StyleMatch — Initial Plan & Prototype Proposal

COSC2471/3139 iPhone Software Engineering — Assessment 1 (Part 1)

1. Cover Page

App name: StyleMatch
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Student number: [S4027498]
GitHub repository URL: [https://github.com/rmit-iPSE-s2-2025/a1-sYourID]
Assessment: Initial Plan and iOS SwiftUI Prototype App (Part 1 Report + Part 2 Prototype)
Submission: Individual

3. Overview & Purpose (Primary Task)

Problem
Shoppers often see a piece of clothing in-person or online but struggle to:

- Find the exact item
- Locate similar items across brands/price points
- Compare options quickly in one place

Solution
StyleMatch focuses on a single primary task:

Let the user enter keywords or choose a reference photo, then display visually similar items with brand, price, tags, and a short description.

For the prototype, "visual match" is simulated by matching tags and colours in a **local JSON catalog** — satisfying Assessment 1 rules (SwiftUI + data structures, no DB/iCloud).

Target users

- Budget-conscious fashion shoppers
- Brand-loyal customers who want alternatives without browsing multiple apps

Prototype success criteria

- Return ranked matches from the local catalog in ≤ 2 taps from Home
- Clear item detail pages with brand, price, tags, and a **Save** option

4. Competitive Review (4 iOS apps)

App (iOS)	Key strengths	Design & HIG alignment	Usability & UX	What we'll adopt / avoid
Lyst	Broad multi-brand catalog; strong filters & editorial curation	Clear nav, strong visual hierarchy; good imagery	Fast browse, but filters can be overwhelming	Adopt: concise cards, image-first. Avoid: deep filter trees up front.
ASOS	Trend discovery; good fit guides	Familiar bottom tabs; consistent icons	Quick add-to-bag; solid PDP layout	Adopt: familiar nav, clear CTAs. Avoid: overly busy product copy.
H&M	Affordable; basic "similar items"	Simple lists; readable type	Easy to use; discovery limited	Adopt: simplicity. Improve: surface "similar" more prominently.
Farfetch	Designer marketplace; premium feel	High-quality images; good whitespace	Clear info; sometimes too image-heavy	Adopt: image-first cards, whitespace. Avoid: hiding metadata.

Lessons learned

1. Keep the primary journey short (Reference → Results → Detail).
2. Always show brand & price on cards.
3. Offer quick filter chips, not heavy filter screens early.
4. Follow HIG for clarity, spacing, and consistent navigation.

5. Iterative Design & Apple HIG Application

Design process

- **Iteration 1**: Low-fi wireframes for 5 screens (Home, Scan, Results, Detail, Saved)
- **Iteration 2**: Simplified navigation (NavigationStack + Saved button instead of bottom tabs)
- **Iteration 3**: Added quick-filter chips, refined spacing & typography per HIG

HIG principles applied:

- **Clarity**: Large titles, consistent text styles, no placeholder text (real product data).
- **Consistency**: Same card style throughout; uniform paddings & iconography.
- **Feedback**: Visual state change when saving an item; selection highlights.
- **Navigation**: Predictable back behaviour; shallow hierarchy using NavigationStack.
- **Layout**: Standard stacks for structure, plus a **custom layout** for the results grid (masonry-style)

6. Data Requirements & External API

Local data (prototype)

- Products stored in products.json in app bundle
- Loaded with Codable via Bundle.main.url and JSONDecoder
- No DB/iCloud per Assessment 1 rules

Data model fields

- id, name, brand, price, imageName, colors: [String], tags: [String], gender

Why necessary

- **UI rendering**: brand, name, price, imageName fill cards and detail views (no lorem ipsum).
- **Filtering/matching**: tags & colours drive similarity scoring.
- **Organisation**: gender supports filtering and relevance.

Future API (report only)

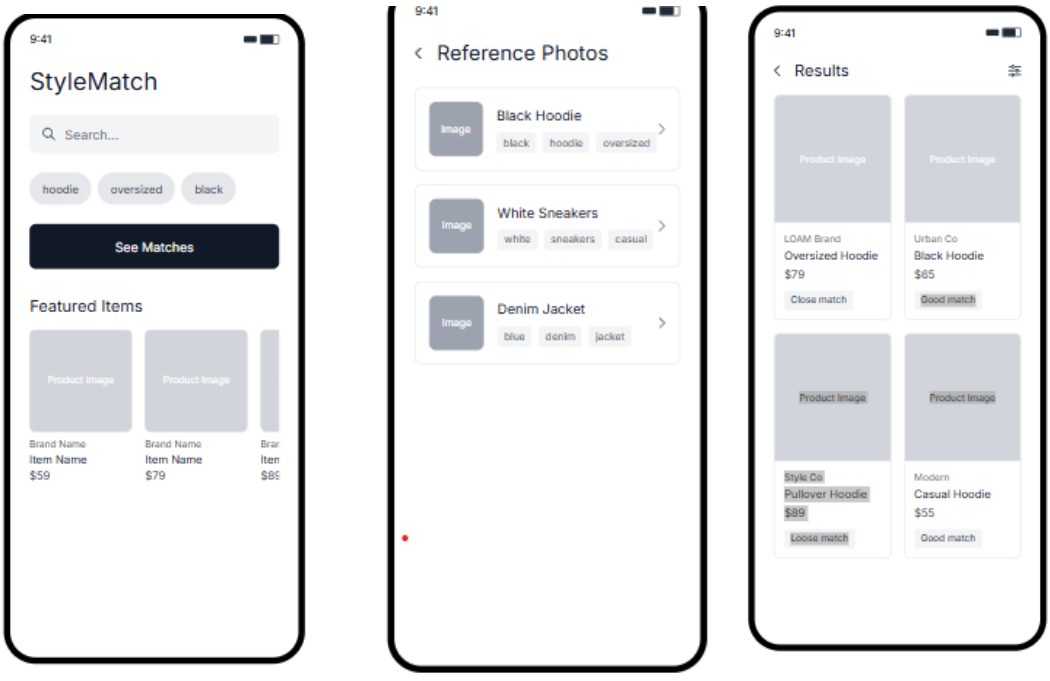
- In later iterations, integrate a fashion/product search API for live data.
- For A1 prototype: simulate “scan” via preset reference images → tag set → local match.

7. Scope Summary

- One primary task: find similar items.
- 5 connected screens: Home, Scan, Results, Detail, Saved.
- Custom layout for results grid.
- Local JSON only; no login.

8. References

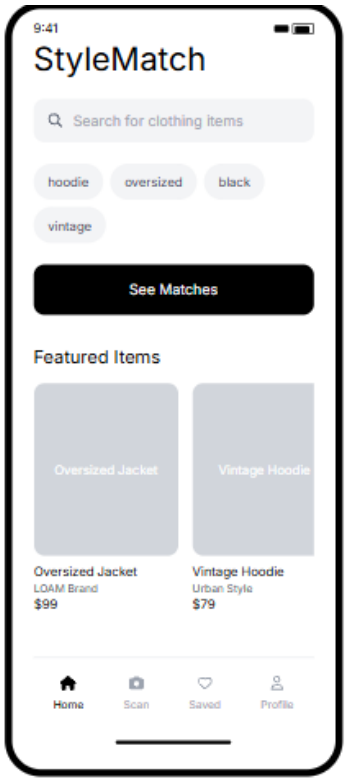
- Apple (n.d.) *Human Interface Guidelines*. Available at: https://developer.apple.com/design/human-interface-guidelines/ (Accessed: [Date]).
- Apple (n.d.) *SwiftUI Documentation*. Available at: https://developer.apple.com/documentation/swiftui (Accessed: [Date]).
- RMIT University Library (n.d.) *Referencing generative AI tools*. Available at: https://rmit.libguides.com/referencing_AI_tools (Accessed: [Date]).
- RMIT University Library (n.d.) *Easy Cite — Harvard style*. Available at: https://www.lib.rmit.edu.au/easy-cite/?styleguide=styleguide-1 (Accessed: [Date]).
- COSC2471/3139 Week 02–04 lectorial & practical notes (Semester 2, 2025).

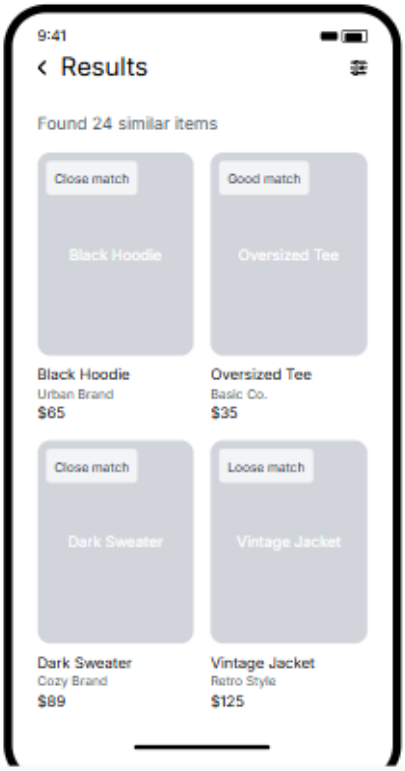


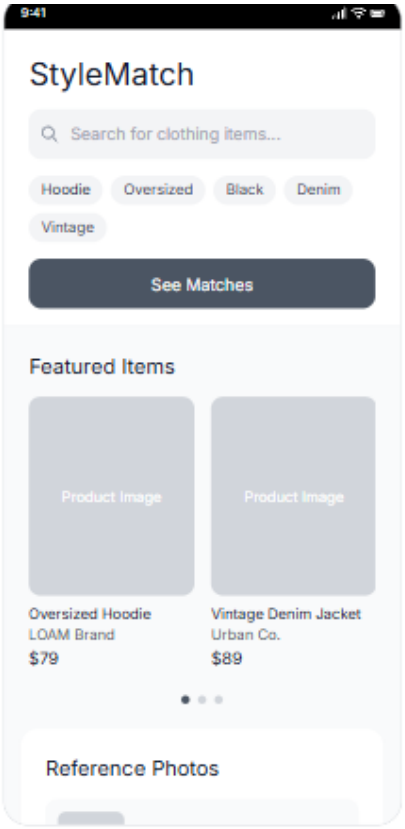
Iteration 1 (Lo-fi wireframe):
Figure 1 shows the initial low-fidelity wireframe of the Home screen. The focus at this stage was on establishing the main layout: a search bar at the top, quick tag filters, and a “See Matches” button. Featured items are represented as placeholder boxes with product names and prices. This wireframe helped clarify the overall structure without focusing on colors, typography, or imagery.

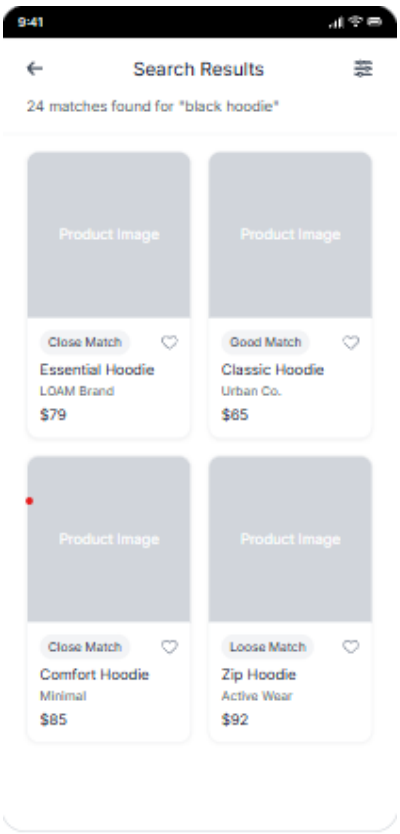
Iteration 2 (Mid-fi):

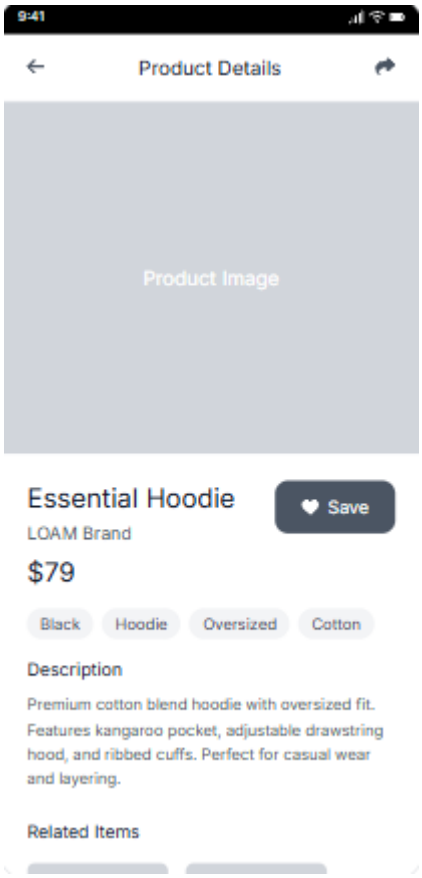
Figure 2 illustrates the mid-fidelity prototype created in Figma. Compared to the initial wireframe, this version introduces more detail such as labelled product cards, clearer typography, and a bottom navigation bar for switching between Home, Scan, Saved, and Profile. The Results screen (right) displays items in a two-column grid, with confidence badges (Close match, Good match, Loose match) to indicate the quality of recommendations. This stage focused on refining usability, consistency across screens, and preparing for the hi-fi stage by aligning with Apple's Human Interface Guidelines.

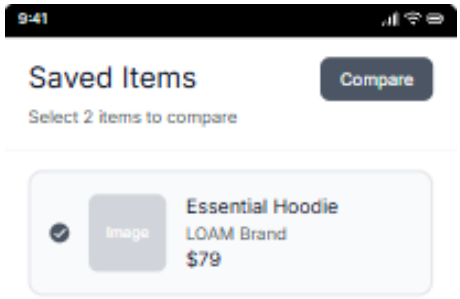





9:41
StyleMatch
Search for clothing items...
Hoodie
Oversized
Black
Denim
Vintage
See Matches
Featured Items
Product Image
Product Image
Oversized Hoodie
LOAM Brand
$79
Vintage Denim Jacket
Urban Co.
$89
Reference Photos


9:41
Search Results
24 matches found for "black hoodie"
Product Image
Product Image
Close Match
Essential Hoodie
LOAM Brand
$79
Good Match
Classic Hoodie
Urban Co.
$65
Product Image
Product Image
Close Match
Comfort Hoodie
Minimal
$85
Loose Match
Zip Hoodie
Active Wear
$92


9:41
Product Details
Product Image
Essential Hoodie
LOAM Brand
$79
Save
Black
Hoodie
Oversized
Cotton
Description
Premium cotton blend hoodie with oversized fit. Features kangaroo pocket, adjustable drawstring hood, and ribbed cuffs. Perfect for casual wear and layering.
Related Items


9:41
Saved Items
Compare
Select 2 items to compare
Image
Essential Hoodie
LOAM Brand
$79

Iteration 3 (Hi-fi):
Figure 3 shows the final high-fidelity version of StyleMatch, implemented in SwiftUI and running in the iOS Simulator. This version closely follows Apple's Human Interface Guidelines. The Home screen integrates a functional search bar, quick tag chips, and featured items loaded from a local JSON file. The Results screen displays clothing items in a clean two-column grid with confidence labels (Close match, Good match, Loose match). The Product Detail screen provides structured information including product title, brand, price, tags, and description, with the ability to save items. The Saved Items screen allows users to compare selected items. This final iteration demonstrates improvements in clarity, consistency, and accessibility, and represents a usable prototype ready for further development.

Conclusion

This report presented the iterative design and prototype of StyleMatch, evolving from lo-fi wireframes to a functional SwiftUI app. By applying Apple's Human Interface Guidelines, the final design emphasises clarity, consistency, and usability. The prototype demonstrates the core primary task effectively: enabling users to search and view similar fashion items in just a few taps. If further developed, StyleMatch could integrate real-time image recognition and external APIs for richer catalog data.