Week 5: Study Design

Nicole Meng-Schneider

Feedback Summary

Feedback Lectures

1. Drill hall sound is bad
    a. Ensure working microphones and check in.

2. Recap is good, but more practical examples would be better. Including some from industry/larger scale
    a. Focus on examples rather than recap
    b. try to find less research-y examples

3. More engagement on a group-to-teacher basis during friday lectures
    a. Go around the room more

4. Interactive tutorials are great and should be continued, but time for activities/guest lectures too limited
    a. We'd love to have more time.
    b. Only 10 credit course, so we are balancing content delivery with practical activities

5. Lecture hybrid tutorial works well for most
    a. Keep up current system

6. Guest lectures are great!
    a. Spoiler for week 11: Dark Patterns by Tara and Challenges in Technology Law by Dr Lachlan Urquhart

Feedback Flipped Classroom Material

1. In some weeks, the video content seems too much
   a. Balance amount of content to coursework timeline
   b. Add video duration to overview
   c. Aim for 1h
2. Too many videos, could be combined
   a. Might seem less daunting, but modularity allows more flexibility
3. Sound quality and subtitles poor
   a. Please flag it when it is the case. We did not notice the sound issues, so please let us know.
4. The video content is engaging and concise. Works really well to bring content across.
   a. We'll continue with the presentation of videos and guidance text
5. Readings work well
   a. Keep up with suggestions

Feedback Quiz

1. No feedback for the quiz, no way to learn from it
   a. Provide answers with explanations

2. Review Quiz Answers in lecture
   a. Due to time constraints, we will review how the above is working

3. Answer choices not clear/ question wording feels ambiguous
   a. Test questions with more people (currently Tara, Nicole, and one TA)
   b. Review answer stats to see if some were problematic

4. Current marking system is unfair. Should not be pass/fail
   a. Pass/Fail is a common used method for small percentages (1%!!!)
   b. Added leeway of 3 wrong questions should allow some slip ups

5. Multiple answer questions are confusing and lead to missed marks
   a. Try add number of answers and reduce the amount of multiple answer

6. Quiz helps internalise knowledge, but should be reworked
   a. Continue with quiz, but make above changes

Feedback Assessment

1. Group work is good

2. Piazza works well to ask questions rg coursework

3. Coursework premise is interesting and group work is good

4. Communication via Learn and on Piazza works well

Photo by Howie R on Unsplash

Usability

Week 1:
Usability in itself is not a design requirement.

Week 1:
Usability in itself is not a design requirement.
> It's too vague to be testable

Usability

Usability of a design depends on

- the features,

- the users,

- the goal/tasks,

- and the environment.

> **We need to define usability for our design**

Usability Testing

1. Define design requirements
   a. What problem should the system solve?

2. Define SPECIFIC Usability Goals (and thus what usability means for your system)
   a. What should the system enable the user to do?
   b. How should the user feel after using the system?
   c. Which interaction specification should the system fulfil?

> All requirements and goals need to be specific, so we can understand whether they have been fulfilled or not.

Usability Goals – Examples

1. Define design requirements
   a. What problem should the system solve?

2. Define SPECIFIC Usability Goals (and thus what usability means for your system)
   a. What should the system enable the user to do?
   b. How should the user feel after using the system?
   c. Which interaction specification should the system fulfil?

1. User can accomplish a task in Y minutes.
2. User can accomplish task with no major errors.
3. User can learn to use the interface the first time they see it so that they can accomplish a task later.
4. More users buy products on the site.
5. Users buy more expensive products on the site.
6. Expert users can navigate from A to B in less than X seconds.
7. Users rate the app highly.
8. Interface breaks no major HCI heuristics.
9. Users can confidently send an encrypted and signed email to someone else who is able to open it.

Tasks and usability

User can accomplish a task in Y minutes.

> Testable

Expert users can navigate from A to B in less than X seconds.

> Testable

User can learn to use the interface the first time they see it so that they can accomplish a task later.

> Testable

Example Task: Navigate to the HCI course page.

Heuristic Evaluation vs Cognitive Walkthrough

- Evaluate a system by looking at it's design and how it "breaks" heuristics

Heuristic Evaluation

- HE focuses on design in general
- experts review design against set of principles

Cognitive Walkthrough

- CW focuses on tasks
- What are the goals?
- Can they be completed (easily)?
- Which problems occur?

Study Example

Observation Study

Tasks:

1. View the hot drinks menu on the costa app.
2. Order a "Maple Hazelnut Hot Chocolate" for collection.

Observation Study

Tasks:

1. View the hot drinks menu on the costa app.
2. Order a "Maple Hazelnut Hot Chocolate" for collection.

Demo

Task 1: View the hot drinks menu on the costa app.

Screen 1 (left):

Hi Nicole

1/10 🔵 | 0

🏠
Scan at Shop

🏪
Scan Machine / Others

BREWED FOR YOU

NEW

Enjoy our new autumn menu.
Get ready to fall into flavour.

🏠 Home | ☕ Order | 📍 Stores | 🎁 Rewards | ⚙ Settings

Screen 2 (middle):

Enjoy our new autumn menu.
Get ready to fall into flavour.

Fancy some free beans?
Invite your friends to the app.

COSTA COFFEE LATTE · COSTA Thank You! · COSTA

Give the gift of coffee.
The perfect present to use in-store.

🏠 Home | ☕ Order | 📍 Stores | 🎁 Rewards | ⚙ Settings

Screen 3 (right):

✕ ∨ costa.co.uk

COSTA COFFEE

Our menu

Whatever your diet or preferences, there's enough choice for everyone. Order your

By clicking "Accept All Cookies", you agree to the storing of cookies on your device to enhance site navigation, analyse site usage and assist in our marketing efforts.
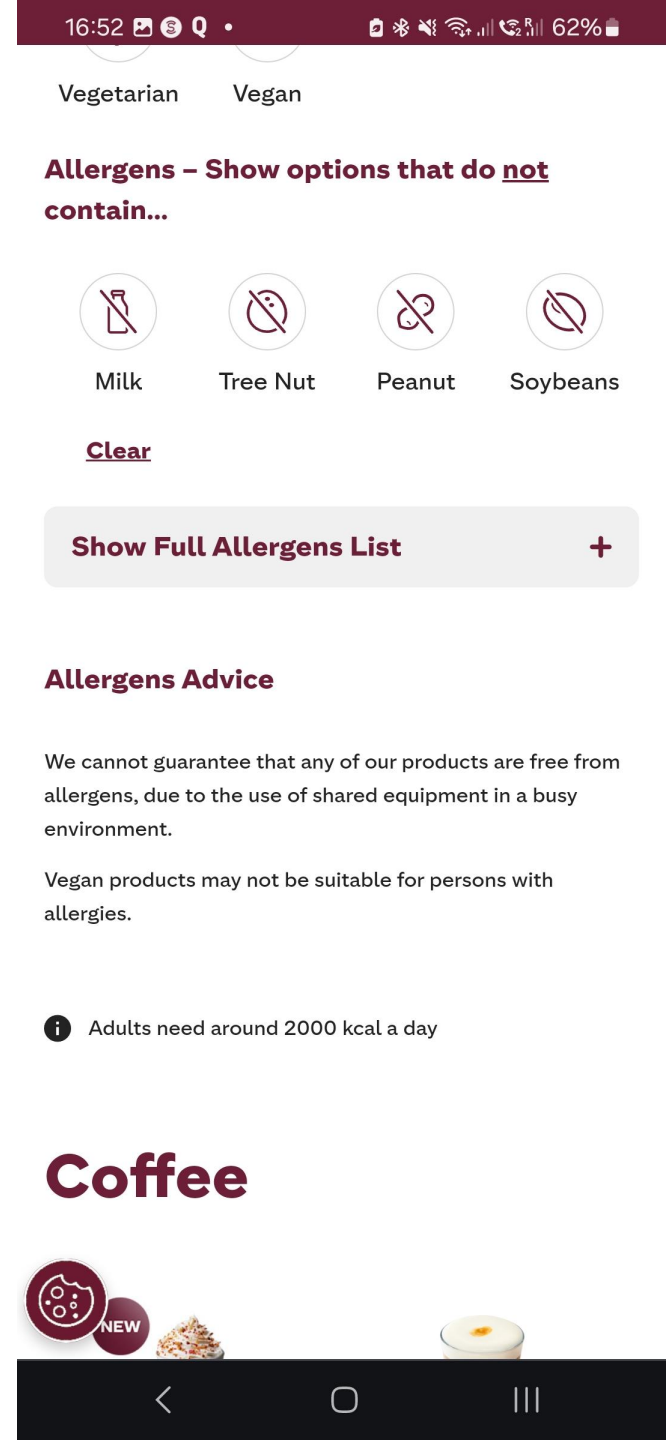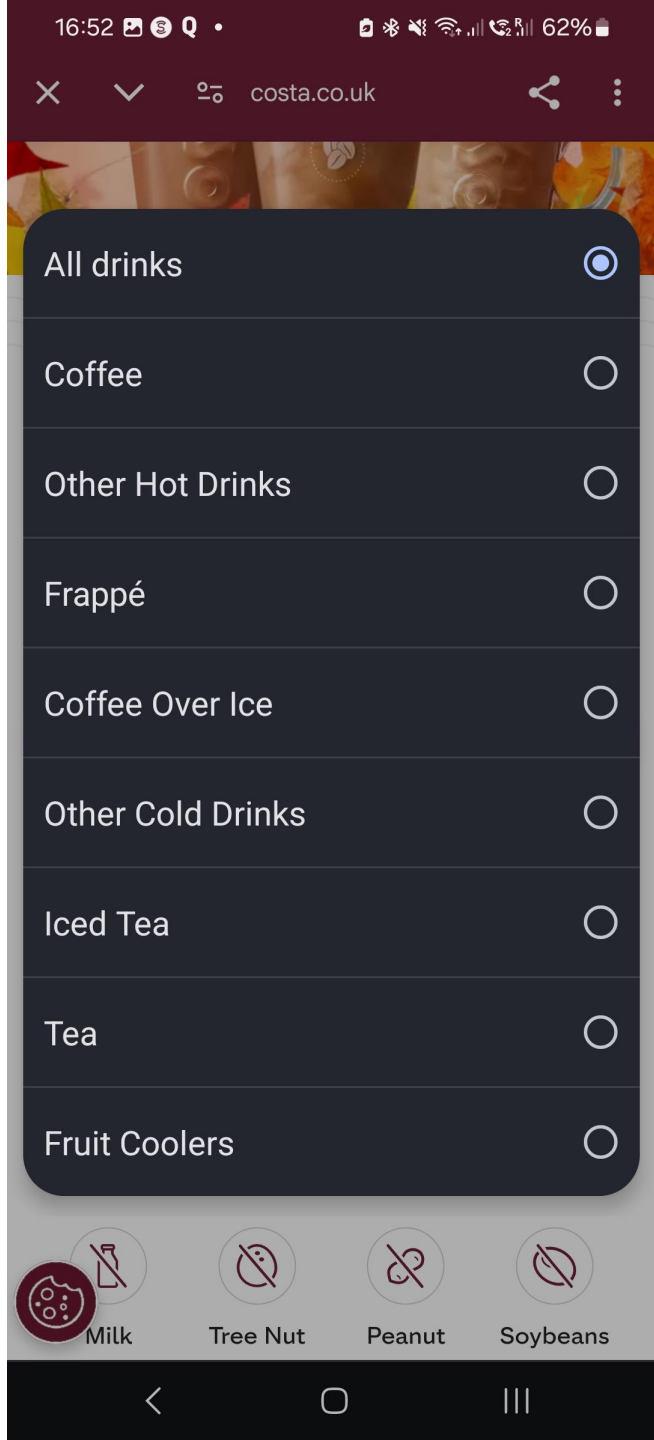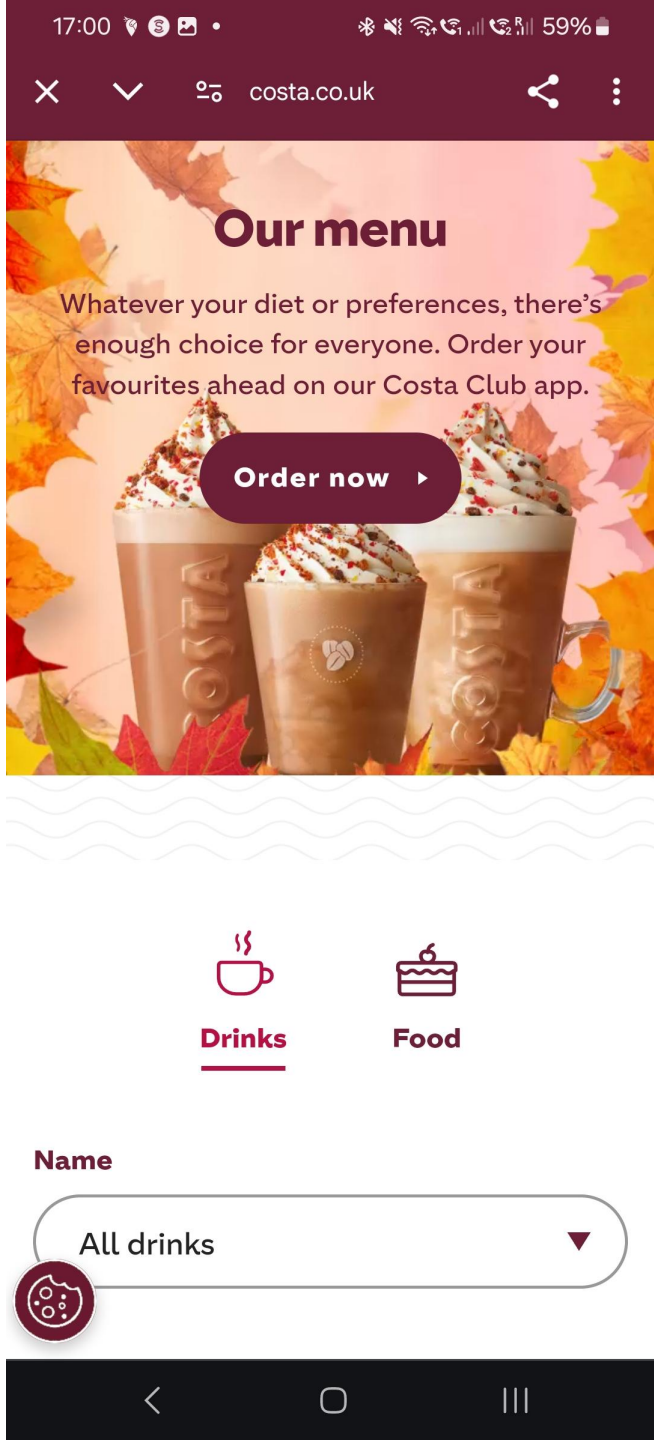
Cookie policy

Reject All Cookies

Accept All Cookies

Cookies Settings

Name

All drinks

Screen 1

17:00 | 59%

costa.co.uk

Our menu

Whatever your diet or preferences, there's enough choice for everyone. Order your favourites ahead on our Costa Club app.

Order now ▶

☕ **Drinks**   🍰 **Food**

Name

All drinks ▼

Screen 2

16:52 | 62%

costa.co.uk

- **All drinks** ⦿
- Coffee ◯
- Other Hot Drinks ◯
- Frappé ◯
- Coffee Over Ice ◯
- Other Cold Drinks ◯
- Iced Tea ◯
- Tea ◯
- Fruit Coolers ◯

Milk | Tree Nut | Peanut | Soybeans

Screen 3

16:52 | 62%

Vegetarian   Vegan

Allergens – Show options that do not contain...

Milk | Tree Nut | Peanut | Soybeans

Clear

Show Full Allergens List +

Allergens Advice

We cannot guarantee that any of our products are free from allergens, due to the use of shared equipment in a busy environment.

Vegan products may not be suitable for persons with allergies.

ⓘ Adults need around 2000 kcal a day

Coffee

Coffee

NEW

Maple Hazel Latte

Latte

Cappuccino

Flat Black

Americano

Flat White

Mocha

Espresso

Cortado

Mocha Cortado

Other Hot Drinks

NEW

Maple Hazel Hot Chocolate

White Chocolate & Strawberry Hot Milkshake

Hi Nicole

1/10 ☕ | 0

Scan at Shop

Scan Machine / Others

BREWED FOR YOU

NEW

Enjoy our new autumn menu.
Get ready to fall into flavour.

Home   Order   Stores   Rewards   Settings

Task 2: Order a "Maple Hazelnut Hot Chocolate" for collection.

16:52 · 62%

Hi Nicole

1/10 🫘 | 0

Scan at Shop

Scan Machine / Others

BREWED FOR YOU

NEW

Enjoy our new autumn menu.
Get ready to fall into flavour.

Home | Order | Stores | Rewards | Settings

16:53 · 61%

START AN ORDER

Click & Collect
Order and pay with the app, then pick up in store. Easy peasy.

Click & Serve
Order and pay with the app, then we'll deliver right to your vehicle.

Costa Express machine
Scan the code displayed upfront on the machine to order using the app.

Delivery
Get Costa favourites to your door. Available on:

ORDER WITH Uber Eats | deliveroo | JUST EAT

Home | Order | Stores | Rewards | Settings

16:53 · 61%

SELECT STORE

🔍 Search

Search this area

Edinburgh

Calton Hill

Palace of

HOLYROOD

EDINBURGH OLD TOWN

Queen's Dr

Commonwe

Google

RECENTLY ORDERED FROM

✓
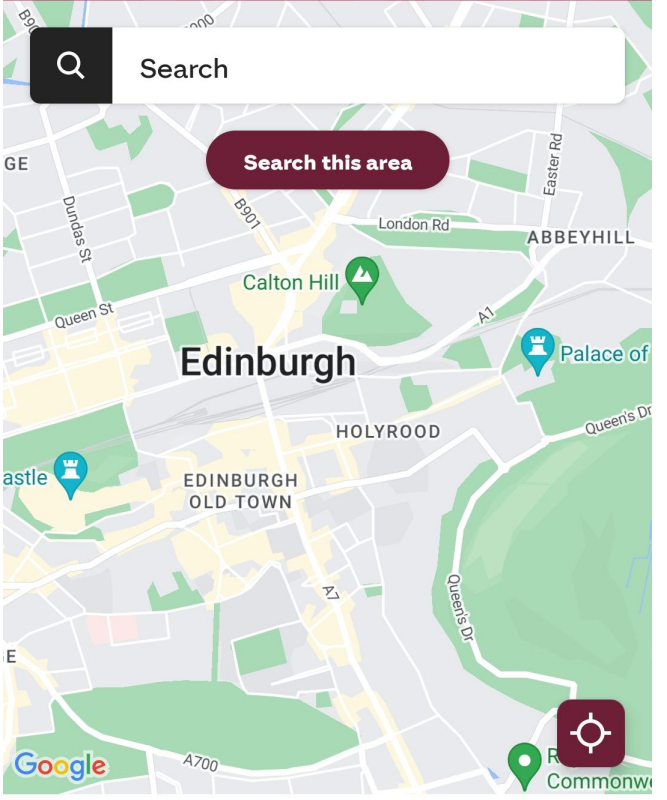
NEXT Edinburgh ...
25 min walk

CLICK & COLLECT STORES NEARBY

NEXT Edinburgh Fort Kinnaird RP

SELECT STORE

Search

Calton Hill

Edinburgh

Palace

ABBEYHILL
London Rd

HOLYROOD

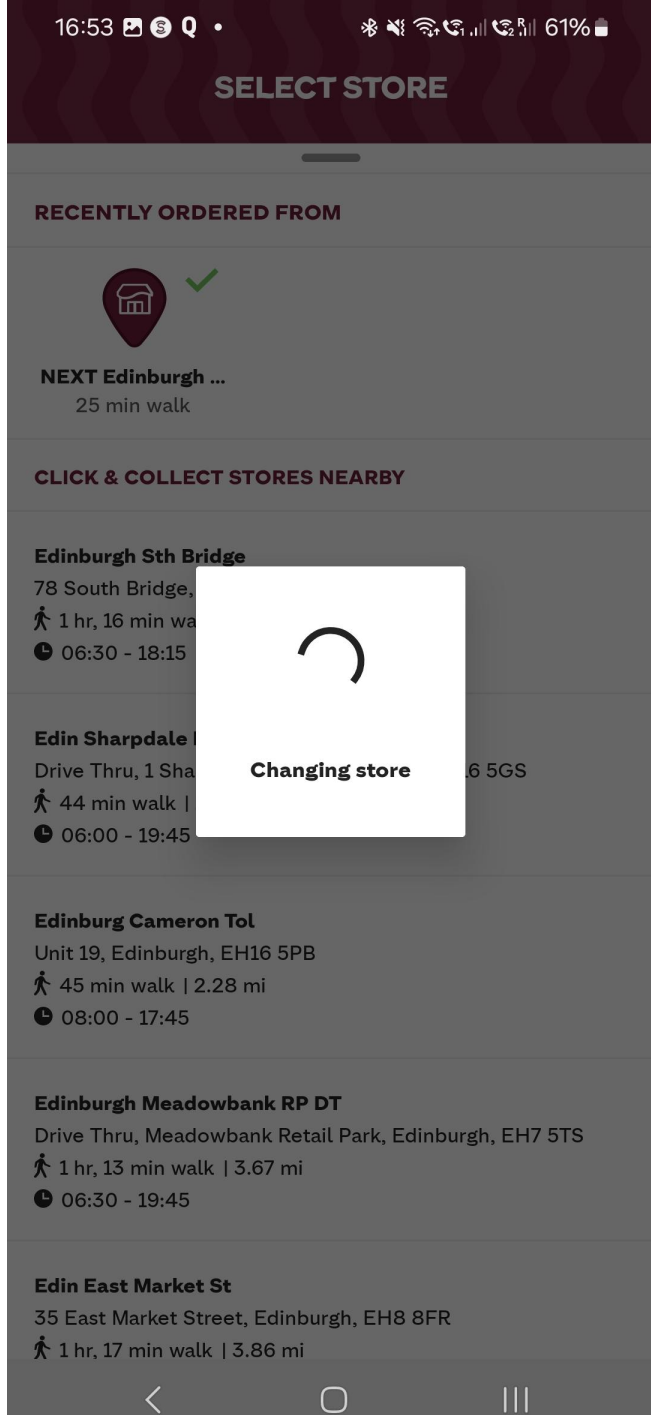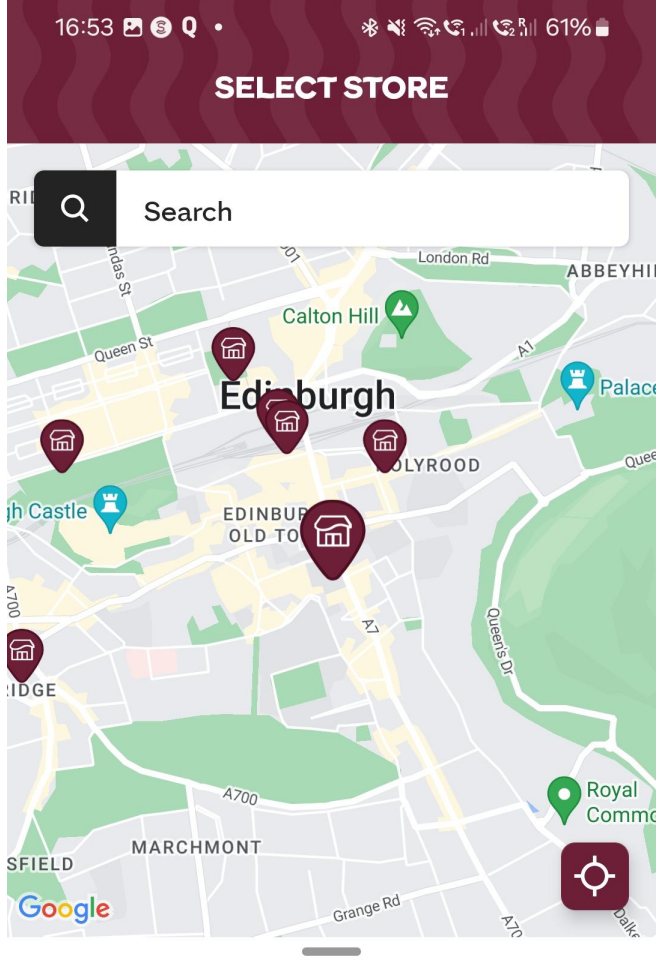EDINBUR
OLD TO

h Castle

Royal
Commo

SFIELD

MARCHMONT

Grange Rd

Google

RECENTLY ORDERED FROM

NEXT Edinburgh ...
25 min walk

CLICK & COLLECT STORES NEARBY

Edinburgh Sth Bridge

SELECT STORE

RECENTLY ORDERED FROM

NEXT Edinburgh ...
25 min walk

CLICK & COLLECT STORES NEARBY

Edinburgh Sth Bridge
78 South Bridge,
🚶 1 hr, 16 min wal
🕐 06:30 - 18:15

Edin Sharpdale
Drive Thru, 1 Sha   .6 5GS
🚶 44 min walk |
🕐 06:00 - 19:45

⟳

Changing store

Edinburg Cameron Tol
Unit 19, Edinburgh, EH16 5PB
🚶 45 min walk | 2.28 mi
🕐 08:00 - 17:45

Edinburgh Meadowbank RP DT
Drive Thru, Meadowbank Retail Park, Edinburgh, EH7 5TS
🚶 1 hr, 13 min walk | 3.67 mi
🕐 06:30 - 19:45

Edin East Market St
35 East Market Street, Edinburgh, EH8 8FR
🚶 1 hr, 17 min walk | 3.86 mi

Edinburgh Sth Bridge

Change store ›

Picked for you   **Hot drinks**   **Cold drinks**   Fo

Coffee

Maple Hazel Latte   **Latte**

Cappuccino   **Americano**

COSTA   COSTA

COSTA   COSTA

🏠 Home   🥤 Order   📍 Stores   🎁 Rewards   ⚙️ Settings

Screen 1

Edinburgh Sth Bridge
Change store >

Picked for you · **Hot drinks** · Cold drinks · Fo

Other Hot Drinks

Maple Hazel Hot Chocolate

White Chocolate & Strawberry Hot Milkshake

Chocolate Hazel Hot Milkshake

Salted Caramel Coffee Hot Milkshake

Home · Order · Stores · Rewards · Settings

Screen 2
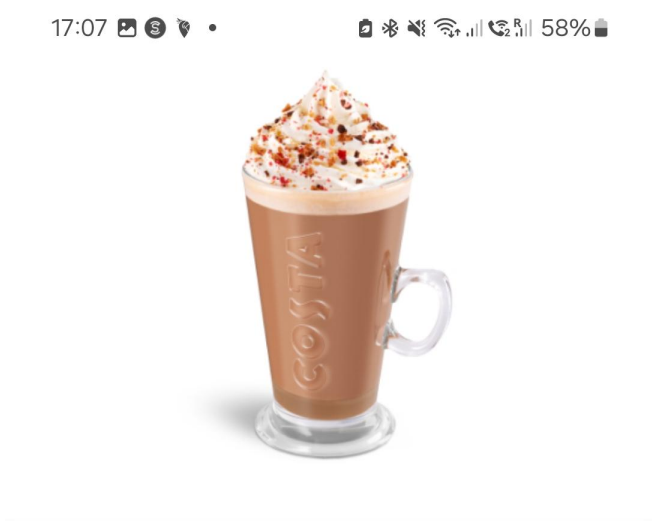
Maple Hazel Hot Chocolate

A rich hot chocolate with roasted hazelnut flavour syrup and luxurious maple sauce, topped with Light whip and sprinkled with an autumnal crunchy biscuit topping. **ATTENTION: This drink cannot be made dairy free, even when made with a dairy alternative, due to other ingredients containing milk**

QUANTITY
− 1 +

OTHER EXTRAS

£0.00   **Add to order**

Screen 3

Maple Hazel Hot Chocolate

A rich hot chocolate with roasted hazelnut flavour
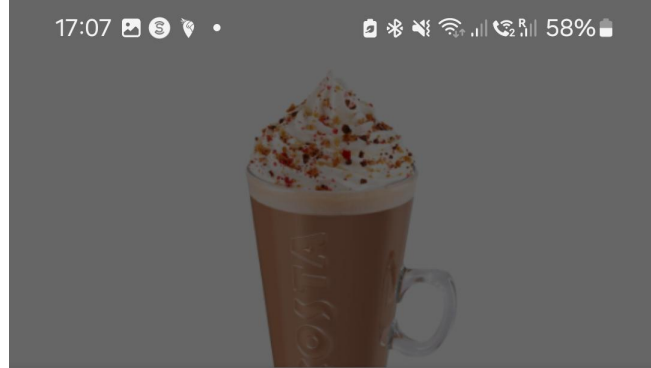
Oops!
Sorry, it's not you, it's us. Please try again later.

OK

QUANTITY
− 1 +

OTHER EXTRAS

None · Marshmallow · Whipp Crea

£0.00   **Add to order**

Think – Pair – Share

Tasks:

1. View the hot drinks menu on the costa app.
2. Order a "Maple Hazelnut Hot Chocolate" for collection.

What did we observe?

Think for 1 min

Discuss with your neighbour for 2 min

Share with the class for 3 min
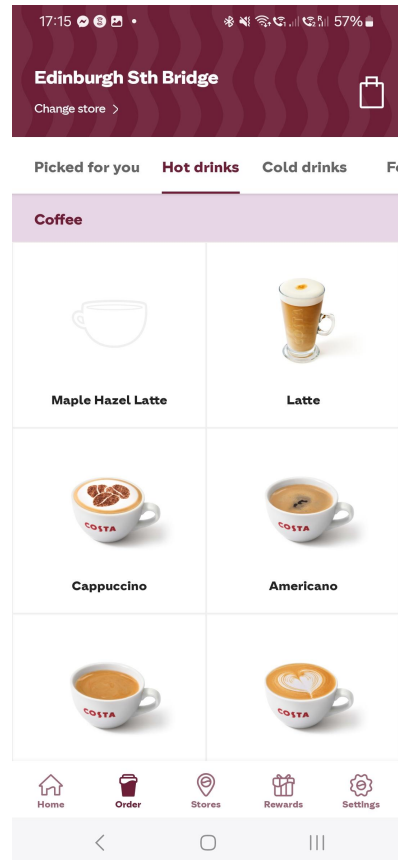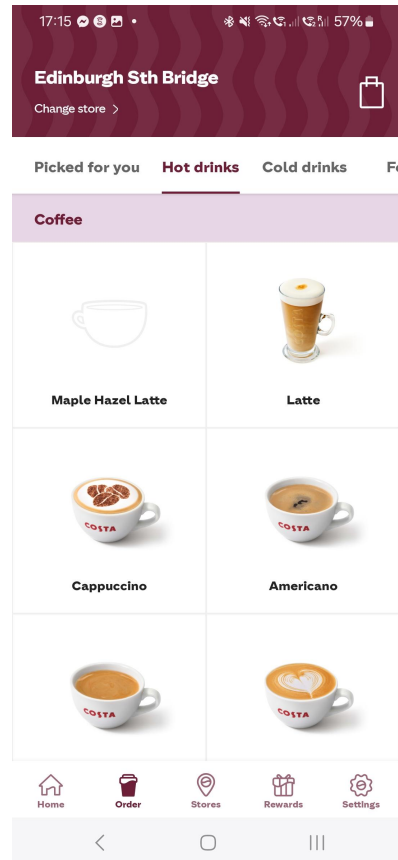
Usability Aspect Report (UAR)

Usability Aspect Report

- Structured way to report usability issues

- Can be good or bad aspects

- Linked to a heuristic (here nielsons)

- Be specific and justified

No. HE-	Problem/Good Aspect:
Name:	

Evidence
Heuristic:
Interface aspect:

Explanation

Severity or Benefit
Rating:
Justification (Frequency, Impact, Persistence)
　Frequency:

　Impact:

　Persistence:

　How I weighted the factors:

Possible solution and/or trade-offs
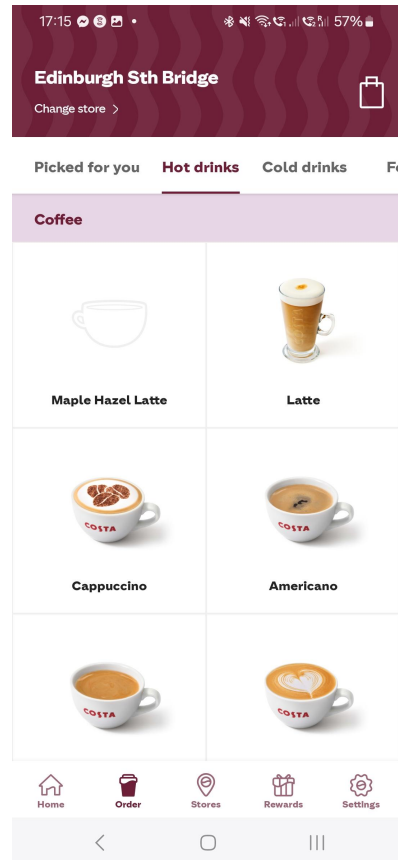
Relationships

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Rating:
Justification (Frequency, Impact, Persistence)
  Frequency:

  Impact:

  Persistence:

  How I weighted the factors:

Possible solution and/or trade-offs

Relationships

Usability Aspect Report

- Structured way to report usability issues

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- Linked to a heuristic (here nielsons)

- Be specific and justified

No.	HE-	*01*	Problem/Good Aspect:	*Problem*

Name: *No search bar to speed up*

Evidence
Heuristic:
Interface aspect:

Explanation

Severity or Benefit
Rating:
Justification (Frequency, Impact, Persistence)
  Frequency:

  Impact:

  Persistence:

  How I weighted the factors:

Possible solution and/or trade-offs
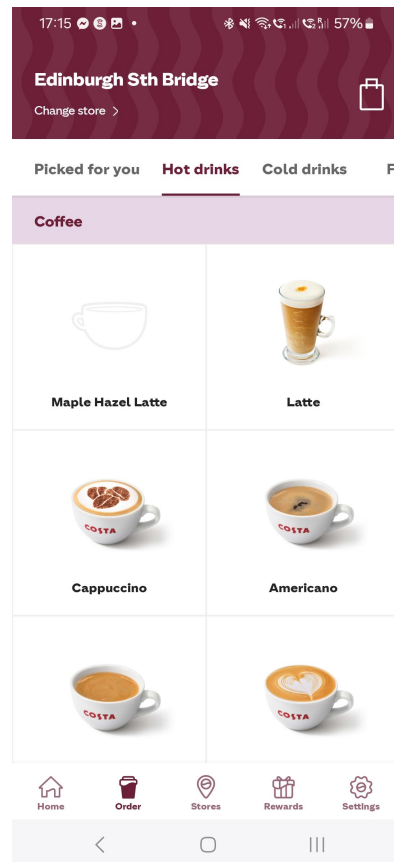
Relationships

Usability Aspect Report

- Structured way to report usability issues

- Can be good or bad aspects

- Linked to a heuristic (here nielsons)

- Be specific and justified

No.	HE-	*01*	Problem/Good Aspect:	*Problem*

Name: *No search bar to speed up*

Evidence
Heuristic: *Flexibility and Efficiency of use*
Interface aspect: *Order menu (Include Screenshot!)*

Explanation

Severity or Benefit
Rating:
Justification (Frequency, Impact, Persistence)
 Frequency:

 Impact:

 Persistence:

 How I weighted the factors:

Possible solution and/or trade-offs

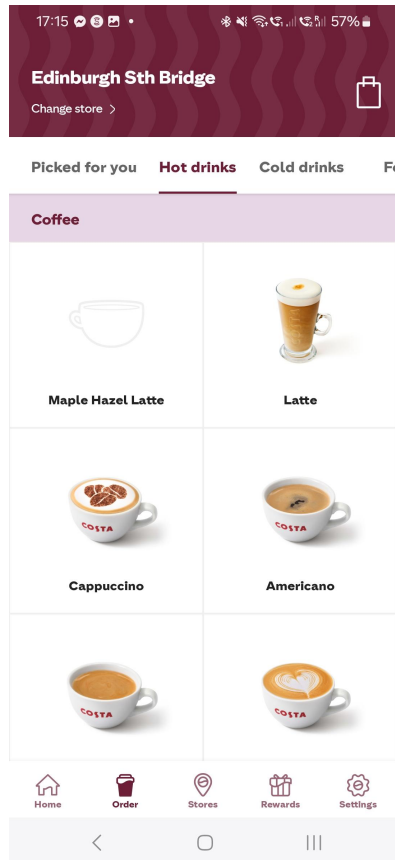**Relationships**

Usability Aspect Report

- Structured way to report usability issues

- Can be good or bad aspects

- Linked to a heuristic (here nielsons)

- Be specific and justified

No.	HE- *01*	Problem/Good Aspect: *Problem*

Name: *Need to scroll through all drinks options*

Evidence
Heuristic: *Flexibility and Efficiency of use*
Interface aspect: *Order menu (Include Screenshot!)*

Explanation
The user already knows what kind of product they want. Instead of having a quick option to find what they want, they need to scroll through all drink options until they find the item they are looking for. For someone less familiar with the interface, that could take a while.

Severity or Benefit
Rating:
Justification (Frequency, Impact, Persistence)
    Frequency:

    Impact:

    Persistence:

    How I weighted the factors:

Possible solution and/or trade-offs

Relationships
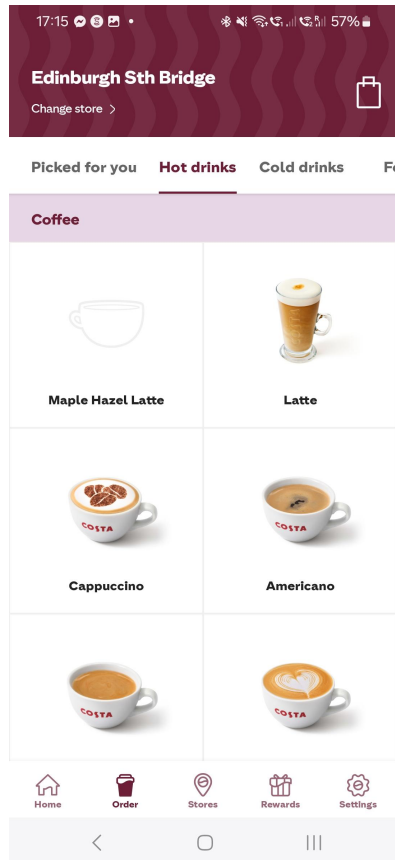
Usability Aspect Report

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- Be specific and justified

No.	HE-	01	Problem/Good Aspect:	Problem

Name: *Need to scroll through all drinks options*

Evidence
Heuristic: *Flexibility and Efficiency of use*
Interface aspect: *Order menu (Include Screenshot!)*

Explanation
The user already knows what kind of product they want. Instead of having a quick option to find what they want, they need to scroll through all drink options until they find the item they are looking for. For someone less familiar with the interface, that could take a while.

Severity or Benefit
Rating: *low*
Justification (Frequency, Impact, Persistence)
Frequency: *medium, whenever the user orders something that is not at the very top.*

Impact: *low, the menu is not as extensive that it will take a very long time.*

Persistence: *high, it happens every time when the user want to order a drink.*

How I weighted the factors: *While the frequency is high, the impact is the worst for first time users, who are less familiar with the layout and structure. More frequent users can benefit from the suggestion tab and will have less impact.*

Possible solution and/or trade-offs
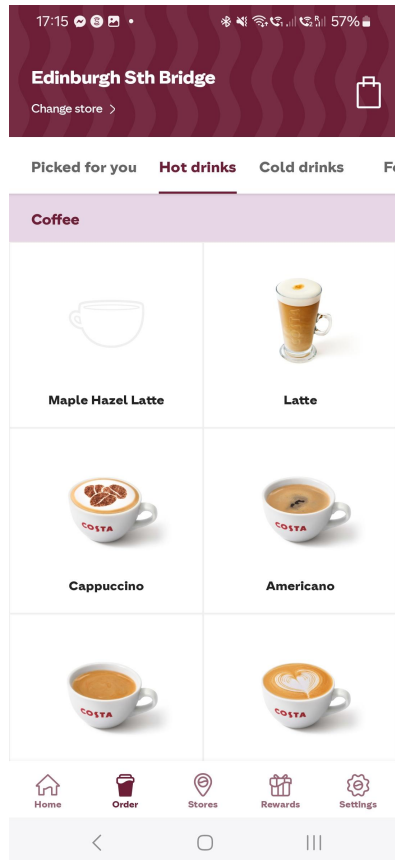
Relationships

Usability Aspect Report

- Structured way to report usability issues
- Can be good or bad aspects
- Linked to a heuristic (here nielsons)
- Be specific and justified

No. HE- *01*	Problem/Good Aspect: *Problem*
Name: *Need to scroll through all drinks options*	

Evidence
Heuristic: *Flexibility and Efficiency of use*
Interface aspect: *Order menu (Include Screenshot!)*

Explanation
The user already knows what kind of product they want. Instead of having a quick option to find what they want, they need to scroll through all drink options until they find the item they are looking for. For someone less familiar with the interface, that could take a while.

Severity or Benefit
Rating: *low*   *Most difficult for first time users as users will get used to it. Also, frequent ordering will per-*
Justification (Frequency, Impact, Persistence) *sonalise suggestions in "picked for you" tab.*

Frequency: *medium, whenever the user orders something that is not at the very top.*

Impact: *low, the menu is not as extensive that it will take a very long time.*

Persistence: *high, it happens every time when the user want to order a drink.*

How I weighted the factors: *While the frequency is high, the impact is the worst for first time users, who are less familiar with the layout and structure. More frequent users can benefit from the suggestion tab and will have less impact.*

Possible solution and/or trade-offs

Relationships

Usability Aspect Report

- Structured way to report usability issues

- Can be good or bad aspects

- Linked to a heuristic (here nielsons)

- Be specific and justified

| No. | HE- | 01 | Problem/Good Aspect: | Problem |

Name: Need to scroll through all drinks options

Evidence
Heuristic: Flexibility and Efficiency of use
Interface aspect: Order menu (Include Screenshot!)

Explanation
The user already knows what kind of product they want. Instead of having a quick option to find what they want, they need to scroll through all drink options until they find the item they are looking for. For someone less familiar with the interface, that could take a while.

Severity or Benefit
Rating: low

Most difficult for first time users as users will get used to it. Also, frequent ordering will personalise suggestions in "picked for you" tab.

Justification (Frequency, Impact, Persistence)

Frequency: medium, whenever the user orders something that is not at the very top.

Impact: low, the menu is not as extensive that it will take a very long time.

Persistence: high, it happens every time when the user want to order a drink.

How I weighted the factors: While the frequency is high, the impact is the worst for first time users, who are less familiar with the layout and structure. More frequent users can benefit from the suggestion tab and will have less impact.

Possible solution and/or trade-offs
search or filter option: takes space and may not be that helpful as scrolling is efficient and time saved might not be worth it

Relationships None

Usability Aspect Report

- Structured way to report usability issues
- Can be good or bad aspects
- Linked to a heuristic (here nielsons)
- Be specific and justified

No.	HE- 02	Problem/Good Aspect:	*Good Aspect*

Name: *Easy Navigation through bottom navigation bar*

Evidence
Heuristic: *Consistency and Standards*
Interface aspect: *Bottom Navigation Bar (Include Screenshot)*

Explanation
The bottom navigation bar has five options which are labelled with text and icons, making it easy to understand which action will happen. Not only are the icons similar to other applications, the navigation through tabs can be found in other apps as well.

Severity or Benefit
Rating: *High*   *The element is the main navigation tool and will be used for all tasks.*
Justification (Frequency, Impact, Persistence)

Frequency: *high, it is used for any action that is not just scanning the reward card*

Impact: *high, as it is the main navigation tool, any issues or positive aspects will have a big influence*

Persistence: *high, it shows on all screens in the app*

How I weighted the factors:
It is the main navigation tool. All justification aspects are high.

Possible solution and/or trade-offs
The bottom navigation bar takes up space, but adds consistency and easy for navigation. A trade off is that this type of menu only allows a limited number of items. For this application it works.

Relationships *None*

Any questions?

Week 5: Study Design

Nicole Meng-Schneider