Zebra Technologies - User Experience Project - Kareena Patel - 2022

Introduction

Project brief:

Retail workers in large department stores want to utilise their time at work by staying connected with different colleagues (in other departments) whilst prioritising customers. They can ask questions, seek additional help about a query or alert colleagues about a situation.

Company introduction:

A department store in the UK supplies necessities such as groceries, clothing and home furniture. The stores have lots of staff in different roles. The workers rely on each other to complete tasks while serving customers. Customers use their stores often. So, the company understands that time and priority should go to them. They know the system is needed to have a better workflow and interaction with colleagues and customers.

Commentary:

Exploring what Workforce Connect is about, I have produced a project brief, so I understand the users, problems and aims for implementing this technology.

I have also introduced a company connecting to the brief to show they want to apply the technology.

Persona Introduction - Empathising with the user

Shai - Customer Assistant
Time in role: 3 Years

Main role:
Works at the customer checkout part time

Tasks her role may do:
- Scanning customer's items and serving customer
- Exchanging items (by asking someone) if they are damaged
- Alerting maintenance if the till hardware is broken
- Alerting cleaners if there is a spillage between tills which stops service
- Alerting security for reasons

Jim - Stock/Shelf stacker
Time in role: 2 Years

Main role:
Works in the stock room and is a shelf stacker full time

Tasks within the role:
- Moving stock between the stockroom and aisles
- Checking on stock levels in store
- Alerting cleaners if spillage on aisles
- Alerting security for reasons
- Stacking shelves
- Answering customer queries (e.g. Where is this item? Is this item in stock?)

Commentary:

The key users (of the system) would be a customer assistant and a stock/shelf stacker. I explore these personas because they are essential front-end and back-end roles within a department store. They also vary in the time they dedicate to the job.

Requirements - Defining the choices and reasons

Reasons for service (motivation)

Prioritising time to customers - Avoid wasting time finding people

Increase in profit with a solid workflow - making customers want to come back

Organisation - Knowing what people are on your shift and what their role is

Increasing company's dynamics - encouraging collaboration and teamwork

Requirements for design and interface

Interface to be intuitive - using universal real-world icons- Reducing cognitive strain

Application is easy to operate - requires minimal training

Able to show who is working on the shift, what department and role if they are signed in

Runs on a seperate device to avoid distractions (Cannot be a public application)

Camera feature for instant messaging (Ability to show and tell)

Tracking user's location through the device (e.g. beacon which can be turned on/off at anytime)

Simple interface with aesthetic and minimal design

Accessibility for staff once they sign in. Preferences saved to their account.

Chat feature to contain premade statements or limited number of characters - allows user to get down their message using specific words.
Prevents unnecessary typing/ thinking about what to type.

Sign in is quick.
Possible methods:
- Username + Password
- Identification number
- Scanning work ID

Error prevention in signing in, messaging and other features. (Preventing the system from failing)

Being able to delete messages which were published by the original person

Able to mark a task complete depending on the type of task and role it applies to.

Displaying current activity of the store on a dashboard which everyone has access to.

Helping the user recognise and prevent error by showing dialog boxes with message explaining the error

Any worker on the shift can add to the acitivty if required

Adding items to be completed in real time so there is no delay or unnecessary work

Showing main people connected to a department (instantly shown before searching)

The yellow notes are ideas taken from the 'How might we?...' section

How might we - Defining the needs

Point of view statements

Shai needs to alert maintenance because her till's scanner is broken

Shai needs to exchange damaged items because the customer may buy a damaged product

Shai needs to alert the cleaners as there is a spill between the cashiers because she cannot serve people.

Jim needs to answer customer questions because he can help them complete their shopping without much interruption.

Jim needs to stack the shelf because the shelf was empty/running low on the item.

Jim needs to move stock between the stockroom and aisles because the items need to be moved as well as the trolley

Breaking down Point of view

Helping with keeping the store clean

Helping with communication between different departments

Helping with providing great customer service

Helping with keeping the stock levels high

How Might We...

How might we be able to identify who is working the same shift as them?

How might we make sure customer service is not rushed?

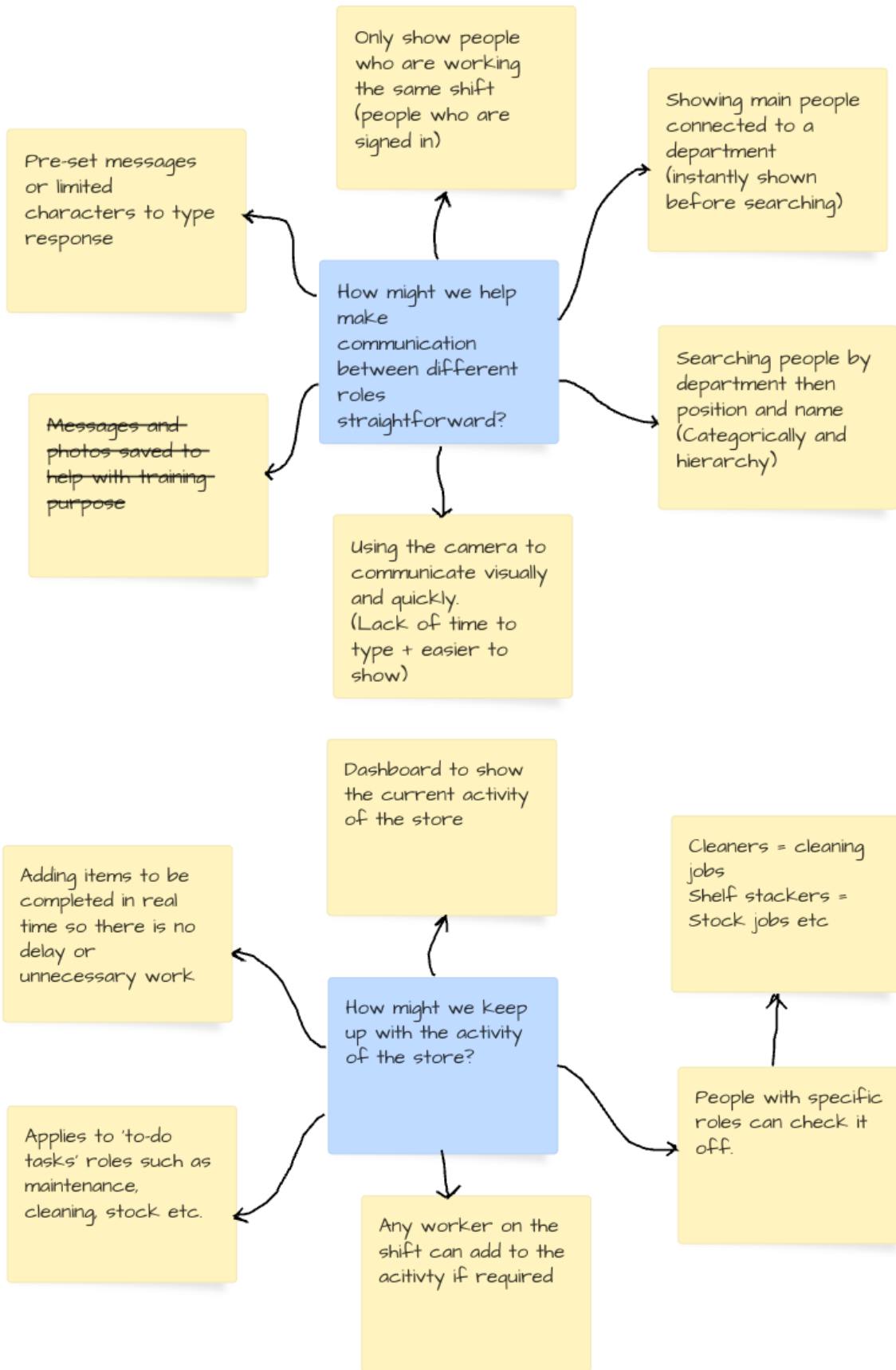How might we help make communication between different roles straightforward?

How might we keep up with the activity of the store?

How might we get workers to solve customer queries if they do not know the answer themselves?
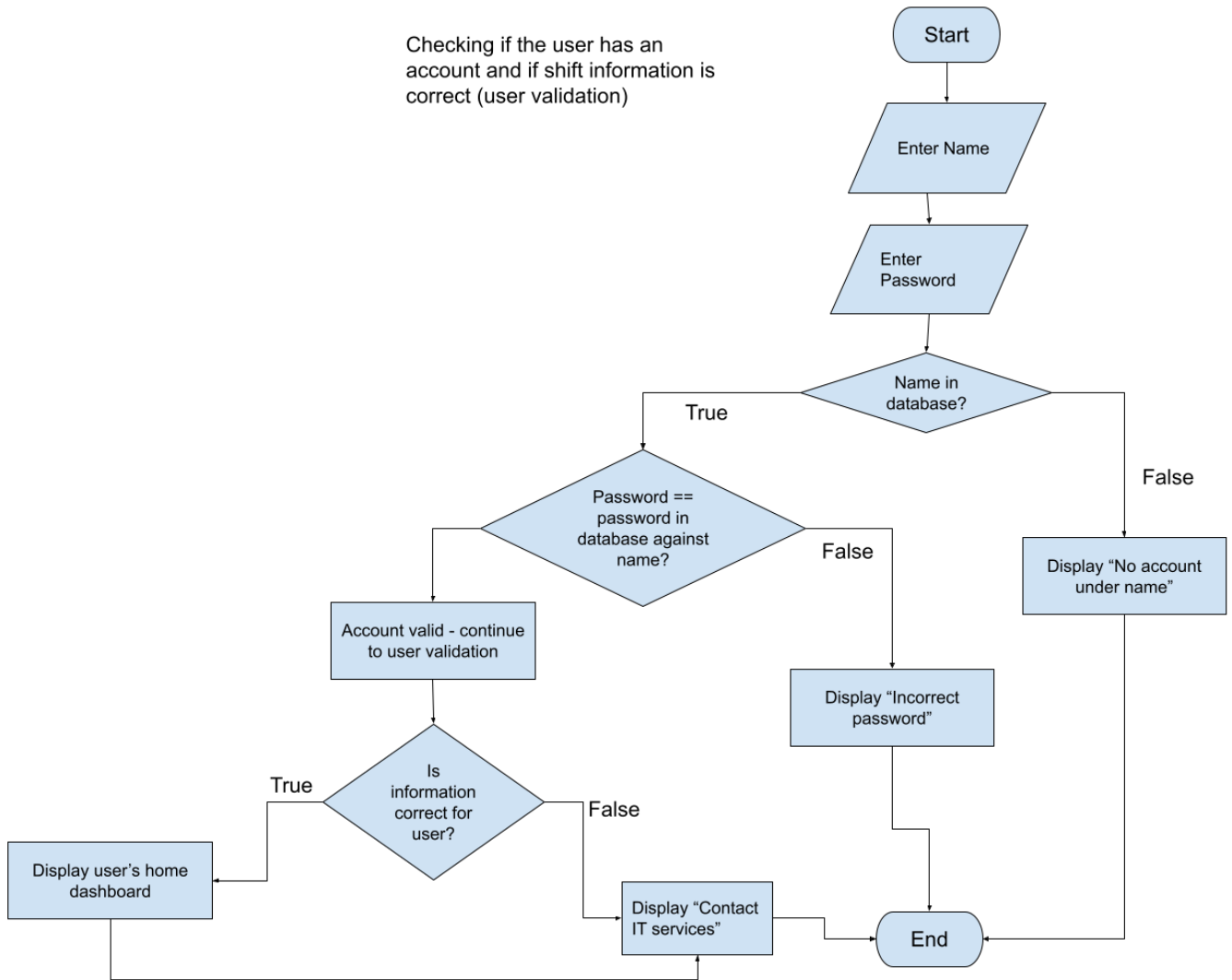
Commentary:
The blue notes circled in red are explored further. I gave answers to the questions. This helped to build up the requirements and user needs further.

How might we?... Answers - Exploring the needs

Only show people who are working the same shift (people who are signed in)

Pre-set messages or limited characters to type response

Showing main people connected to a department (instantly shown before searching)

How might we help make communication between different roles straightforward?

~~Messages and photos saved to help with training purpose~~

Searching people by department then position and name (Categorically and hierarchy)

Using the camera to communicate visually and quickly.
(Lack of time to type + easier to show)

Dashboard to show the current activity of the store

Adding items to be completed in real time so there is no delay or unnecessary work

Cleaners = cleaning jobs
Shelf stackers = Stock jobs etc

How might we keep up with the activity of the store?

Applies to 'to-do tasks' roles such as maintenance, cleaning, stock etc.

People with specific roles can check it off.

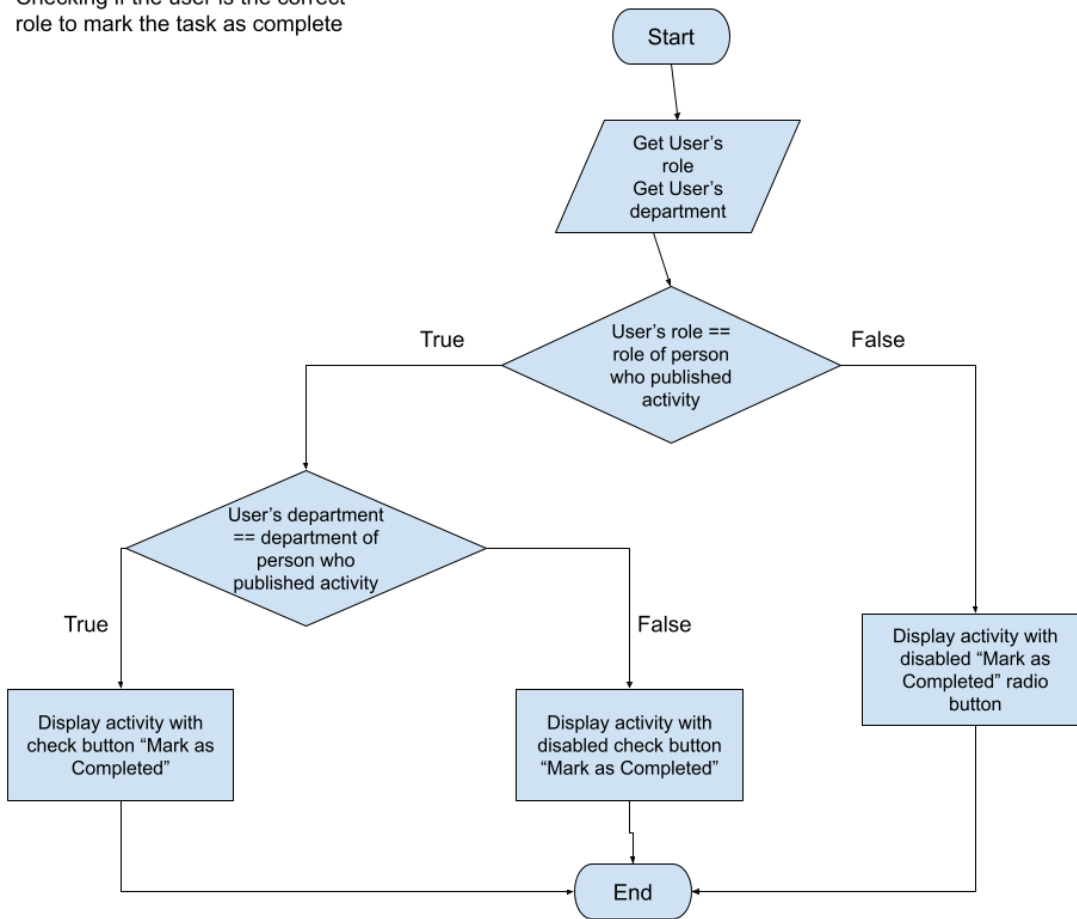Any worker on the shift can add to the acitivty if required

Flowcharts - Thinking about user flows and how tasks are done
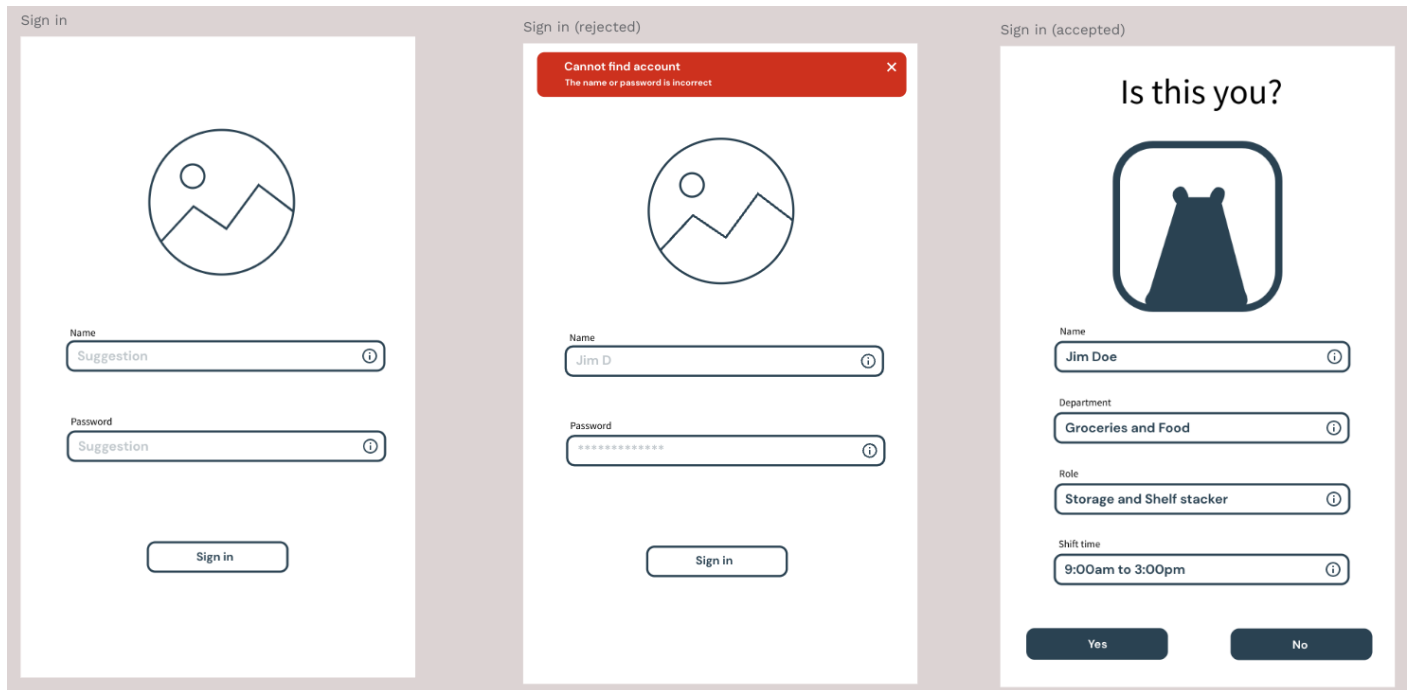
Checking if the user has an account and if shift information is correct (user validation)
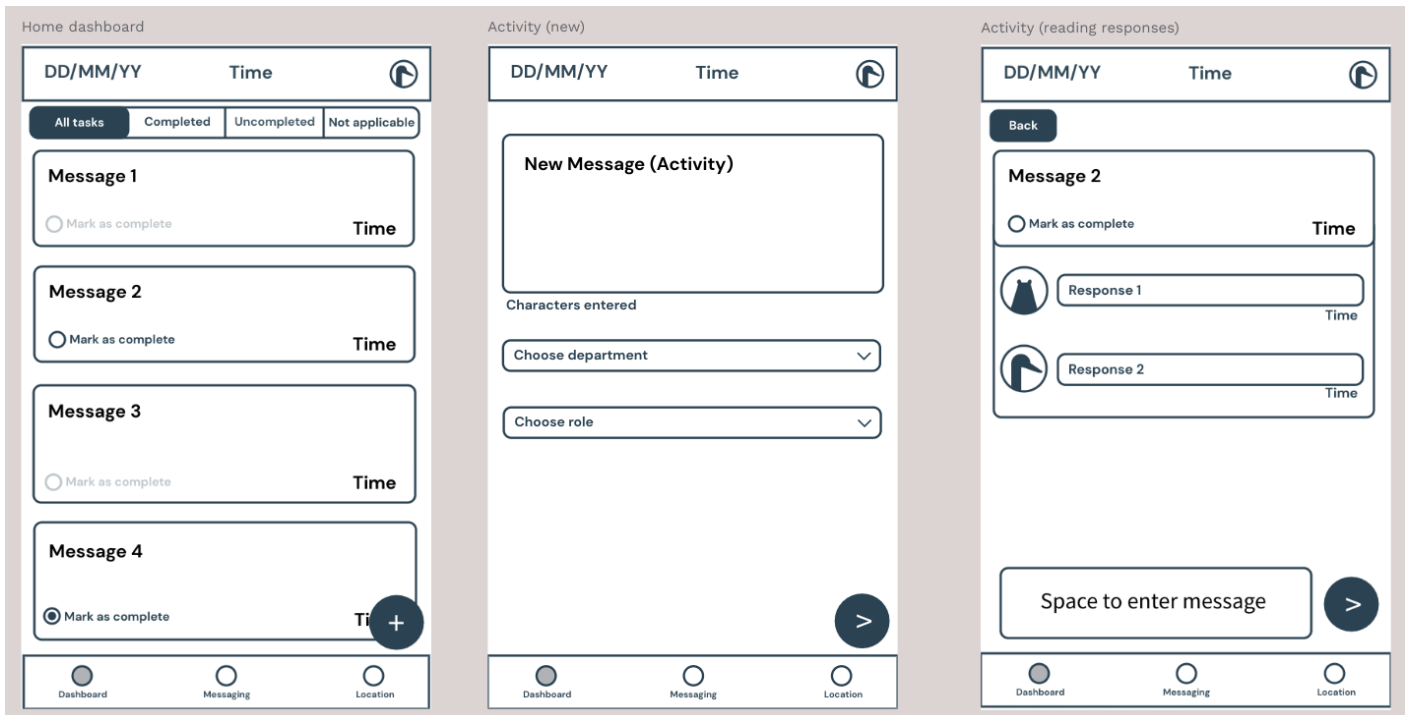
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                                                  / Enter
                                                    Password /
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                                              < Name in database? >
                                       True  /                    \  False
                                            v                      v
                            < Password ==                    Display "No account
                              password in                      under name"
                              database against                      |
                              name? >                               |
                        False |        |                            |
                              v        |                            |
                    Account valid -    | False                      |
                    continue to        v                            |
                    user validation   Display "Incorrect            |
                         |             password"                     |
                         v                  |                        |
                    < Is                    |                        |
                      information           |                        |
                      correct for           |                        |
                      user? >               |                        |
             True  /        \  False        |                        |
                  v          v              |                        |
    Display user's    Display "Contact      |                        |
    home dashboard    IT services"          |                        |
          |                 |               |                        |
          |                 |               v                        |
          |                 +----------> ( End ) <-------------------+
          +----------------------------------^
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Checking if the user is the correct
role to mark the task as complete

Start

Get User's role
Get User's department

User's role == role of person who published activity

True

False

User's department == department of person who published activity

True

False

Display activity with disabled "Mark as Completed" radio button

Display activity with check button "Mark as Completed"

Display activity with disabled check button "Mark as Completed"

End

Wireframes - Low fidelity model of the application

Frame Name:	Notes:
Sign In	• Company logo appears at the top showing the system belongs to them • Entry fields are centralised as important information is needed to sign in • The sign-in button is at the bottom because it is the last action to do on the page

Sign In (Rejected)	• The warning message appears at the top and does not overlap the screen
	  ○ It is similar to how Google apps respond if there is either an incorrect password or username given
	  ○ Many users are familiar with this

Sign In (Accepted)	• Verifies the user login-in by showing information related to the user and seeing if it is correct • For clarity, the information and user's photo are in aligned to the middle. • The design trusts the user to identify themselves honestly

Frame Name:	Notes:
Home Dashboard	- A filter bar is at the top; the user is encouraged to use the feature - Activities have a card-like display - The activity information is at the top as it is mandatory to view. - Time the activity is on the right-hand side showing as secondary information - The 'Mark as complete' section is underneath as secondary information. - The plus button (Adding a new Activity) is on the right-hand side as most people are right-handed - It is similar to Google Keep's layout
Activity (New)	- The message box is large for visibility - The number of characters entered is visible underneath as a reference - The drop-down menus for the department and role are underneath as it is mandatory to fill. - The Messaging (Department) wireframe has 'choose department' at the top. To keep it consistent, it will change.
Activity (Reading responses)	- The message is at the top as a reference to the response thread - Responses are underneath to show that it links to the message - The profile photo is at the left of the message - The user will know who sent the message first then what they have said - Similar to WhatsApp, the message space and send button are in matching locations for familiarity - The back button is also in a similar location to most applications.
Additional notes	- The navigation bar is at the bottom of all frames because it is clear and accessible and does not overlap content on any frame. - The header bar is at the top of all frames for the same reasons as the navigation. - The time, date and profile photo are constantly visible - The position of the time and date is changeable.

Messaging (home)
DD/MM/YY   Time
Messages to person
+
Dashboard   Messaging   Location

Messaging (department)
DD/MM/YY   Time
Choose department
Message
Dashboard   Messaging   Location

Contact
DD/MM/YY   Time
Search...
Choose department   Filter
Person's name / Role
Person's name / Role
Person's name / Role
Person's name / Role
Person's name / Role
Person's name / Role
Dashboard   Messaging   Location

Messaging (person)
DD/MM/YY   Time
Person's name / Role
Message
Dashboard   Messaging   Location

Frame Name:	Notes:
Messaging (Home)	● The message box covers the whole frame because it is part of the main feature. ● Plus button on the right-hand side (Reason similar in Home Dashboard)
Messaging (Department)	● Department dropdown bar is before the messaging area ○ Choosing the department first helps the user have direction in writing.
Contacts	● Search bar at the top of the frame. It is identical to most applications ● Filtering options are underneath to provide another way to find contacts ● The layout is similar to Samsungs phone's contacts page. ○ The difference is the display of the role of the person.
Messaging (Person)	● Person's information displayed above for referencing ● Messaging space underneath and centred on the screen

	○ Should be a send button on the right-hand side
Additional Notes	● The layout of the message (Messaging (Home)) in the box should have been considered (this is in the hi-fidelity model) ● Messaging (Person) frame has developed and changed in the hi-fidelity model

Frame Name:	Notes:
Locator (off)	● On button at the top due to the layout of the second screen
Locator (on)	● Location Off button in the same place as the button on the other frame. ○ It acts as a toggle button to show information under it ● Drop bar is before the map to make the user consider filtering. ● The calibrate button is underneath. ○ It is the last action to consider if the locator does not work correctly.
Additional notes	● In the hi-fidelity model, Locator (on) has its layout changed to suit the graphics and colour

Actual Design - High-fidelity model of the application

Sign in (Start)

13:00   14/05/2022

Name

Password

Sign in

Sign in (Error)

13:00

Name or password not recognised

OK

Name

JimDoe

Password

****

Sign in

Sign in (verification)

13:00   14/05/2022

← Go to Login

Is this you?

Name

Jim Doe

Department

Groceries and Food

Role

Stock/Shelf stacker

Shift time

9:00 AM to 3:00 PM

NO   YES

Dashboard (Home)

13:00   14/05/2022

✓ All tasks ⊗   Completed   Not completed   Not applicable

Milk spilled in aisle 2 GF   12:59
○ Mark as completed   Samuel Kim

New shoes to display 2nd Floor   12:30
✓ Mark as completed   Jordin Sparks

Till 4's scanner on first floor not working   12:23
◉ Mark as completed   Marcus Warner

Cadbury chocolate stock low on shelves   11:30
✓ Mark as completed   Daniel Rojas

Home   Message   Location

Viewing notifications

13:00   14/05/2022

← Go to

Enter me

Messages   13:00
New message from Vance Joy

Dashboard   12:34
You have been mentioned by Stephen Stanley

Open notifications

Choose department ⊙

Choose role ⊙

+ ADD TO DASHBOARD

Home   Message   Location

Dashboard (Adding activity)

13:00   14/05/2022

← Go to dashboard

Enter message

0/300

Choose department ⊙

Choose role ⊙

+ ADD TO DASHBOARD

Home   Message   Location

13:00 14/05/2022

← Go to dashboard

New shoes to display 2nd Floor 12:30

✓ Mark as completed Jordin Sparks

Shoes with Item number: 23489768406 to display

Cullen Vance
I'm currently on the second floor now. I can get them out. @StephenStanley are you available? 12:32

Stephen Stanley
I'm available. I just had a look at the stock, we need extra hands. @JimDoe can you help? We are low on staff here. 12:33

I can help. Let me ask and I'll come up from the groceries department.
54/300 >

🏠 Home 🔍 Message ⓘ Location

13:00 14/05/2022

← Go to dashboard

Till 4's scanner on first floor not working 12:23

◉ Mark as completed Marcus Warner

Main scanner doesn't work. Handheld scanner does.

Martin Brown marked as completed 12:35

Martin Brown
I can come to you to fix it. Give me 2 minutes. 12:24

Marcus Warner
Okay now both scanners don't work. 12:25

You cannot message because you are not in the correct role
0/300 >

🏠 Home 🔍 Message ⓘ Location

13:00 14/05/2022

✓ Individual Department

Vance Joy
A customer wants to know if there are these croissants in stock? 12:59

Lila McKenna
Just a heads up, the orange crate is a bit low. Did we not get another order? 10:45

Lanley Jones
Do we have any Tic-Tack boxes left? They're selling really quickly with the offer. 10:00

Department
Individual +

🏠 Home 🔍 Message ⓘ Location

13:00 14/05/2022

← Go to messages

Choose department ▼

Enter message

0/300

+ SEND TO DEPARTMENT

🏠 Home 🔍 Message ⓘ Location

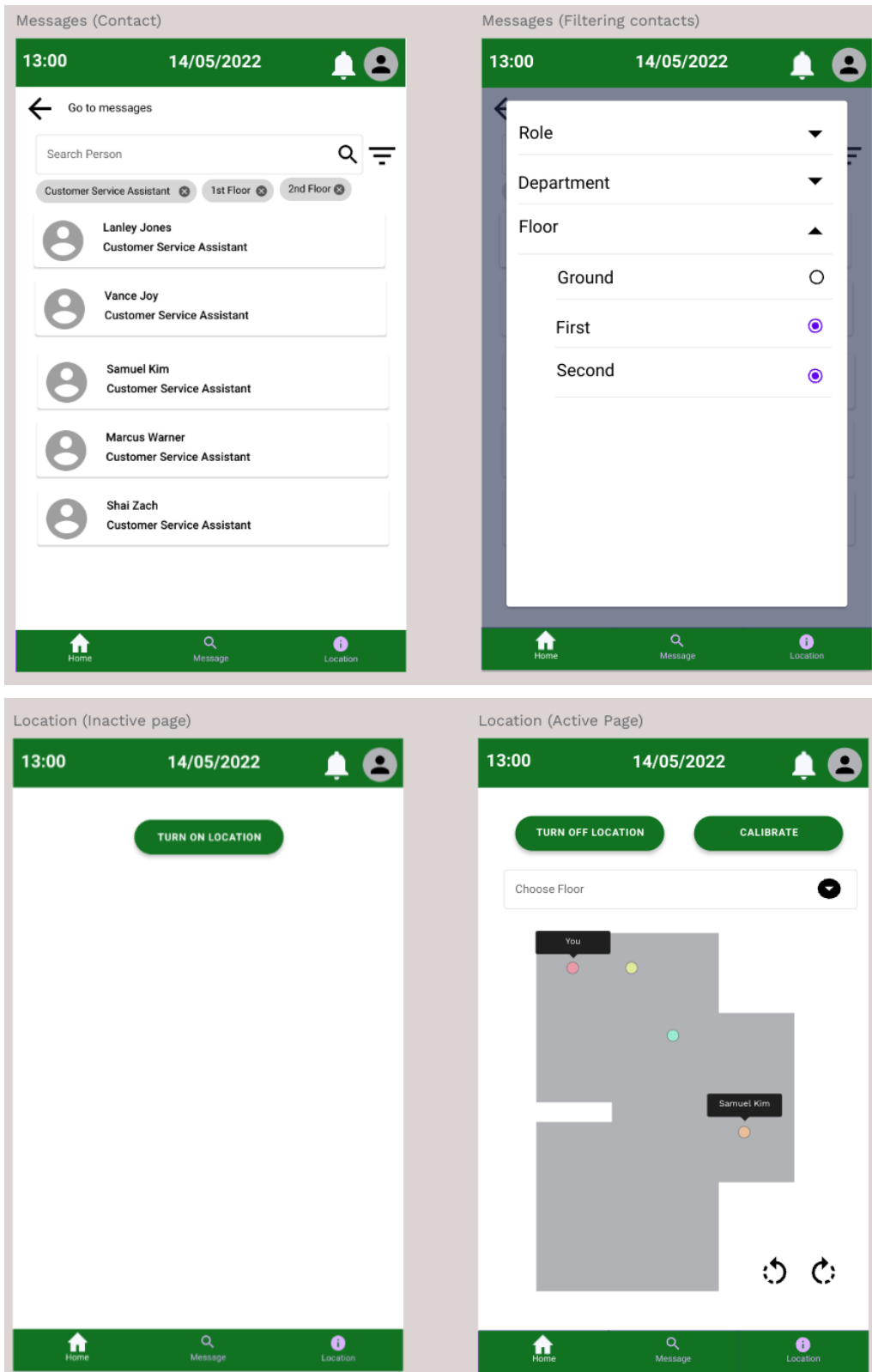13:00 14/05/2022

← Go to messages

Vance Joy

A customer wants to know if there are these croissants in stock?
🖼️ 12:59

13:00 No sorry. They won't be in stock until Monday.

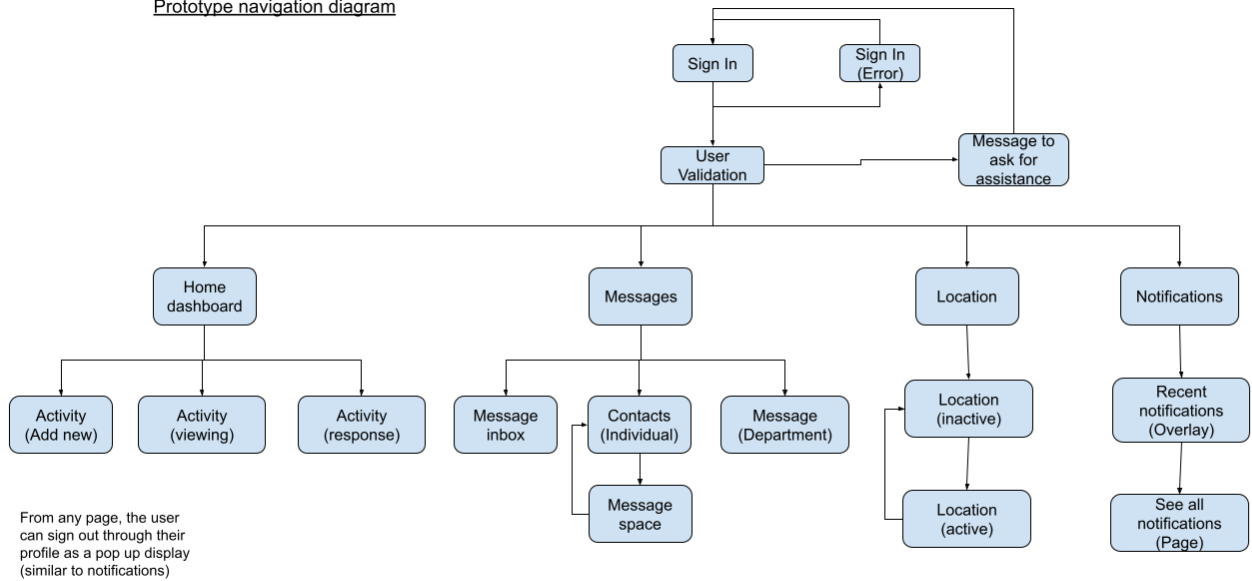Ah. No problem. Appreciate it. 13:00

0/300 >

🏠 Home 🔍 Message ⓘ Location

Messages (Contact)

13:00	14/05/2022

← Go to messages

Search Person 🔍 ≡

Customer Service Assistant ⊗   1st Floor ⊗   2nd Floor ⊗

👤 Lanley Jones
Customer Service Assistant

👤 Vance Joy
Customer Service Assistant

👤 Samuel Kim
Customer Service Assistant

👤 Marcus Warner
Customer Service Assistant

👤 Shai Zach
Customer Service Assistant

🏠 Home   🔍 Message   ⓘ Location

Messages (Filtering contacts)

13:00	14/05/2022

Role ▼

Department ▼

Floor ▲

Ground ○

First ◉

Second ◉

🏠 Home   🔍 Message   ⓘ Location

Location (Inactive page)

13:00	14/05/2022

TURN ON LOCATION

🏠 Home   🔍 Message   ⓘ Location

Location (Active Page)

13:00	14/05/2022

TURN OFF LOCATION   CALIBRATE

Choose Floor ⬤

You

Samuel Kim

↺ ↻

🏠 Home   🔍 Message   ⓘ Location

Frame name:	Notes:
All frames	• Choosing dark green as the theme colour makes the system feel unique. It can associate with the company's logo colour. • Contrasting a dark colour with white text makes it stand out. • The time and date have swapped places because it appears to fit better. • A notification bell is shown on every frame; the user knows if there is a new message or activity. • (Except sign-in) The user profile photo in the top right corner is where the account

	information is.

Dashboard (Home)	● Different toggles for "Mark as completed"
	  ○ Radio button not filled disabled - Task not completed and cannot be checked off because the person is not part of the role.
	  ○ Radio button filled disabled - Task is finished by a person in a different role.
	  ○ Check button disabled - Task relates to the person's role but not their department
	  ○ Check button enabled - Task relates to the person's role and department so they can tick it. (The frame shows the fourth activity is done)
	● Chips displayed at the top for filtering activities by completion
	● Red dots on the notification icon and messages icon to show content is sent to them

Viewing notifications	● The user has options for each notification through the three dots ● Only three recent notifications are shown; the whole screen is not covered. ○ The user can see more notifications. If more notifications want to be displayed, they would be displayed similarly to Messages (Individual)
Messages (Filtering contacts)	● Filter screen is an overlay to Messages (contact) (this was not part of the wireframes) ● The icon for filtering is recognisable ● Choosing the criteria shows the keyword on Messages (Contact) as a chip ○ Each chip has a cross for easy removability (than going to the filter page and removing criteria one by one)

Message (Individuals)	● Chips at the top so the user can swap between individual and department messages.
	  ○ Tick on chip showing the messages under the section
	● Layout similar to Gmail
	  ○ Bolding a message which has not been opened
	  ○ Creating a new chat with the plus button on the right-hand side with options

Messages (Talking to an individual)	● Using a similar WhatsApp/ messaging interface from phones where the colour of the message determines which user has sent it.
Location (Active Page) Original name: Locator (on)	● The user can rotate the map to suit their view. ● The calibrate button has moved to the top to suit the layout ● Coloured markers represent workers with their device location turned on. ○ User can hover over a marker to show who is who.

Linking prototype frames - Showing how the frames link together

Prototype navigation diagram

From any page, the user can sign out through their profile as a pop up display (similar to notifications)

Feedback for the prototype - Understanding the strengths and weaknesses

Commentary:

I collected some feedback from the high-fidelity designs to see what could be improved. For simplicity, I have put the feedback in a table where it talks about a particular frame.

| Frame name	Feedback
Dashboard (Home)	- Great that all activities are displayed on cards to separate them. - Able to mark a task as completed but cannot show if a task has been started at a glance. - How do you add a title to the activity? There is only a message space. - Coloured chips are beneficial for quick sorting.
Messaging (Contacts)	- Simple, intuitive display - How do you know the floor number a person works on? - The search bar is very important
(All frames)	- It is not clear which section from the bottom navigation has been selected. - Nice to include a dot where messages or notifications are needing to be seen.

Changes to prototype

Commentary:

Acting on the feedback of the prototype, I have changed some of the frames either by changing the graphics, adding functionalities and giving more information in some areas.

Frames before changes
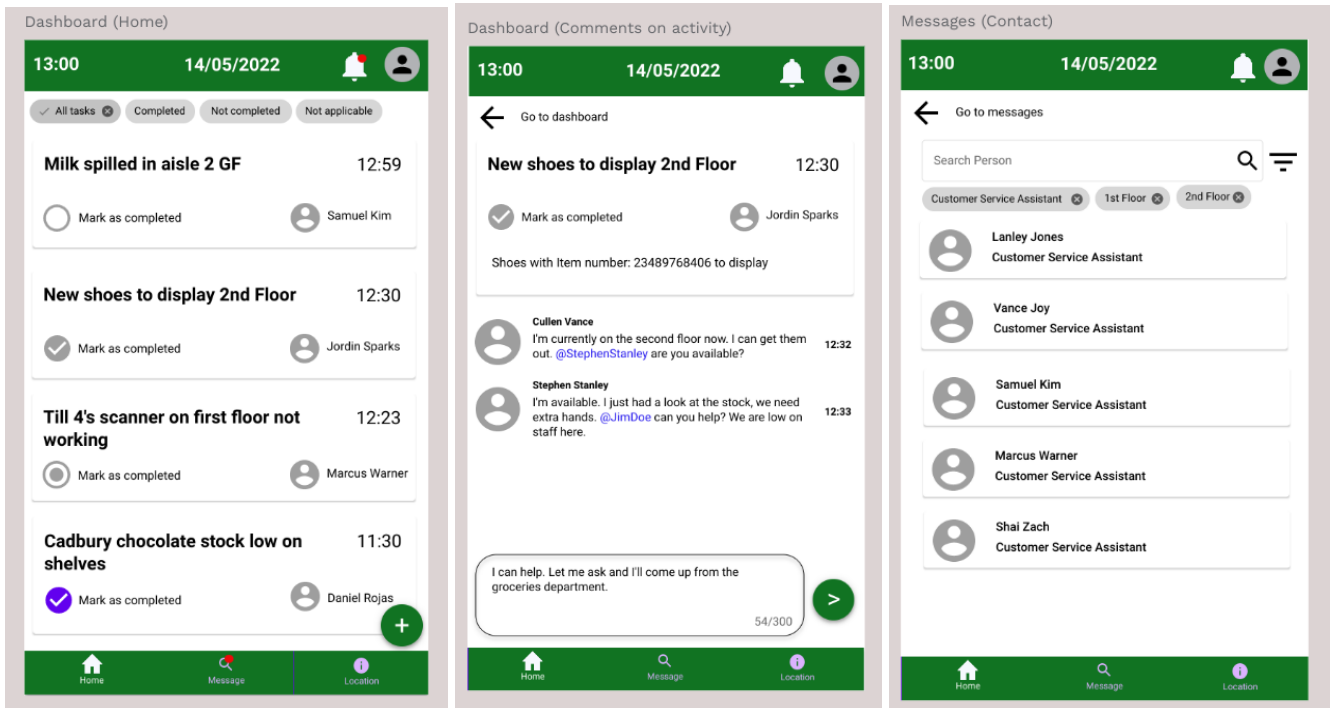
Frames after changes
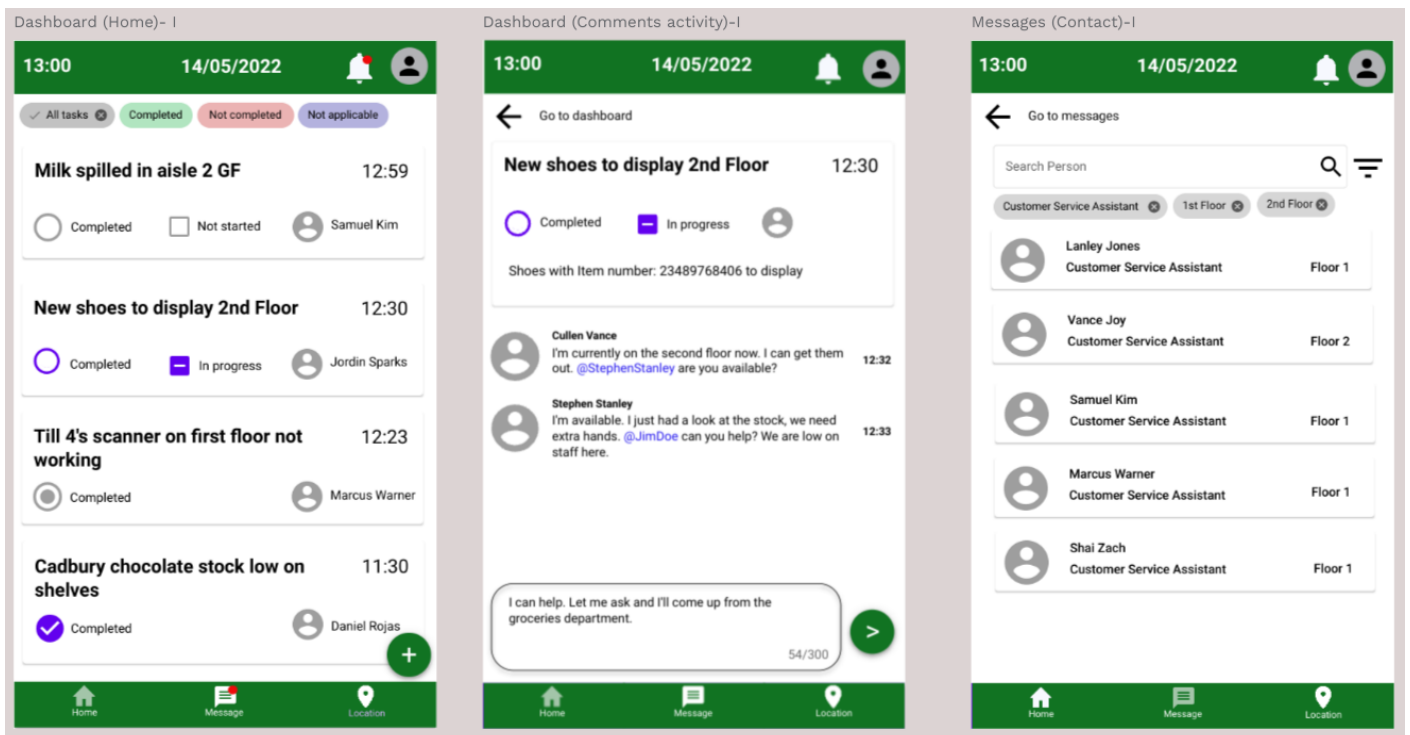
Commentary (Conclusion about the whole project):

Overall this internship has pushed me to explore UX design. From understanding design and aesthetics to how to generate requirements and think beyond within a project. This internship has helped develop my organisation skills and time management as this was done during the university semester. I am grateful to have experienced this.