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### **Project Overview**

* **StepWise** is a **step tracking app** that helps users monitor:
  + Daily **step count**
  + **Distance walked** (in km or miles)
  + **Calories burned**
* Continuously tracks steps, even **in the background** or if the user forgets to stop tracking.

### **App Structure**

* Built with **SwiftUI**, featuring **three main screens**:
  + **Today**
  + **History**
  + **Settings**
* Navigation implemented using **MainTabView** for seamless screen switching via tab bar.

### **Today Screen**

* Displays real-time:
  + Step count
  + Distance walked
  + Calories burned
* Includes **Start/Stop buttons** to control tracking manually.
* Step tracking begins when "Start" is pressed and ends with "Stop".
* Launch screen shown on app open before transitioning to Today screen.

### **History Screen**

* Allows users to review previous activity data.
* Features three toggle buttons:
  + **Daily** – cumulative stats for the current day.
  + **Weekly** – stats for the current week.
  + **Monthly** – stats for the month.
* Uses **Swift Charts** to display:
  + Hourly data for daily stats
  + Daily data for weekly stats
  + Day-wise data for monthly stats
* Enhances clarity with **visual bar charts**.

### **Settings Screen**

* Fully implemented using **SwiftUI List** view with clear sections:
  + **Daily Reminders**: Enable/disable notifications.
  + **Step Goal**: Set daily walking goal.
    - Notification sent when goal is achieved.
  + **Units Selection**: Toggle between kilometers and miles.
  + ️ **Reset Step History**: Deletes all step data from Core Data.

### **Technical Implementation**

* Developed using **Xcode 16.2**.
* Uses **Core Motion** and **CMPedometer** for step tracking (requires iPhone).
* **Core Data**: Persistent storage for step tracking records.
* **Swift Charts**: For bar chart visualizations.
* **UserDefaults**:
  + Preserves state when app is in background.
  + Continues tracking till day’s end even if user forgets to stop.
* **UserNotifications**: Notifies users upon goal achievement.

### **🔧 Frameworks Used**

* **Core Motion**
* **Core Data**
* **Swift Charts**
* **UserDefaults**
* **UserNotifications**
* **SwiftUI**

### **UI/UX Improvements/changes**

* **Transitioned from UIKit to SwiftUI** to improve responsiveness and design.
* We user experience and user interface is not visually pleasing and can also be responsive it other versions of iPhones and also in iPad
* We changed complete look and feel of the user interface by switching to swiftUI from UIKit as we felt it is not responsive and have achieved user experience in swiftUI as the functionalities are vast and helpful for a clean UI
* We worked with UIKit in our Homework 4 and then decided to switch to swift UI
* It is noticeable in all the screens as we are using swift UI in all the screen
* We have modified the structure of the code to adapt to the SwitUI standards we have organized all the controllers, models and Views inside a controller folder, models and Views.
* We changed it to adapt to the swift UI standards

### **Key Enhancements**

* We have used userDefaults to make the app run in the background and when the app is running in the background and the user forgets to stop, the app tracks the step count till the end of the day and once the day end, the app stops tracking and automatically updates to the coreData