19CSE463 - Mobile Application Development Project Report

Habit Tracking App

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Scope

The Habit Tracker App is designed to provide users with a simple yet effective tool to build and maintain positive habits. The app focuses on a minimalistic and user-friendly interface, allowing users to easily add and organize habits with customizable frequencies and a color-coded system for better visualization. Users can track their progress through streak counters and checkboxes, encouraging consistency in habit completion. Customizable notifications and reminders ensure that users stay on track, with the flexibility of snoozing reminders as needed. Additionally, the app offers basic performance analytics, such as habit streaks, average completion rates, and summaries of weekly and monthly progress. By emphasizing simplicity and eliminating unnecessary complexity, the app helps users create structured routines, stay motivated, and achieve their personal goals efficiently.

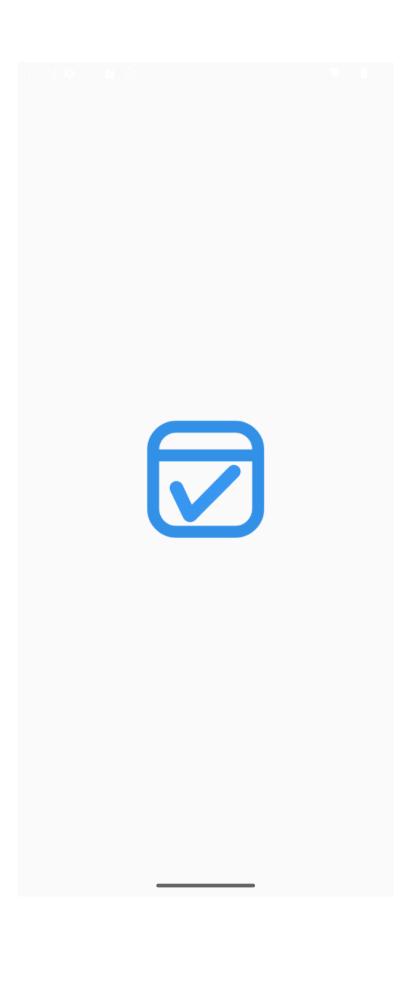
Features

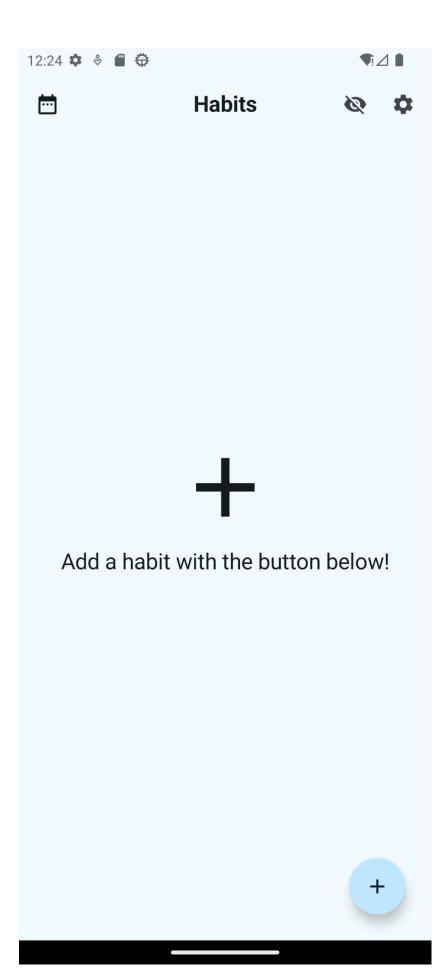
- 1. **Habit List Display:** The app displays a well-organized list of habits to be tracked daily. Each habit shows its name, a progress streak counter, and a checkbox for marking completion.
- 2. **Habit Completion Tracking:** Users can mark habits as completed for the day using a checkbox next to each habit.
- 3. **Theming Options:** The app supports light and dark themes, allowing users to switch between them for a customized experience.
- 4. **Add New Habit Functionality:** A floating action button ("+" icon) is available for users to quickly add new habits to the list.
- 5. **Minimalist Interface:** The app features a clean, straightforward design focused on essential functions.
- 6. **Top Navigation Bar:** The top navigation bar includes icons for accessing a calendar view, app settings, and notifications.

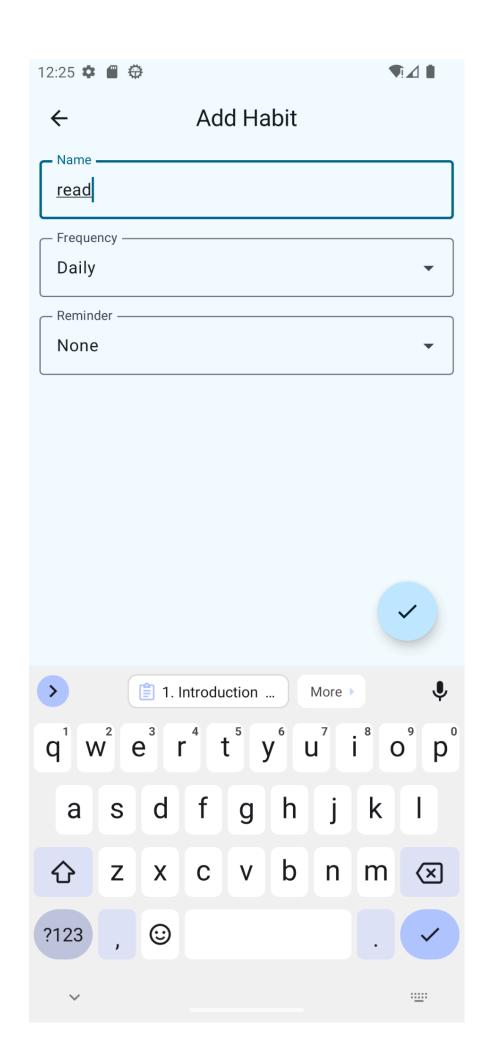
Design

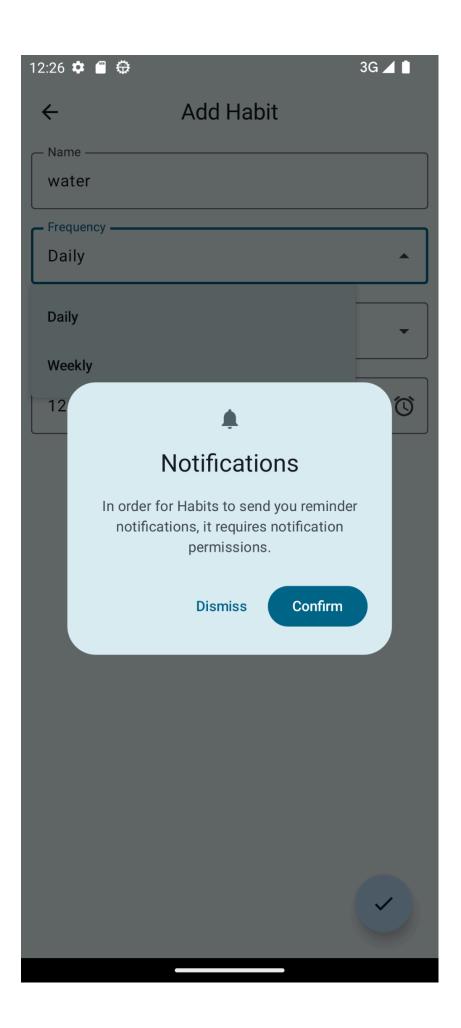
- 1. **Home Screen:** The home screen features a clean, minimalist layout with a scrollable list of active habits. Each habit is presented in a card format, displaying the habit name, a streak counter to track progress, and a checkbox to mark completion. This layout ensures that users can quickly view and manage their daily habits.
- 2. **Themes:** The app offers both light and dark themes, allowing users to choose according to their preferences or ambient lighting conditions. The colour schemes are subtle and designed to minimize eye strain, providing a comfortable reading and interaction experience.
- 3. **Navigation:** A simple top navigation bar enables quick access to essential features such as the calendar, settings, and notifications. The bar is discreet yet always available, ensuring easy navigation without cluttering the screen.
- 4. **Floating Action Button:** Positioned at the bottom-right of the screen, the floating action button serves as a quick and accessible method for adding new habits. This button is prominently displayed, ensuring users can easily track and manage their goals with minimal effort.
- 5. **User-Friendly Interactions:** The app incorporates intuitive animations and transitions that guide users smoothly through the app. The colour-coding system for habit categories, along with progress indicators, offers clear visual cues that make the experience more engaging and motivating.

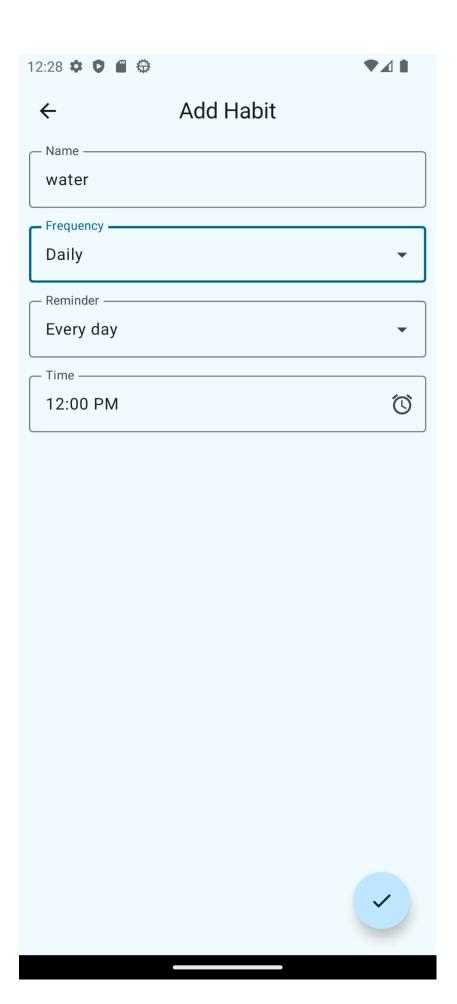
Screenshots of Frontend

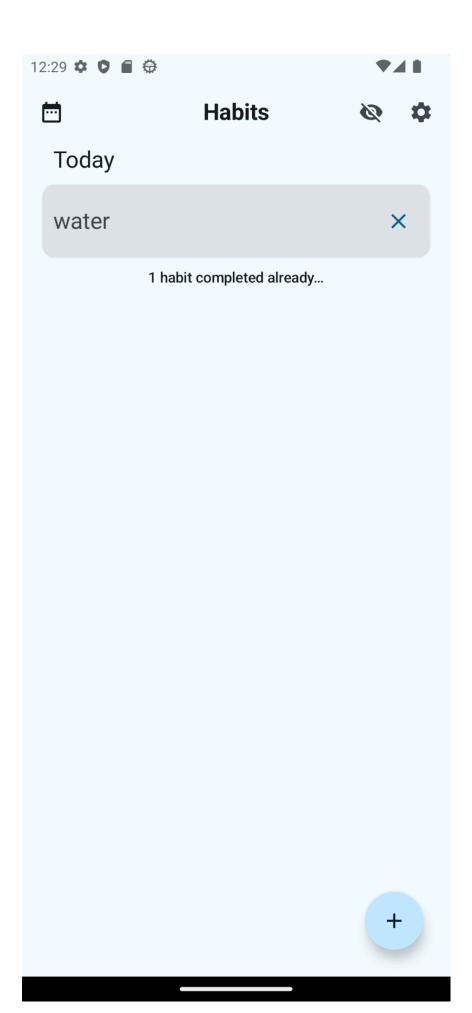


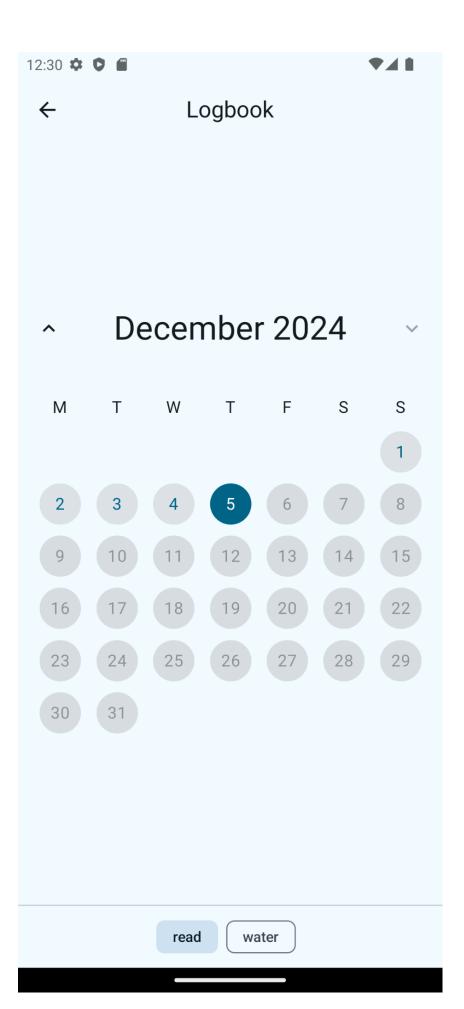


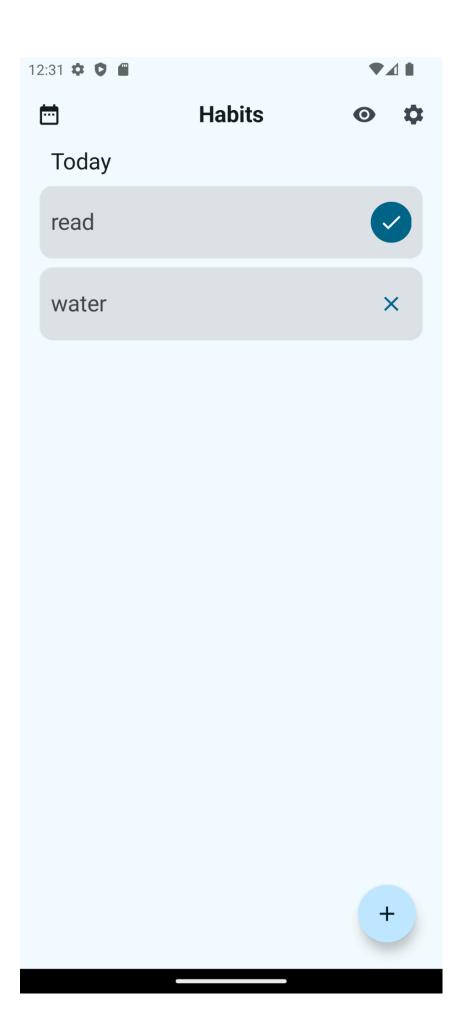


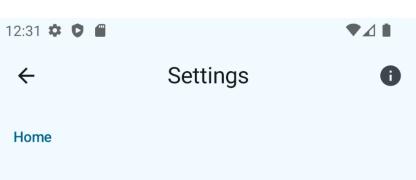












Display statistic on home

Show a statistic on each habit on the home screen. Shows streaks by default.

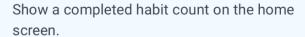


Show scores on home

Show scores on the home screen instead of streaks.



Show completed subtitle on home





Backup

Export database

Export the database to a file for backup.

Import database

Import a database file. Please note this will erase all existing data.

Code Snippets

```
// Top-level build file where you can add configuration options common to all sub-projects/modules.

plugins {
    alias libs.plugins.android.application apply false
    alias libs.plugins.android.library apply false
    alias libs.plugins.kotlin.android apply false
    alias libs.plugins.hilt apply false
    alias libs.plugins.ksp apply false
    alias libs.plugins.kspt apply false
    alias libs.plugins.compose.compiler apply false
```

```
buildTypes { NamedDomainObjectContainer<BuildType> it ->
    release {
        minifyEnabled true
        debuggable false
        proguardFiles getDefaultProguardFile('proguard-android-optimize.txt'), 'proguard-rules.pro'
    }
    debug {
        applicationIdSuffix ".debug"
        debuggable true
        minifyEnabled false
    }
}
compileOptions { CompileOptions it ->
        sourceCompatibility JavaVersion.VERSION_17
    targetCompatibility JavaVersion.VERSION_17
}
kotlinOptions {
    jvmTarget = '17'
}
buildFeatures { ApplicationBuildFeatures it ->
        compose true
    buildConfig true
}
composeOptions { ComposeOptions it ->
        kotlinCompilerExtensionVersion libs.versions.androidxComposeCompiler.get()
}
```