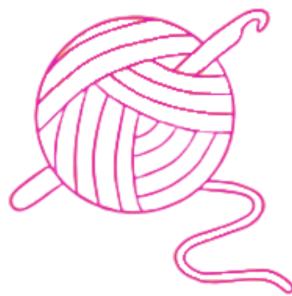


App Development: Knots and Crosses



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**Coding Four: App Development Studio,
University of the Arts London**

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Introduction

The idea behind Knots&Crosses came to me while helping my mum create a Pinterest account so that she could start collecting ideas for her crochet projects. Although simple enough to use, many things were sending us out of the app, and there was unnecessary filler within the searches (think adverts and unrelated images). My mum is fairly tech-literate, and watching her struggle with the over-saturation of the app made me wonder how older, less tech-literate users would interact with Pinterest. Are modern apps too complicated now? With unnecessary features that only work to bulk up the application. Modern apps often seem bloated, packed with unnecessary features that just get in the way.

Github Link: [GitHub - Brainrotz/App_development](#)

App demo video: [Crochet App demo](#)

Link to Canva presentation: [App devlopment](#)

App Overview:

Knots & Crosses is a Crochet hobby app where users can browse, upload, and log projects.

The app aims to create a linear and intuitive space to develop and share their crochet projects. Simple enough that the older generation can navigate it with ease, but not so bare-boned that younger people don't engage.

The goals for the app are as follows:

- 1) a simple and intuitive design that is easily usable by both older and younger demographics.
- 2) Something specific to the niche of crocheting, curated and created for this specific hobby.
With no unnecessary filler or complicated out-of-app functions.

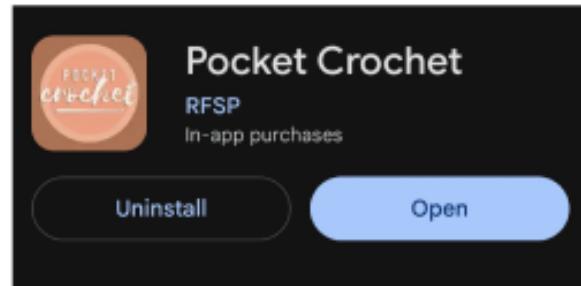
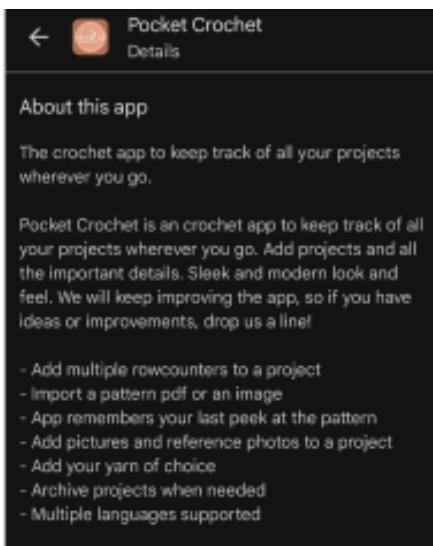
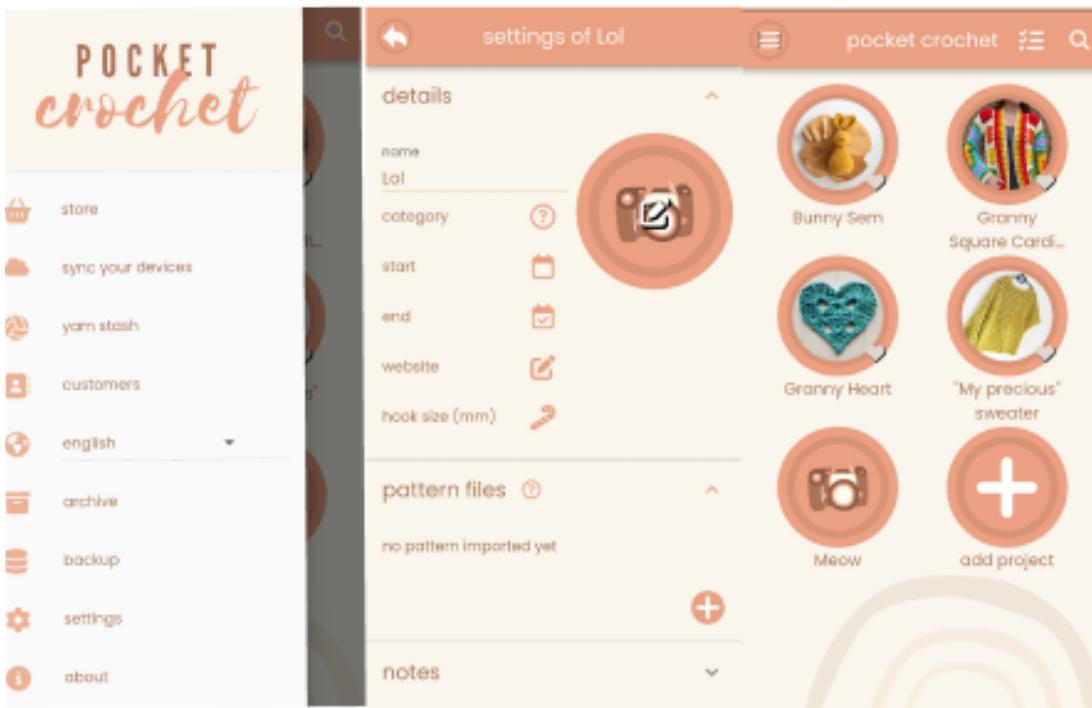
To help me develop the app, I analysed a few pre-existing crochet hobby apps to see what worked well and where they missed the mark

Research:

To help draft my app, I went to the Google Play Store to look at some already existing crochet apps to see what they do well and what they lack.

The first app I looked into was [Pocket Crochet](#).

Pocket Crochet is an app that allows users to upload and track their projects. Users can track the materials, patterns, tools, and progress of their projects.



Pros:

Straightforward intuitive design

Very simple layout and easy to navigate

Great if you only need an app for logging projects

Doesn't push premium purchases onto the user

Cons:

Users can only upload their projects (manually)

The app is only a tracking app and doesn't offer anything else.

The second app I looked into was [Crochet & Knit Stitch Counter](#)

Patterns

All Amigurumi Clothes Just for you

- Curious Owl Bookmark**
This Owl will be waiting for you on the last page, hoping that you would continue reading t...
- Clovis the Duck**
Clovis the duck takes its name from a brave and conquer king of France. He loves ch...
- Teddy Bear**
Yes, you saw correctly! This is a bear, and its name is Aubergine. This is because hi...
- Milo's Pumkin**

Counter Patterns Tools PDF's Profile

Welcome

WELCOME

Hi, tell us about you, how experienced are you in crocheting?

Beginner Experienced

My PDF's

Sync ⌂

Search... PDF's Finished PDF's

You do not have any PDF's yet

Just press "+" button and upload new PDF. With free plan there are 5 file upload available.

Counter Patterns Tools PDF's Profile

Row counter

Global counter

1 00:00:00

Secondary counters Add

Counter Patterns Tools PDF's Profile

Tools

- Yarns warehouse**
All your yarns in one place, control them in one click
- Hook warehouse**
All your hooks in one place, control them in one click
- Needle warehouse**
All your needles in one place, control them in one click
- Shopping list**
Easy tool to create your list of purchases to have everything you need for the crafts.
- Unit converter**
Quickly convert between yards and meters, ounces and grams, inches and millimeters.
- Abbreviations**
Check out this list of common

Crochet & knit stitch counter Details About this app Row counting app for handmade & pro crafting. Learn crafts & stash app download Crochet app with row stitch counter with features for handmade craft items and PDF upload. Preview and store PDF files, count rows with steps, track progress, upload patterns from other apps or marketplaces like Etsy, ravely app, etc. Use counting app with + and -, check timer and track your progress on DIY handicrafts Items crafted specially for mobile view Lowers the bar on users who can craft projects. We find best amigurumi patterns to make crafts with the best crocheters. Stash manager & shopping list Gathered best yarn collections from best manufacturers: YarnArt, Drops, Alize, Schachenmayr, DMC, etc for the stash app. Allows to control stock of items for crocheting, yarn stash, crochet hooks and other tools. Helps creators to make sure stash and yarns are always full and ready. New standards for easy crochet life

Counter Patterns Tools PDF's Profile

Pros:

You can upload your own PDFs to the app

Lots of different features

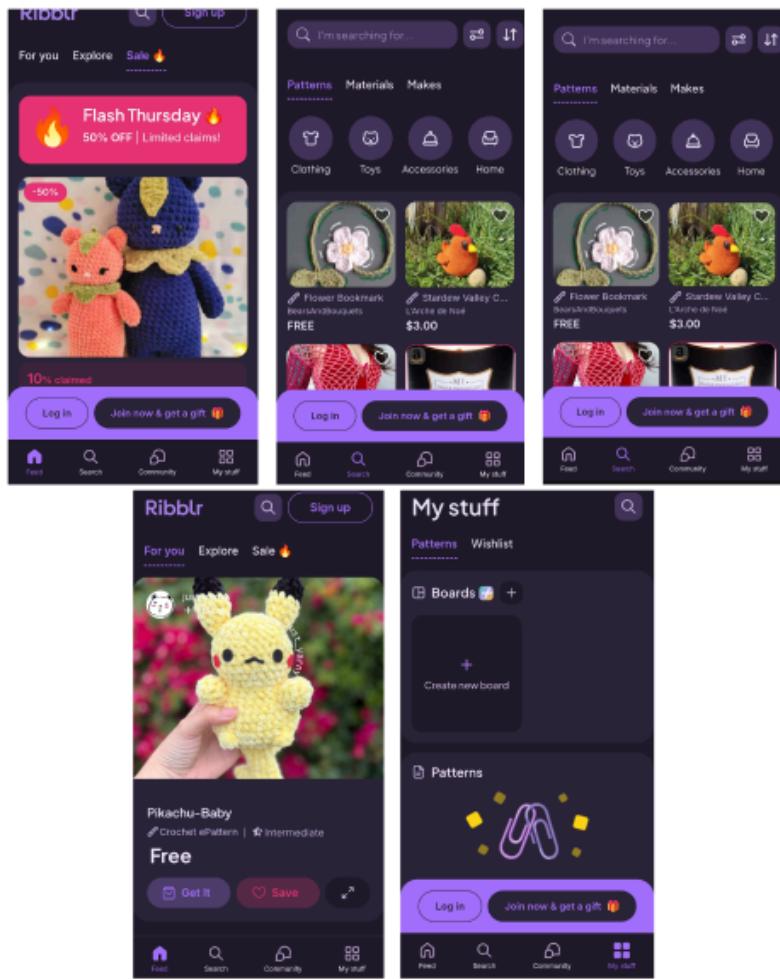
Cons:

Slightly overwhelming, although many features are good, sometimes it can be a bit much

A lot of pay-only options

Payment pushy

The third app I looked into was [Ribblr](#)



Pros:

Visually pleasing appearance

Interesting design and easy to navigate

Cons:

Very purchase-heavy, the first page that appears when installing the app is the sale tab

Very pushy with making purchases

Why crochet?

Crochet offers surprising benefits, especially for older adults, making it more than just a relaxing pastime. Studies have shown that engaging in crafts like crochet can help reduce stress, improve mood, and even slow cognitive decline by keeping the mind active and focused (Riley et al., 2013, *Journal of Ageing Studies*). For seniors, the repetitive motion of crocheting can help maintain hand dexterity and fine motor skills while offering a sense of accomplishment and purpose. Socially, it provides a great opportunity to connect, whether it's joining community groups or simply making handmade gifts for loved ones.

Beyond the mental and physical advantages, crochet can also boost self-esteem by allowing people to create something tangible and beautiful with their hands. For older individuals,

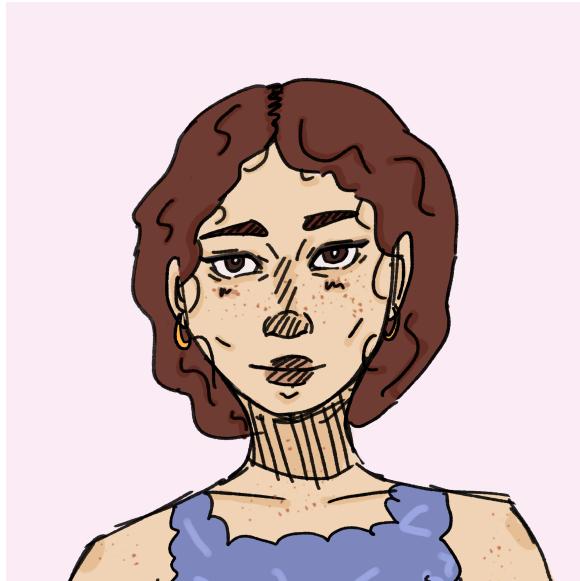
especially those who may be dealing with loneliness or mobility issues, having a creative outlet can make a huge difference in daily life. According to the Craft Yarn Council, many older crafters report that crochet helps them feel more relaxed, happy, and less isolated.

Whether it's a scarf, a blanket, or a toy for a grandchild, each project offers a sense of progress and personal expression—something that's both comforting and empowering at any age.

Keeping this in mind, I created 3 Personas of community members who would potentially use my App.

App Development Process:

User Persona's



Name : Linda

Age : 58

Occupation : Stay a home Mum

Background: Linda is a stay at home mum with two adult children who are in the process of moving out. She has been crocheting since a young age and likes to do projects in her spare time. Although she is fairly tech literate Linda still is easily overwhelmed by clunky apps and isn't on any social media besides Pinterest

Goals:

To document and track her crochet projects in one place

To find new project ideas and patterns without needing to browse multiple sites

To connect with a like-minded, low-pressure community for inspiration and advice

To build a digital "library" of her past work to look back on or share with family

Frustrations:

Complicated navigation or overly trendy design elements that confuse her

Apps that prioritize social media features over core functionality

Losing track of saved patterns or progress when switching devices

Being forced to engage with a large, noisy community when she prefers quiet browsing

Knots&Crosses Needs to Provide:

A clean, intuitive interface with easy-to-read text and large tap targets

A simple project logging system with optional notes and progress photos

Optional social/community features that can be explored at her own pace

Accessible inspiration boards or pattern suggestions that are easy to save and revisit

Syncing or backup options to avoid data loss

Persona #2



Name : Maya

Age : 24

Occupation : Office worker

Background: Maya recently transitioned from retail work to her first full-time office job. While she's adjusting to the new structure and pace of office life, she often finds herself seeking creative outlets during evenings and weekends to unwind. She discovered crochet during the pandemic and quickly fell in love with the craft. Maya enjoys learning new stitches, experimenting with colors, and scrolling through crochet content on Instagram and TikTok for ideas. She's confident with technology and uses several hobby-related apps, but she values clean design and quick navigation—especially when balancing hobbies with her busy work schedule.

Goals:

To stay inspired with new patterns and trending ideas

To document and visually track progress across multiple WIPs (works in progress)

To share finished pieces online and get feedback from a like-minded community

To build a digital archive of her work to showcase or refer back to later

Frustrations:

Clunky or outdated interfaces that feel slow or visually unappealing

Apps that feel too basic and don't offer features she needs to organize and grow her hobby

Poor search functionality or lack of filtering when browsing new patterns

Having to jump between platforms for inspiration, tracking, and sharing

Knots&Crosses Needs to Provide:

A modern, visually engaging interface with smooth navigation

A strong inspiration feed with trending patterns, tags, and user content

Easy-to-use project logging tools that support photos, notes, and milestones

Light community features (likes, comments, shares) that don't feel overwhelming

Syncing across devices so she can pick up her hobby anywhere

Persona #3



Name : Jessica

Age : 19

Occupation : University Student

Background:

Jessica is a first-year university student studying graphic design. Between lectures, part-time work, and social commitments, she looks for relaxing, screen-free activities to help manage stress. She recently picked up crochet after seeing tutorials on TikTok and finds it both calming and creatively fulfilling. Jessica enjoys experimenting with fun, quirky projects like plushies, wearables, and personalized gifts for friends. She's fluent in digital tools, constantly on her phone, and used to highly visual, fast-loading apps. Community and aesthetics matter to her—she's drawn to platforms that feel fresh, curated, and social without being too chaotic.

Goals:

To learn new crochet skills through tutorials and community posts

To find cute, beginner-friendly project ideas and patterns

To document her crochet journey and share finished pieces with friends or followers

To connect casually with others in her age group who enjoy the same hobby

Frustrations:

Apps that look outdated or aren't mobile-optimized

Lack of beginner-friendly content or inspiration that aligns with current trends

Overly text-heavy or cluttered interfaces that aren't visually appealing

Features that feel isolating or don't support sharing/progress tracking

Knots&Crosses Needs to Provide:

A visually engaging, mobile-first experience with quick access to content

A feed of fresh, on-trend crochet ideas with strong visual search or tagging

An easy way to upload, log, and share projects with minimal effort

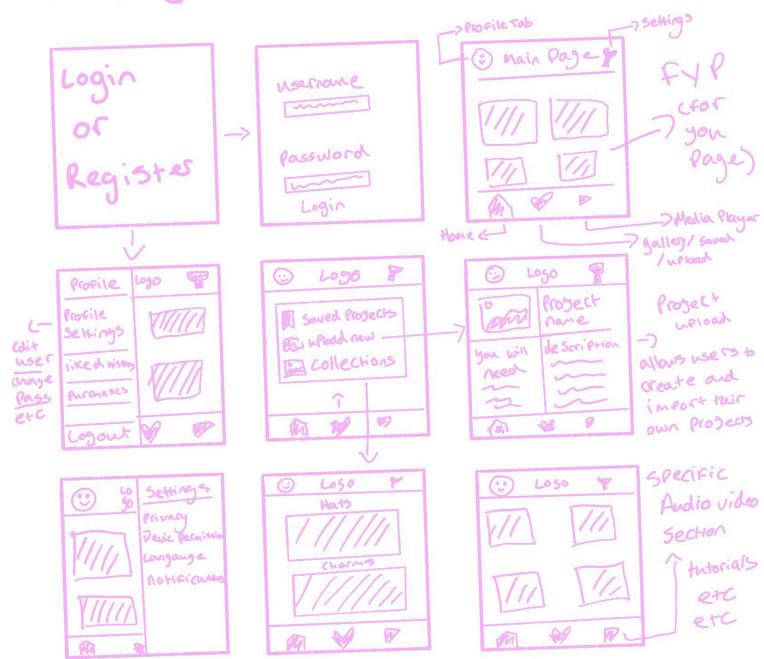
A light social layer—liking, commenting, saving—that feels community-driven but optional

Beginner-friendly patterns and tutorials in a well-organized format

Application Outline:

This was the roadmap created to structure the app and its features:

Knots & crosses App Roadmap



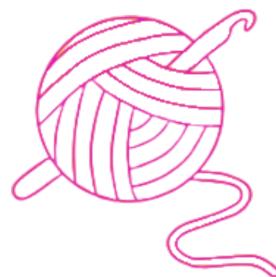
Notes → I want to design an app that is intuitive so it easily digestable for all age and skill demographics (eg home = home video = video). Although slightly stereotypical crochet is a hobby/ interest that is popular with the elderly.

Design Process

App Logo

Keeping to the bright and girlish aesthetic, I made the logo simple but bright

logo 1: used in the login page and registration page:



Logo 2: used as the application launcher and icon:



Application layout designed in Adobe Express and Figma

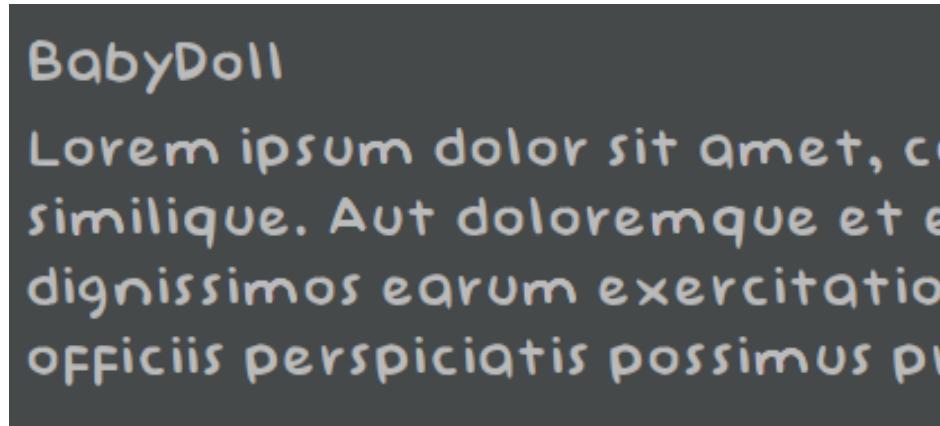


Final roadmap excluding the video page:



Font choices:

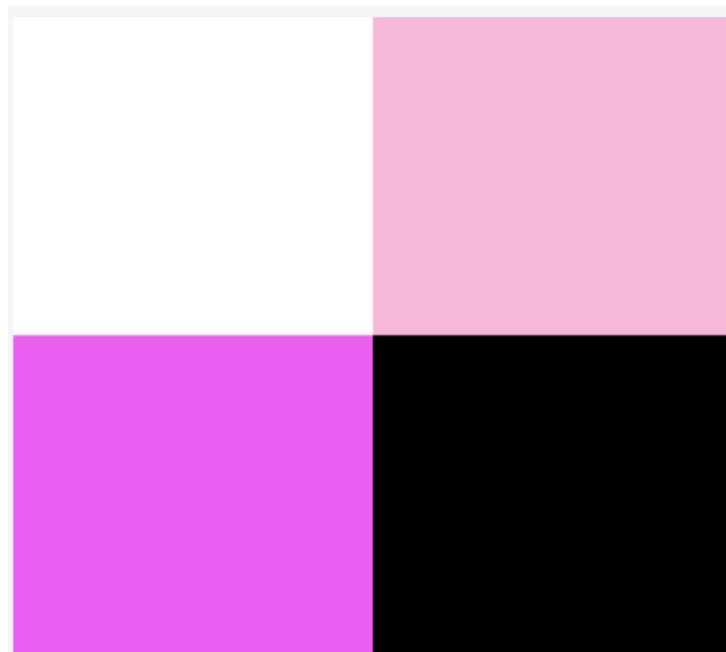
I've chosen the Babydoll font for my app. This is my favourite font. It is stylistic but still easy to read. I want the theme to be girly and bright, and the font fits the theme. Also, this font is very dyslexia friendly.



App Colour scheme:

I ended up slightly altering the colour scheme from the draft designs so that the colours went together more smoothly. The pink and white theming is engaging but not overwhelming. I kept sub-colours to just black and dark pink to not cause heavy contrast or visual confusion.

Pink is a comforting colour, and I wanted the app to be a comforting, safe space and inviting to users.

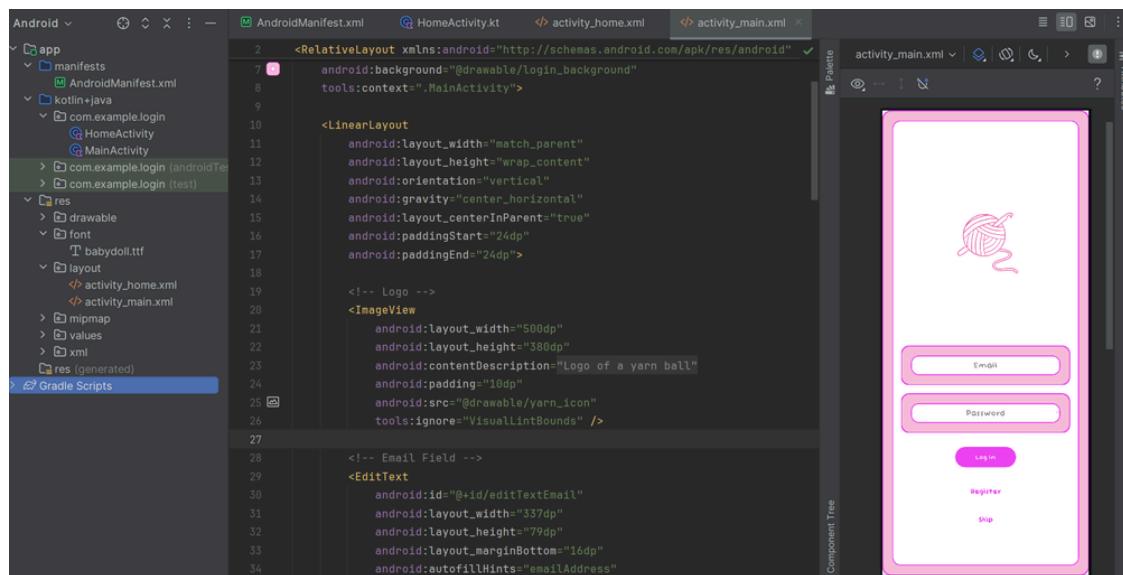


Prototype:

I used Kotlin and Java primarily for this project within Android Studio. The App is emulated on a Pixel 9.

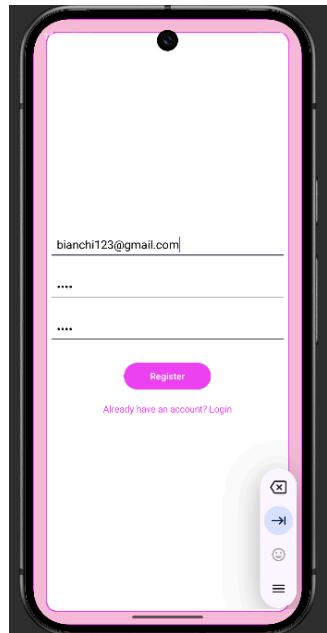
Login Page:

I kept the login page the same as the draft design. Users can log in to register or skip to the home page.



Registration page:

Users can register for an account on the app. After registering, users are redirected to the login page where their registered credentials are usable. The credentials are only valid for the current session, however, so if the app is exited and closed, the credentials are wiped. The ability to save the credentials to the app permanently is something I would add in future development.



Home Page:

After users log in/register/skip, it takes them to the home page.

Using Pinterest as a visual reference, I want users to enter a faux explore page. Displayed are crochet project photos, the top navigation bar and the main bottom navigation bar.

I worked on visualising the home page, increased the size of the images for easier viewing, and rounded out the images to match the border.



Version 1



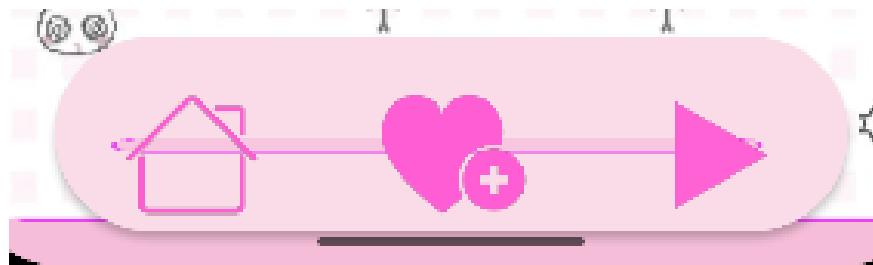
Version 2

Navigation Bars:

Bottom Nav:

The bottom navigation bar is the main feature of the app

The Home button takes users home, which is more useful on the subpages. The play button contains crochet tutorials in video form, and the heart button is where all the submenus are located.

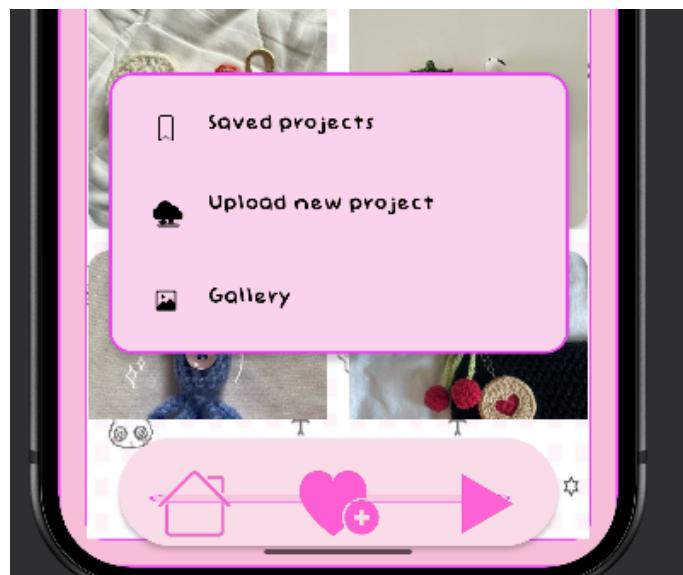


The sub-menus include the three main features:

Saved projects, where users can find images they have saved from the home page, similar to creating a collection or board on Pinterest.

Upload projects: where users can create and upload their crochet projects for themselves or to share with others.

Gallery: where users can access their created/uploaded projects.



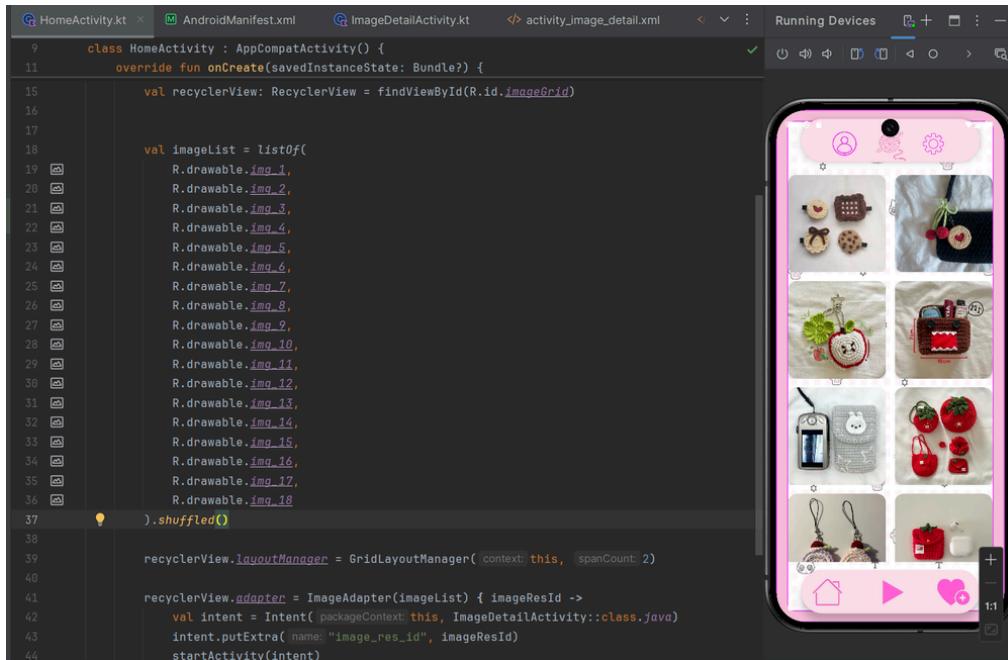
Top Nav:

The top nav includes profile settings and regular settings as well as the app logo in the centre.



In the end, I removed the logo as it was a low quality and also obstructed by the camera

Random position function:



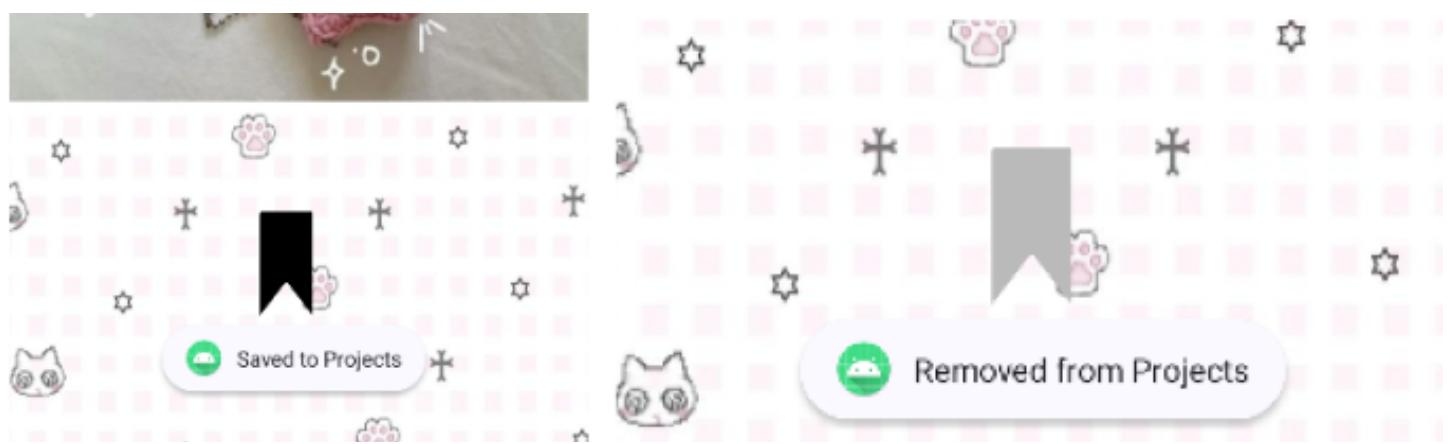
The ambition for the home page would be an algorithm of images uploaded and shared by the users (as well as included by the developer), but with the time and skill constraints, this wouldn't be achievable. However, to achieve the illusion that there is an algorithm, I've added a randomiser function (shuffle) so every time a user logs in, the photos are in different positions. This makes it look as if there is an algorithm behind the app.

Saved Projects:

Users can download images to their gallery and save them to the projects page. One issue I found with Pinterest while going through the app with my mother was that the number of options for the images was overwhelming. Keeping this complaint in mind, I kept the interactions minimal.



The save button changes colour when saved and unsaved to make it easily visible and clear when it has been saved.



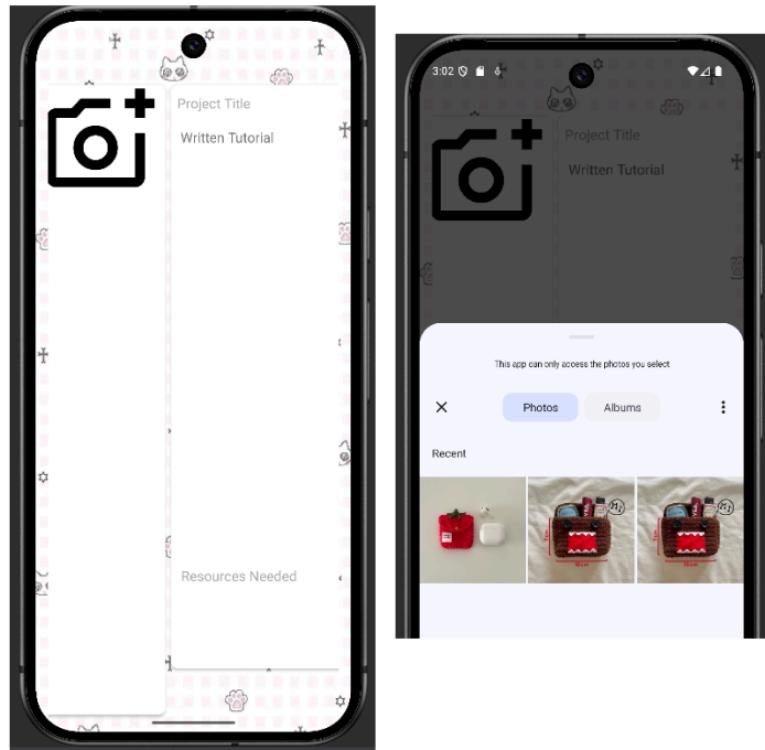
First draft of the project's page:



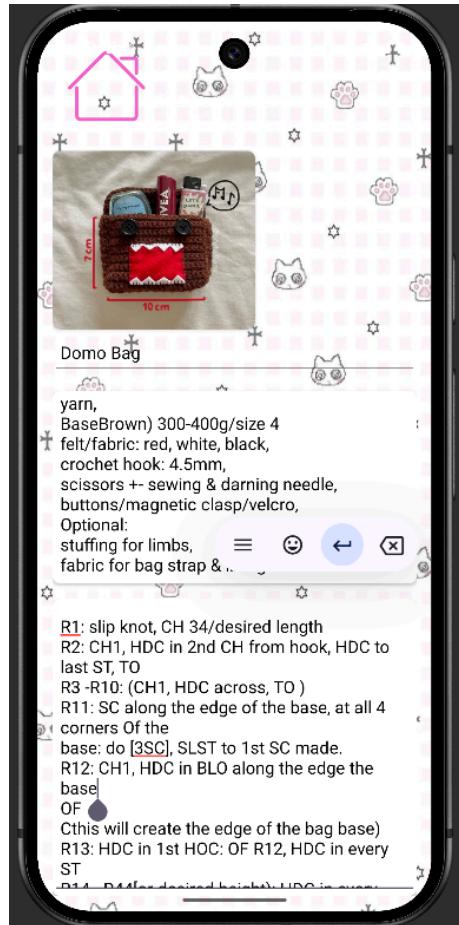
The final saved projects page will have both nav bars:



Upload Projects:



Project example:



Save project added so users can save their drafts/completed projects:



Gallery page:

The Gallery page is a work in progress, as I wasn't able to get the save button to work. The current Gallery page includes some placeholder projects to demonstrate what it would look like with the saved projects.



Video page:

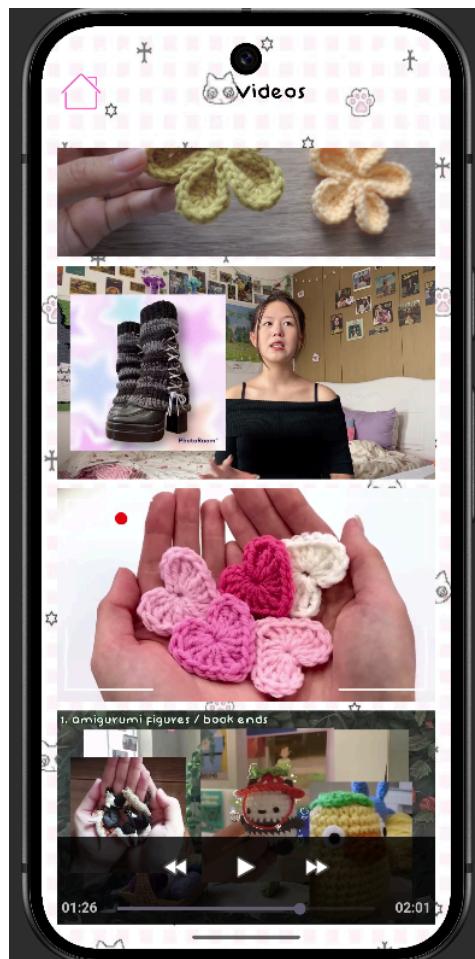
The Video page would include videos uploaded by users and developers, and functions similarly to the Explore page. I wanted to keep videos and photos in the app separate to not overwhelm users.

The screenshot shows the Android Studio interface. On the left is the project structure, which includes files like activity_register.xml, activity_video.xml, VideoActivity.kt, and various resource files. The main area displays the code for VideoActivity.kt:

```
1 package com.example.login
2
3 import android.os.Bundle
4 import android.widget.LinearLayout
5 import android.widget.MediaController
6 import android.widget.VideoView
7 import androidx.appcompat.app.AppCompatActivity
8 import androidx.core.net.toUri
9
10 class VideoActivity : AppCompatActivity() {
11
12     private val videoList = listOf(
13         R.raw.video_1,
14         R.raw.video_2,
15         R.raw.video_3,
16         R.raw.video_4
17     )
18
19     override fun onCreate(savedInstanceState: Bundle?) {
20         super.onCreate(savedInstanceState)
21         setContentView(R.layout.activity_video)
22
23         val container = findViewById<LinearLayout>(R.id.vide
24
25         for (videoRes in videoList) {
26             val videoView = VideoView(this).apply {
27                 setVideoURI("android.resource://${packageName}/${
28                     layoutParams = LinearLayout.LayoutParams(
29                         LinearLayout.LayoutParams.MATCH_PARENT,
30                         600 // Adjust video height
31                 )
32             }
33         }
34     }
35 }
```

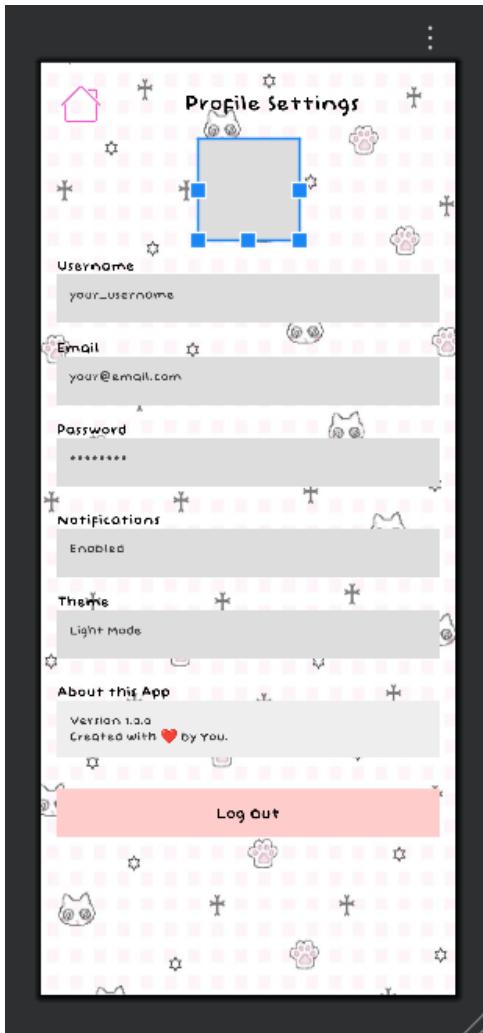
To the right is a preview window showing a mobile application interface. The top navigation bar has icons for home, videos, and profile. Below is a grid of video thumbnails. One thumbnail is larger and shows a woman speaking. Another thumbnail shows hands holding crocheted items. At the bottom, there is a video player showing a person holding a small amigurumi figure.

Final Video page visualisation:



Profile Settings:

Users are able to change their profile picture, email ,password,toggle notifications and log out of the app.



Logging out of the app sends users back to the login page.

Final Profile settings page:



Future Implementations and Reflection:

Future implementations for the app would include,

- A functional project save button

- An upload feature that would allow users to upload their photos and videos to the App

- Expanded gallery features, which would include being able to track the number of rows done and the amount of yarn used.

- A comment section on the explore page so users could leave comments on posts and foster a community.

- Further customisation in terms of profile settings.

- An explore page for tutorials and user projects.

- More backend features like cloud storage and saving login details.

Aesthetically, I am content with how the app looks as I feel it keeps the girly engaging look without being overwhelming and garish.