [H1 Visibility of system status] (Severity 3)

The main check out screen has no indication for quantities. I was unsure if the cost of oranges was a per unit cost or total cost. The user also has no feedback on what amount of each item they are purchasing and an option to only eliminate some subset of the amount.

5. [H6 Recognition rather than recall] (Severity 2)

Users may want to still see their purchases while they pay. Otherwise they may not remember what the breakdown is during their transaction and wish to go back and check.

6. [H3 User control] (Severity 3)

If this were on a touchscreen, the buttons seem really small.

7. [H8 Aesthetic and Minimalist Design] (Severity 2)

The UI when I press on the X for a produce item has a lot of text. At least back to main screen seems easier represented as just a "close window x" in the corner like everyone is used to using to get out of a popup

8. [H8 Aesthetic and Minimalist Design] (Severity 1)

The text for the "produce" and "finish and pay" buttons looks really awkward. Could you make it fill the button and be centered.

9. [H8 Aesthetic and Minimalist Design] (Severity 1)

More whitespace between large fonts would make it a lot easier for me to read. a 12pt size linebreak between 48 sized font is basically just 1.25 spacing.

10. [H8 Aesthetic and Minimalist Design] (Severity 1)

Wrapped text is really hard to read. Think about resizing your buttons to make the text fit more easily.

11. [H4 Consistency and standards] (Severity 0)

Generally it's "pinpad" for credit/debit cards.

12. [H4 Consistency and standards] (Severity 3)

On the pay by cash screen, it says "coind" and the dollar sign is after the 25.45 which could confused some users. Also, cash should be replaced by bills in the instruction since coins count as cash as well. The total given before payment of \$49.99 also does not match the amount to pay on the cash payment screen, format-wise and by amount.

13. [H1 Visibility of System Status] (severity 2)

How does the 'SCAN ITEMS' list function if I buy more items than fit in the box? I'm guessing that you are assuming that people will bring, at most, 15 - 20 items to the self-checkout line. I also know that there will inevitably be times when somebody brings an entire shopping cart, especially if your design is successful. Is it a scrolling list? How would a person find a particular item in a very long list?

14. [H4 Consistency and standards] (Severity 1)

While the top bar remains consistent throughout the prototype, objects on the main portion of the interface layout vary greatly and unsmooth transitions can disorient the user.

15. [H4 Consistency and standards] (Severity 1)

The Call for Help button and text size and its position is different on the Welcome Screen than the rest of the screens and returns to the same size and position at the last thank you screen.

16. [H6 Recognition Rather than Recall] (Severity 1)

The amount to pay could be kept in the same position with the instructions so that the user would not have to search for it again between one screen and the next.

Total for heuristic types:

1. Visibility of system status	2
2. Match between system and the real world	1
3. User Control and freedom	1
4. Consistency and standards	5
5. Error prevention	0
6. Recognition rather than recall	2
7. Flexibility and efficiency of use	0
8. Aesthetic and minimalist design	5
9. Help user recognize, diagnose, and recover from errors	0
10. Help and documentation	0

Total for severity ratings:

Severity 0	Severity 1	Severity 2	Severity 3	Severity 4
1	7	5	2	0

Recommendations:

We think you’ve put a lot of thought and effort into simplifying the process and the overall design, but now we would encourage you to hone in on the details. There were a few edge cases

1. [H2 Match between system and the real world] (Severity 2)

The main check-out screen has a button on it that just says “produce”. This button name was ambiguous and I couldn’t tell what it would do until I clicked on it and saw the next page.

2. [H4 Consistency and standards] (Severity 2)

On the main check-out screen, the three grocery items all have x icons next to them. The orange’s x icon had a different functionality from the other groceries’ x buttons. Maybe this difference should be indicated by the symbol.

3. [H4 Consistency and standards] (Severity 3)

When I hit cancel on the oranges screen I was expecting to see the ‘return in return basket’ screen, but that didn’t pop up. Maybe it’s not supposed to, but the interface led me to expect that.

4. [H4 Consistency and standards] (Severity 1)

The screen for other purchasing options had two buttons that allowed the user to go back. First, the standard back button. Then there was also a button that specifically said ‘Back to Previous Options’. This seemed superfluous and confusing as the standard back button was still available.

5. [H1 Visibility of system status] (Severity 3)

The main check out screen has no indication for quantities. I was unsure if the cost of oranges was a per unit cost or total cost. The user also has no feedback on what amount of each item they are purchasing and an option to only eliminate some subset of the amount.

6. [H6 Recognition rather than recall] (Severity 2)

Users may want to still see their purchases while they pay. Otherwise they may not remember what the breakdown is during their transaction and wish to go back and check.

7. (H2 Match between System and the Real World) (severity 3)

I didn't understand what the keyboard icon on the 'IDENTIFY PRODUCE' page was until I clicked on it. I'd suggest adding a label underneath the button, replacing the icon with text, or finding a different icon. Everything else in your design is excruciatingly obvious, so it stuck out a lot to me.

8. [H7 Flexibility and Efficiency] (Severity 0)

Provided that this is being rolled out in an English speaking country, it would be nice to default to English instead of requiring a choice.

Strong Points:

The calling attendant functionality was a great example of visibility of system status. It allowed the user to feel like work was being done by the system while waiting for an attendant to respond. The overall design was also fairly minimalist/efficient, so you were successful in that regard. Another strength was in user control and freedom. There were many opportunities for users to backtrack if they selected something on accident. Overall the functionality was straightforward and made good use of existing systems/system properties to familiarize the user with how the system would work.

1. [H3 User control] (Severity 3)

If this were on a touchscreen, the buttons seem really small.

2. [H6 Recognition rather than recall] (Severity 3)

The keyboard in identify produce is tiny, hard to find, and I didn't immediately know what it was for. Could you make it bigger and maybe have a caption saying "Type in name" or something?

3 . [H7 Flexibility and Efficiency] (Severity 2)

Provided that this is being rolled out in an English speaking country, it would be nice to default to English instead of requiring a choice.

4. [H8 Aesthetic and Minimalist Design] (Severity 2)

The UI when I press on the X for a produce item has a lot of text. At least back to main screen seems easier represented as just a "close window x" in the corner like everyone is used to using to get out of a popup

5. [H1 Visibility of system status] (Severity 1)

Why does the button say "finish and pay" if you still need to pay, you're not finishing.

6. [H10 Help and documentation] (Severity 2)

It would be nice to have some documentation on how to scan produce, especially since most people are accustomed to a different way of doing it.

7. [H8 Aesthetic and Minimalist Design] (Severity 1)

The text for the "produce" and "finish and pay" buttons looks really awkward. Could you make it fill the button and be centered.

8. [H8 Aesthetic and Minimalist Design] (Severity 1)

More whitespace between large fonts would make it a lot easier for me to read. a 12pt size linebreak between 48 sized font is basically just 1.25 spacing.

9. [H8 Aesthetic and Minimalist Design] (Severity 1)

Wrapped text is really hard to read. Think about resizing your buttons to make the text fit more easily.

10. [H4 Consistency and standards] (Severity 0)

Generally it's "pinpad" for credit/debit cards.

11. [H4 Consistency and standards] (Severity 0)

There's a typo on "coind" in the Pay:Cash page

1. [H10 help and documentation] (severity 1)

On the 'PAY: CASH' screen there are two typos. 'Please place coind' should be 'Please place coins' and 'Please enter: 25.45\$' should be 'Please enter: \$25.45'

2. [H2 match between system and the real world] (severity 2)

It may be the case that you have thought this through, but what happens to the list of goods on the 'SCAN ITEMS' page if I buy six boxes of Lucky Charms? Does it display six rows of 'Lucky Charms', one after the other, or does it put a (6) next to the label 'Lucky Charms'? If it's the former, have you thought through any implications of the resulting information density? If it's the latter, how does canceling a purchase work? If I added six boxes but decide I only want five, can I cancel a single box?

3. [H1 visibility of system status] (severity 2)

How does the 'SCAN ITEMS' list function if I buy more items than fit in the box? I'm guessing that you are assuming that people will bring, at most, 15 - 20 items to the self-checkout line. I also know that there will inevitably be times when somebody brings an entire shopping cart, especially if your design is successful. Is it a scrolling list? How would a person find a particular item in a very long list?

4. [H2 match between system and the real world] (severity 2)

I didn't understand what the keyboard icon on the 'IDENTIFY PRODUCE' page was until I clicked on it. I'd suggest adding a label underneath the button, replacing the icon with text, or finding a different icon. Everything else in your design is excruciatingly obvious, so it stuck out a lot to me.

Strong Points:

I really like your design! It feels much more streamlined than the current checkout experience. The linear progression from start to end is very easy to understand and you guys have done a lot of work to eliminate pain points. Your design also feels appropriately minimalistic. Buttons are large, prominently placed, and (except for #4 - see above) have clear use cases.

[H1 Visibility of System Status] (Severity 0)

[H2 Match Between System and the Real World] (Severity 2)

The language is easy to understand even though it does not follow the standard of "check out" instead of "finish and pay" from online stores. It also gives the unnecessary instruction for the user of having to insert coins first for paying cash before inserting bills. On the identify produce screen for the keyboard, it takes me a while to see that the down arrow means to expand options, but it does not give any feedback, so I may be mistaken. It was a little awkward to have to click on the cash insert and credit card reader pictures even though it would be different at an actual store check out screen.

[H3 User Control and Freedom] (Severity 0)

Back buttons are always flexible.

[H4 Consistency and standards] (Severity 4)

While the top bar remains consistent throughout the prototype, objects on the main portion of the interface layout vary greatly and unsmooth transitions can disorient the user.

[H4 Consistency and standards] (Severity 2)

The Call for Help button and text size and its position is different on the Welcome Screen than the rest of the screens and returns to the same size and position at the last thank you screen.

[H4 Consistency and standards] (Severity 3)

On the pay by cash screen, it says "coind" and the dollar sign is after the 25.45 which could confused some users. Also, cash should be replaced by bills in the instruction since coins count as cash as well.

The total given before payment of \$49.99 also does not match the amount to pay on the cash payment screen, format-wise and by amount.

[H4 Consistency and standards] (Severity 4)

Is your produce... options are in a different format for identifying produce from the video or via the keyboard. It would be better for the multiple choice options for detecting and recognizing product to be green instead of the redirect options since green buttons are associated with moving forward and completing steps, not troubleshooting.

[H5 Error Prevention] (Severity 4)

There is no way to conduct another transaction for the user that comes after the first one.

[H6 Recognition Rather than Recall] (Severity 2)

The amount to pay could be kept in the same position with the instructions so that the user would not have to search for it again between one screen and the next.

[H7 Flexibility and Efficiency of Use] (Severity 0)

There are no tangible accelerators. It seems to have almost no learning curve.

[H8 Aesthetic and Minimalist Design] (Severity 2)

There is a lot of blank green space on the buttons. The text on those buttons could be centered. The green back to previous option on the other payment methods screen is unnecessary and not useful since there is always a back button at the top left of the screen. The text for the items scanned is quite small for a checkout touch panel.

[H9 Help Users Recognize, Diagnose and Recover from Errors] (Severity 0)

If the scanning of the produce is wrong, there were options to retry or type the produce in manually. In any extraordinary cases, the customers can ask the attendant for help.

[H10 Help and Documentation] (Severity 3)

No task scenarios and limitations on what the prototype could do were given. There was no indication on the first welcome screen that this was an interface for self checkout at supermarkets.