Mobile Application for Supporting and Motivating Yoga Practice

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User-Centered Design Methodology
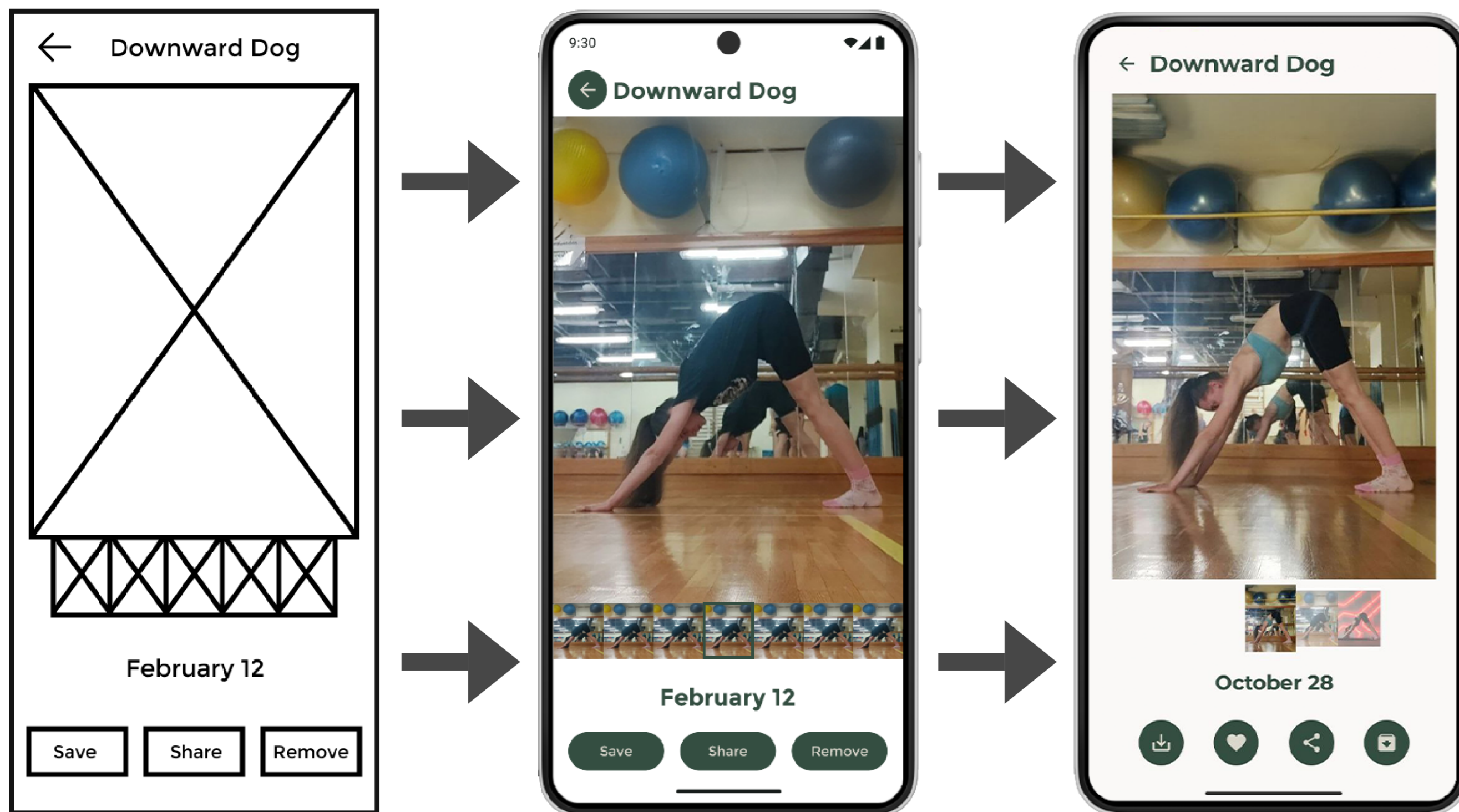### From Concept to Prototype [1]

Figure 1

Technologies and Tools
Key tools for design, development, and data management

Figma, Adobe Illustrator/Photoshop, Kotlin & Jetpack Compose [2], CameraX, Room Database [3], MVVM Architecture [4].

Streak Score System
A dynamic streak score based on weekly target (f_t) and workout frequency (f) [5]

$$B = \begin{cases} 1.3, & \text{if } f \geq 1.5f_t \\ 1.15, & \text{if } f \geq f_t \\ 1.0, & \text{otherwise} \end{cases} \tag{1}$$

$$S = S_p \cdot 0.5^{\frac{\sqrt{f_t}}{13}} + c \cdot \left(1 - 0.5^{\frac{\sqrt{f_t}}{13}}\right) \cdot B \tag{2}$$

Dashboard, *Session History*, Photo Capture, *Gallery*
Interface design includes a dashboard with motivational elements, session records, real-time pose recognition [6] and capture, and a gesture-driven gallery
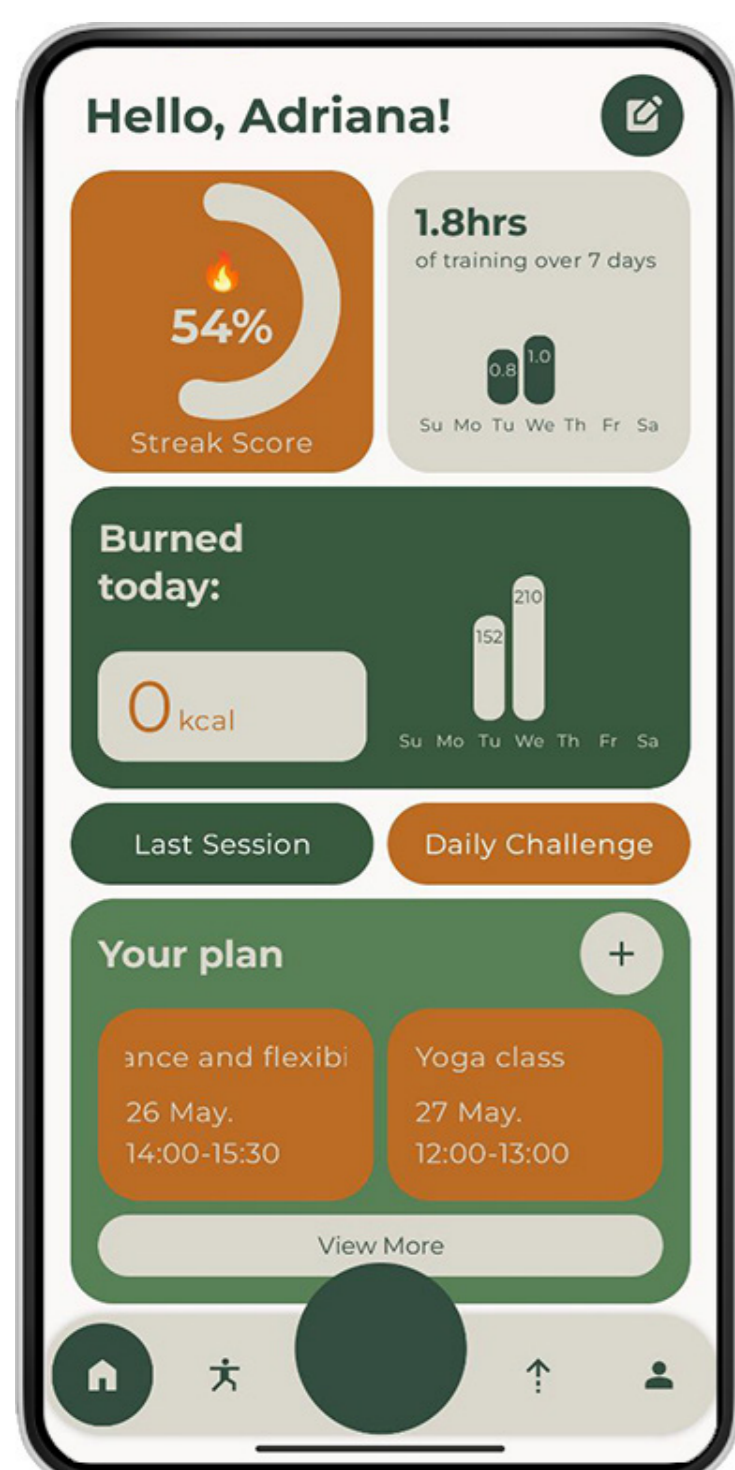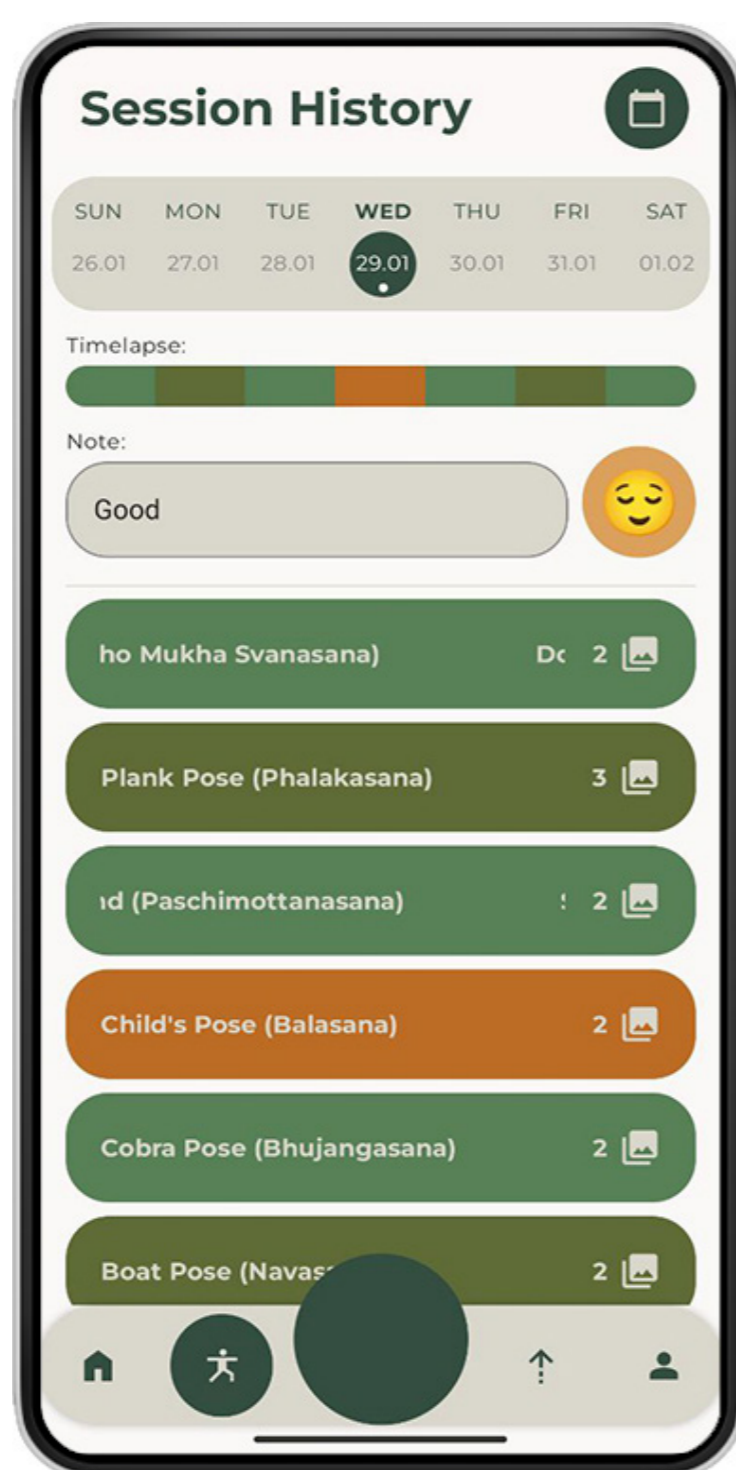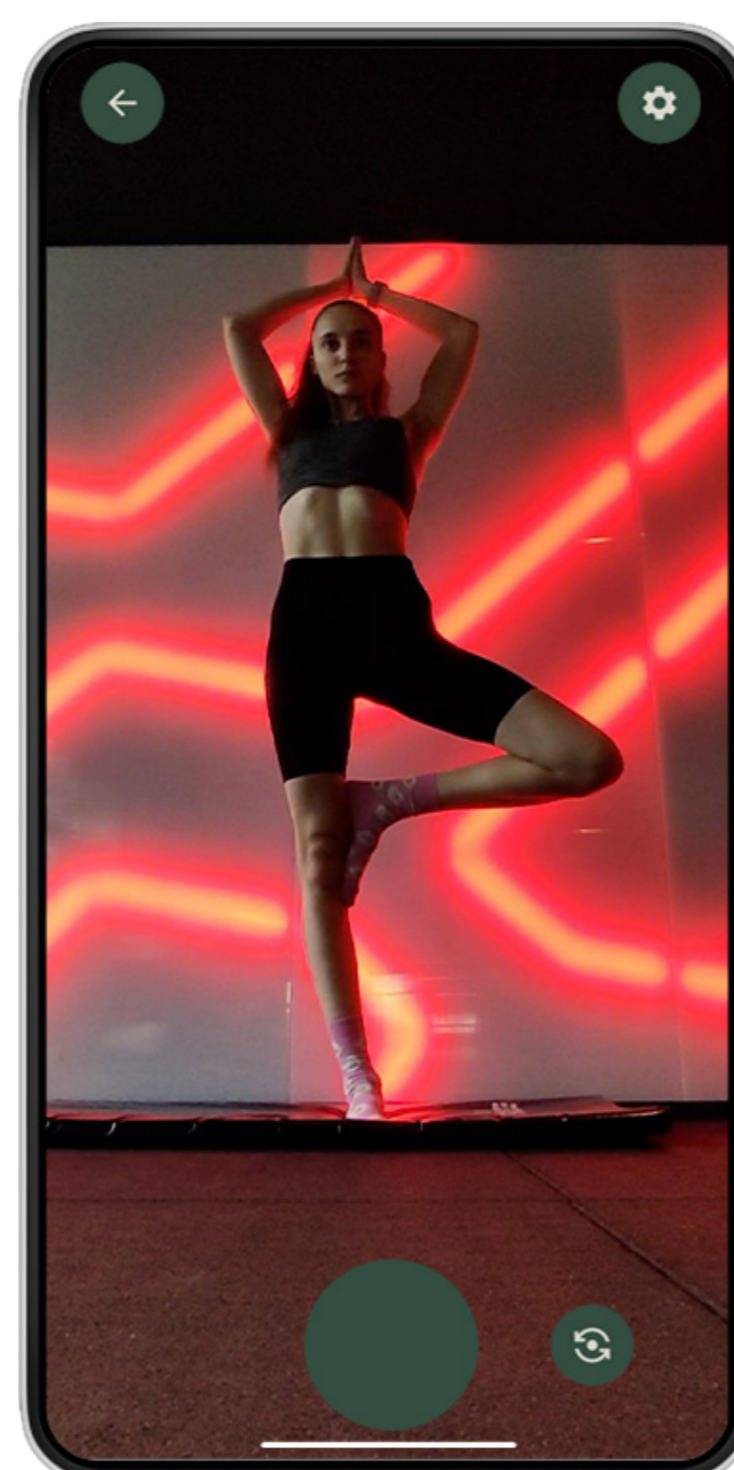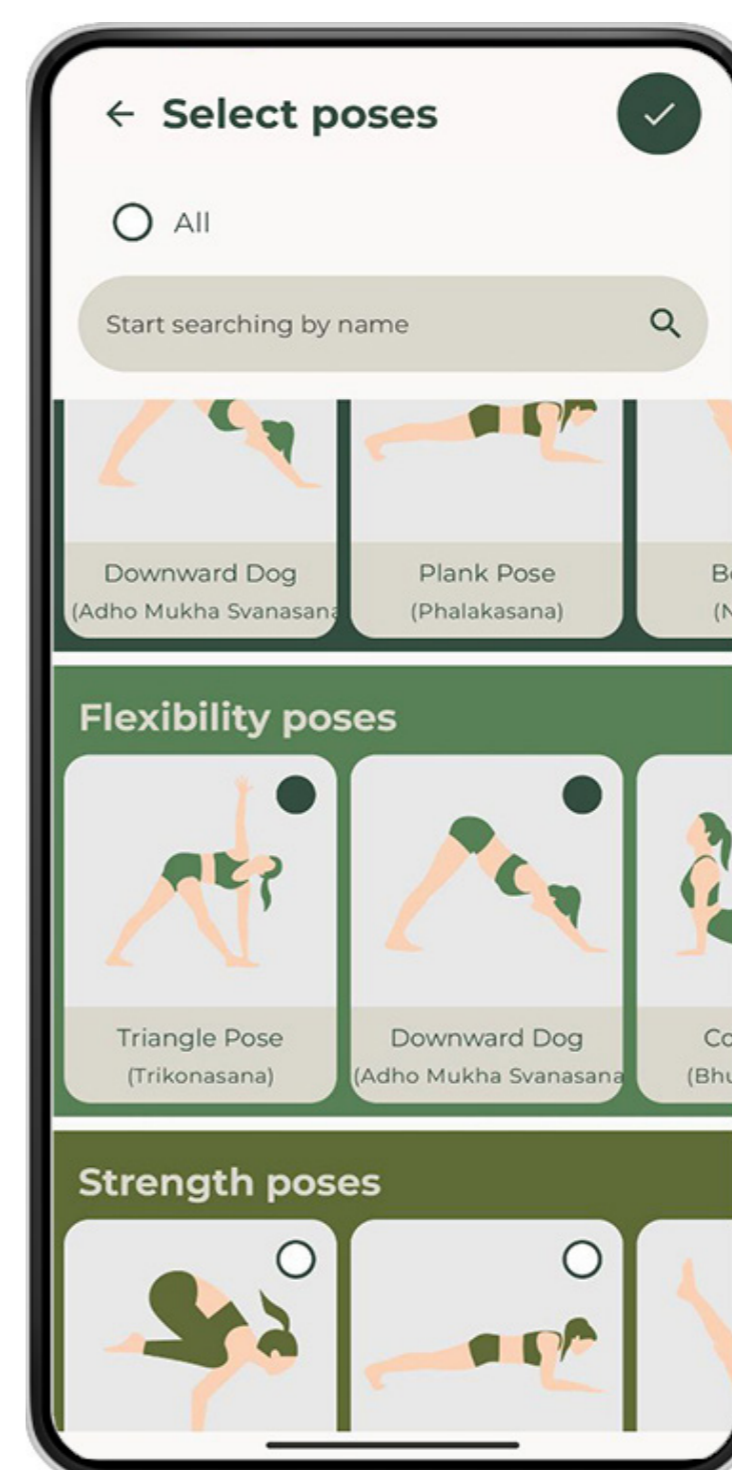

Figure 2

Figure 3

Figure 4

Figure 5

Progress Tracking
Progress is presented through visual comparison of time-stamped, aligned user images over time
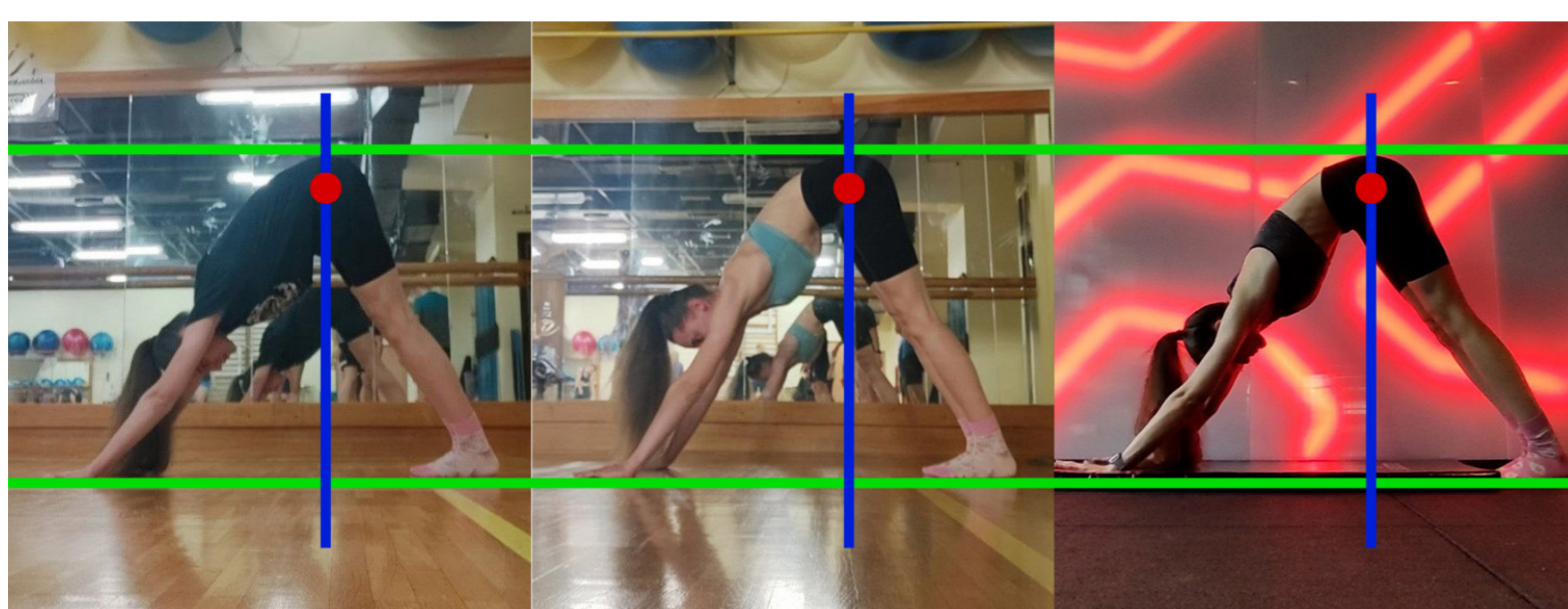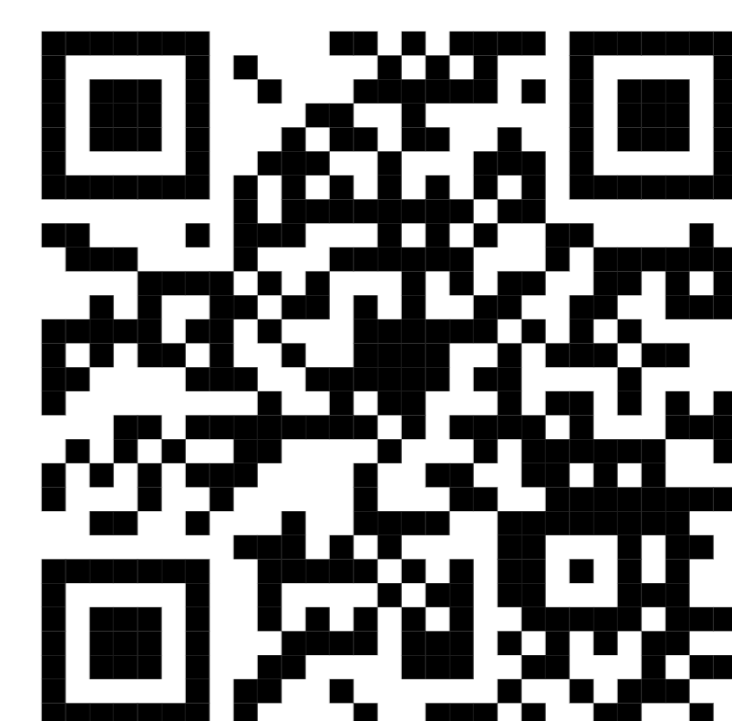

Figure 6

Explore the App
User Interface preview of the app available on Google Play

[1] Lowdermilk, T. User-centered design: a developer's guide to building user-friendly applications. "O'Reilly Media, Inc.", 2013.
[2] Google Inc.. Jetpack Compose UI App Development Toolkit. 2020. Available at: https://developer.android.com/compose.
[3] Google Inc.. Room Persistence Library. 2018. Available at: https://developer.android.com/topic/libraries/architecture/room.
[4] Akhtar, N. and Ghafoor, S. Analysis of Architectural Patterns for Android Development. No. June, 2021.
[5] Loop Habit Tracker Developers. Loop Habit Tracker. 2025. https://github.com/iSoron/uhabits.
[6] Yadav, S. K.; Singh, A.; Gupta, A. and Raheja, J. L. Real-time Yoga recognition using deep learning. Neural computing and applications. Springer, 2019.

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