EGE UNIVERSITY

FACULTY OF ENGINEERING

COMPUTER ENGINEERING DEPARTMENT

WINDOWS PROGRAMMING

2025 – 2026

PROJECT-1 REPORT

DELIVERY DATE

11/11/2025

PREPARED BY

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Project Overview

Project Context

We developed a prototype for "LifeHub," a personal productivity and wellness concept. This project consists of four separate, single-screen .NET MAUI applications, each addressing a core domain of the concept.

The DashboardApp acts as the main navigation menu for the other modules. The HabitTrackerApp allows users to add daily habits via an Entry, mark them as complete using a CheckBox, and manage the list. The MoodJournalApp lets users record their mood using a picker and add an optional note. Finally, the PlannerApp functions as a to-do list where users can assign tasks to a specific day using a DatePicker and see completed items struck through (using an IValueConverter).

Project Objectives

Our primary objectives for this project were aligned with the course requirements :

- To apply modern .NET MAUI layout principles (Grid, VerticalStackLayout, and Styles) to create aesthetic and consistent interfaces.
- To demonstrate strong data binding capabilities between XAML and C# code-behind, specifically using ObservableCollection, BindingContext, and the required ICommand interface .
- To integrate the 10 core UX Laws (Fitts's, Hick's, Miller's, etc.) into our design decisions for each application.
- To establish a consistent visual language and user experience (UX) across all four applications.

Contribution of Students

This project was completed by a 2-person team. The workload was distributed as follows:

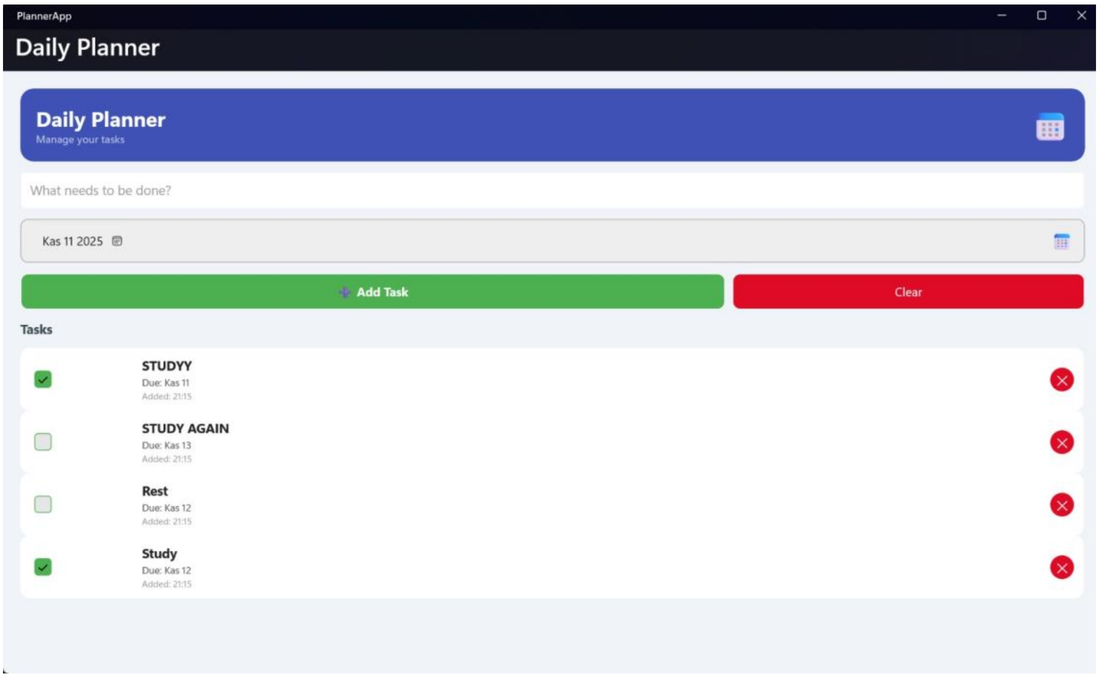
Ali Osman Taş: I was responsible for the C# logic and XAML design of the PlannerApp and the MoodJournalApp. This included implementing custom C# logic like the IValueConverter (for the task strikethrough effect), handling the data binding for the DatePicker and Picker controls, and creating the modern XAML interfaces based on UX laws . I also managed the technical setup and troubleshooting for our team on the macOS environment, which involved configuring the .NET 9.0 SDK, correcting .csproj files for Mac/Windows compatibility, and resolving complex Android SDK path errors (like Hata 127 and XA5207) to enable deployment.

Kutlu Çağan Akın: I was responsible for the development of the DashboardApp (the main menu) and the HabitTrackerApp. This included implementing the core navigation logic (distinguishing between ICommand and Clicked events) in the dashboard, and writing the data manipulation logic for the ObservableCollection in the HabitTrackerApp (add, delete, and the '7-item limit' feature). I also played a key role in defining the common aesthetic decisions (color palette, style resources) used across all projects.

UX Law Implementation

1- Fitts's Law:

All primary action buttons ("Add Task," "Clear All") and dashboard cards were designed as large, easy-to-tap targets.



What needs to be done?

Kas 11 2025

☑ **STUDYY**
Due: Kas 11
Added: 21:15

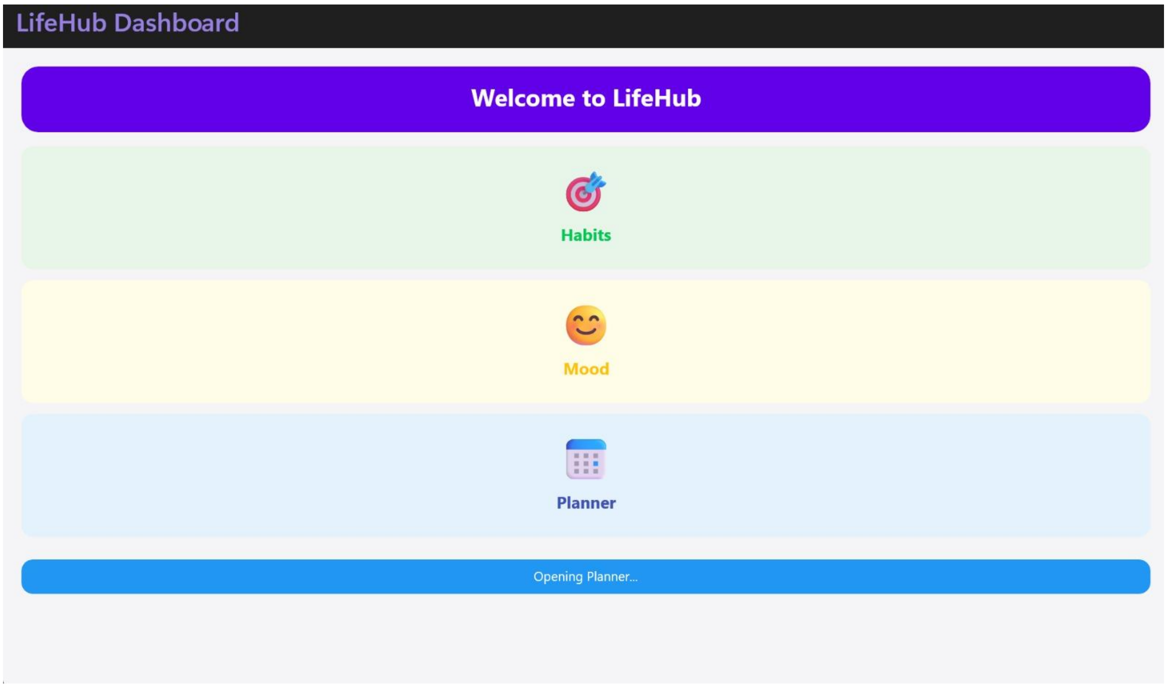
□ **STUDY AGAIN**
Due: Kas 13
Added: 21:15

□ **Rest**
Due: Kas 12
Added: 21:15

☑ **Study**
Due: Kas 12
Added: 21:15

2- Hick's Law:

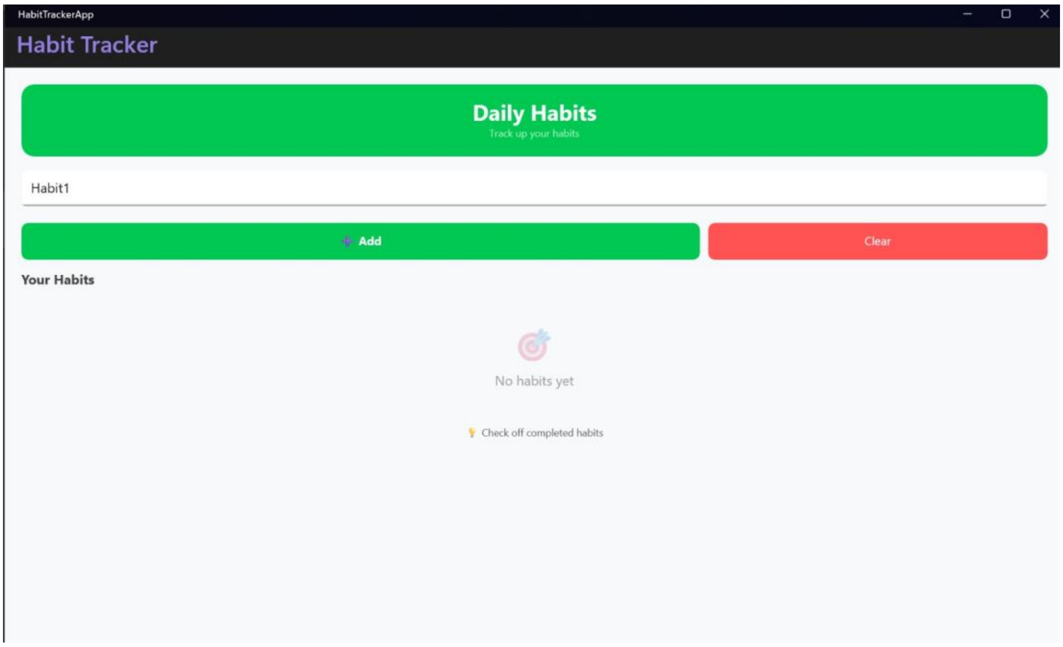
The DashboardApp presents the user with only three clear, distinct choices (Habit, Mood, Planner).

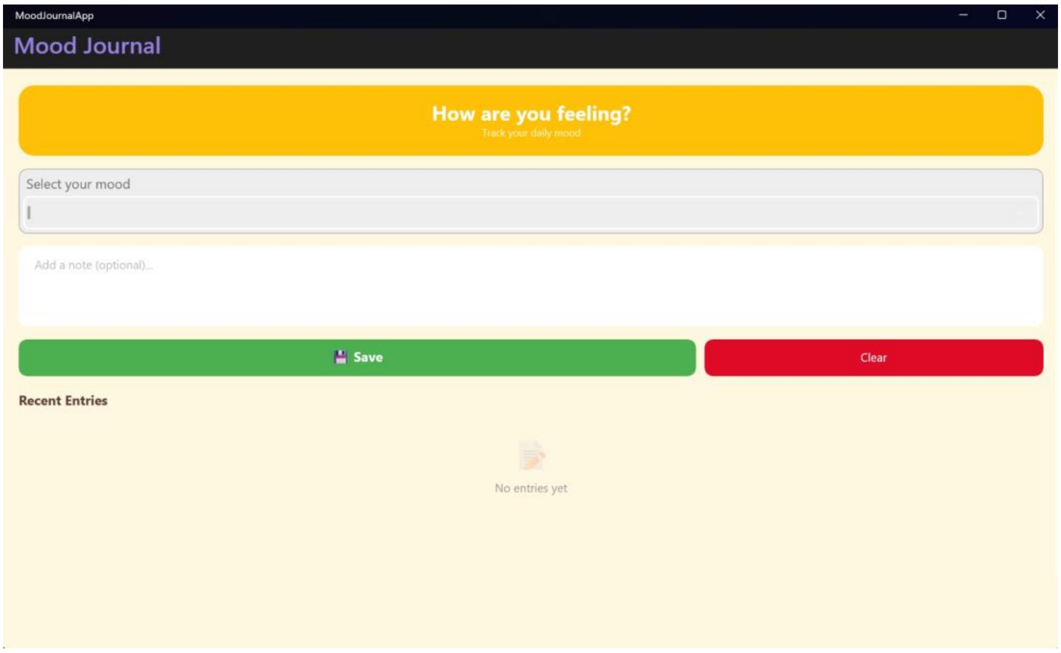


The time it takes to make a decision increases with the number of choices . By limiting the main menu to three options, we minimized cognitive load and prevented "choice paralysis," allowing the user to navigate faster.

3- Aesthetic-Usability Effect

We used a consistent design system (Style resources) across all four apps, featuring Border with CornerRadius, consistent Shadow effects, and a unified color palette.

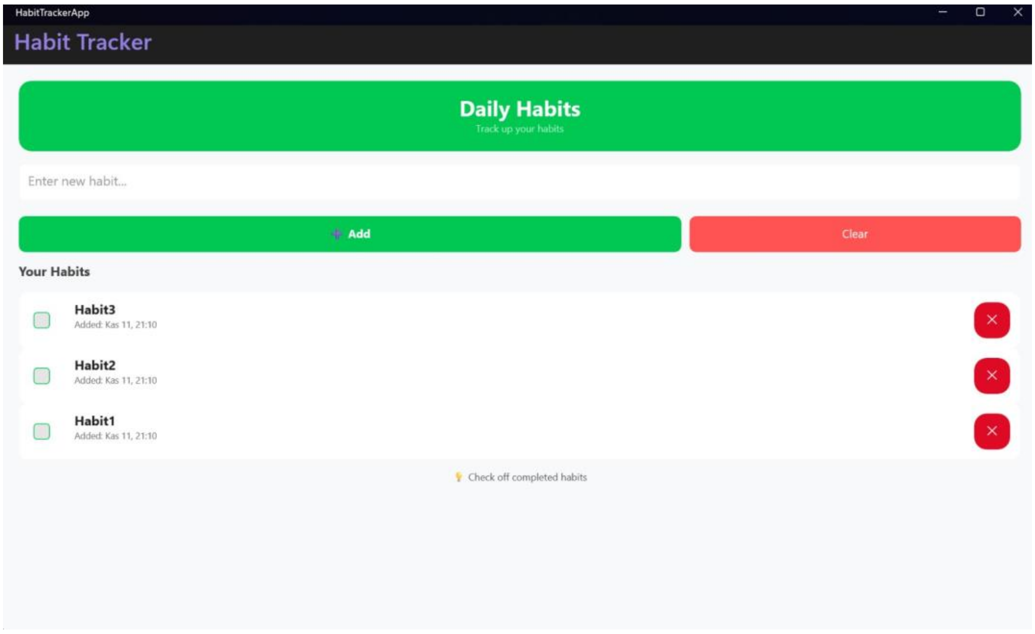




Users perceive aesthetically pleasing designs as more usable . Our clean, consistent, and modern UI builds trust and makes users more tolerant of any minor usability issues

4- Jakob’s Law:

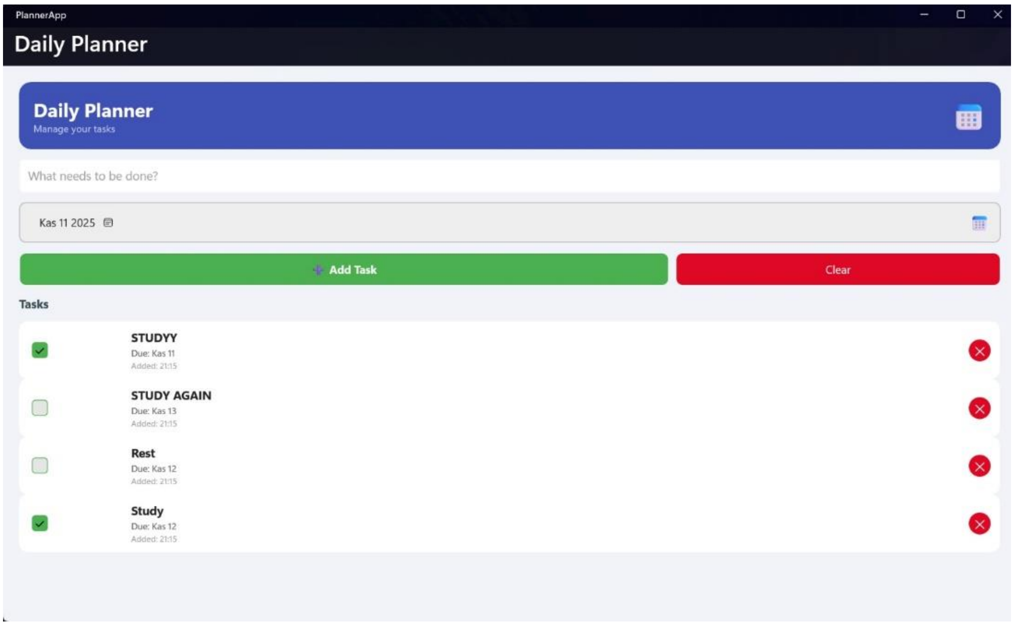
Our PlannerApp and HabitTrackerApp lists follow a familiar pattern: CheckBox on the left, task description in the center, and a Delete button on the right.



Users expect your app to work like other apps they already know . This standard "to-do list" layout matches the user's existing mental model, making our apps immediately intuitive and easy to learn

5- Gestalt Principles:

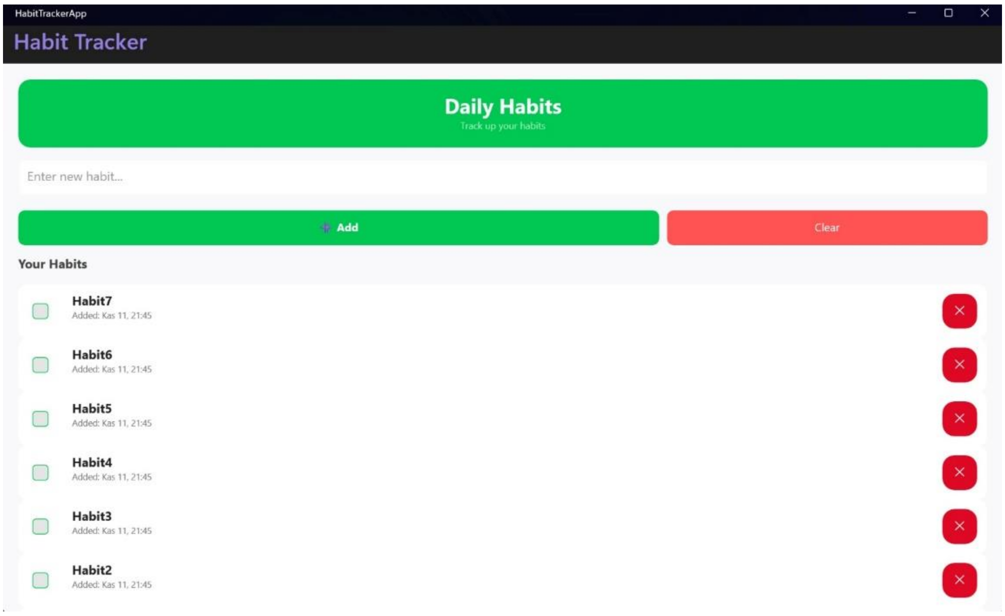
In PlannerApp and MoodJournalApp, we grouped all input controls (e.g., Entry, DatePicker, Picker) inside a single, visually distinct <Border> (card).



This is the Principle of Common Region. By enclosing related items in a boundary, the user's brain perceives them as a single functional unit ("Add Task"), separating them from the "List" area and making the UI easier to scan

6- Miller’s Law:

In the C# code for HabitTrackerApp, MoodJournalApp, and PlannerApp, we programmatically limit the list to 7 items (e.g., if (Habits.Count > 7) Habits.RemoveAt(Habits.Count - 1);).



□ Habit7 Added: Kas 11, 21:45

□ Habit6 Added: Kas 11, 21:45

□ Habit5 Added: Kas 11, 21:45

□ Habit4 Added: Kas 11, 21:45

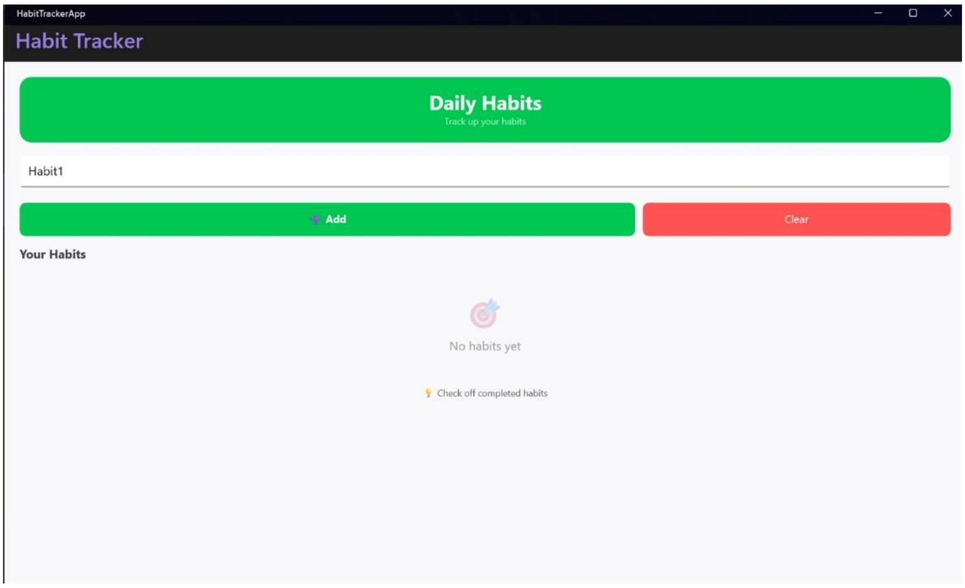
□ Habit3 Added: Kas 11, 21:45

□ Habit2 Added: Kas 11, 21:45

The average person can only keep 6 (±2) items in their working memory. By "chunking" the list to the 6 most recent entries, we prevent cognitive overload and make the list feel manageable

7- Von Restorff Effect:

In all apps, the primary action ("Add") is a solid, positive color (e.g., green #27AE60), while the destructive action ("Clear") is a visually distinct, contrasting style (e.g., red transparent #E74C3C).



Habit1

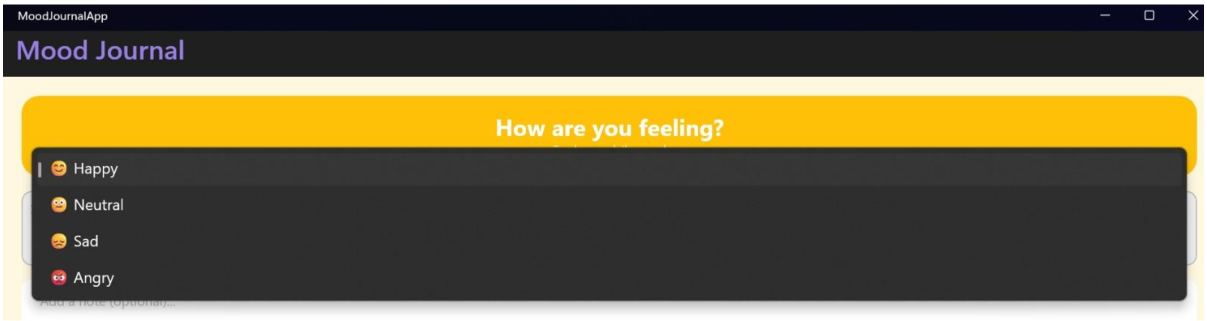
No habits yet

Check off completed habits

The item that stands out is the one most easily remembered . This color contrast highlights the primary call-to-action ("Add") while also making the dangerous "Clear" button distinct, which helps prevent user error.

8- Tesler’s Law:

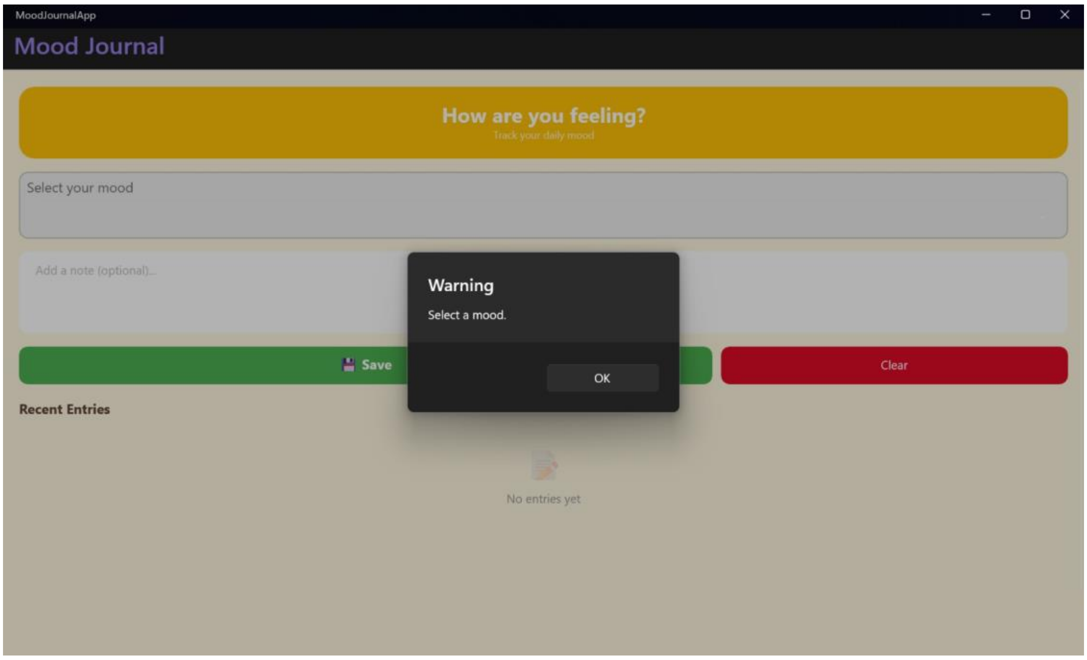
In MoodJournalApp, the user can leave the note field blank. The system handles this by auto-populating "No note" instead of showing an error



All processes have a core complexity . We moved the complexity of handling an "empty" (but optional) note from the user (forcing them to enter something) to the system (which provides a sensible default)

9- Postel’s Law:

In PlannerApp, if the user tries to add a task with an empty title (string.IsNullOrEmpty(title)), the app does not crash. It gracefully handles this "bad" input by showing a DisplayAlert warning.



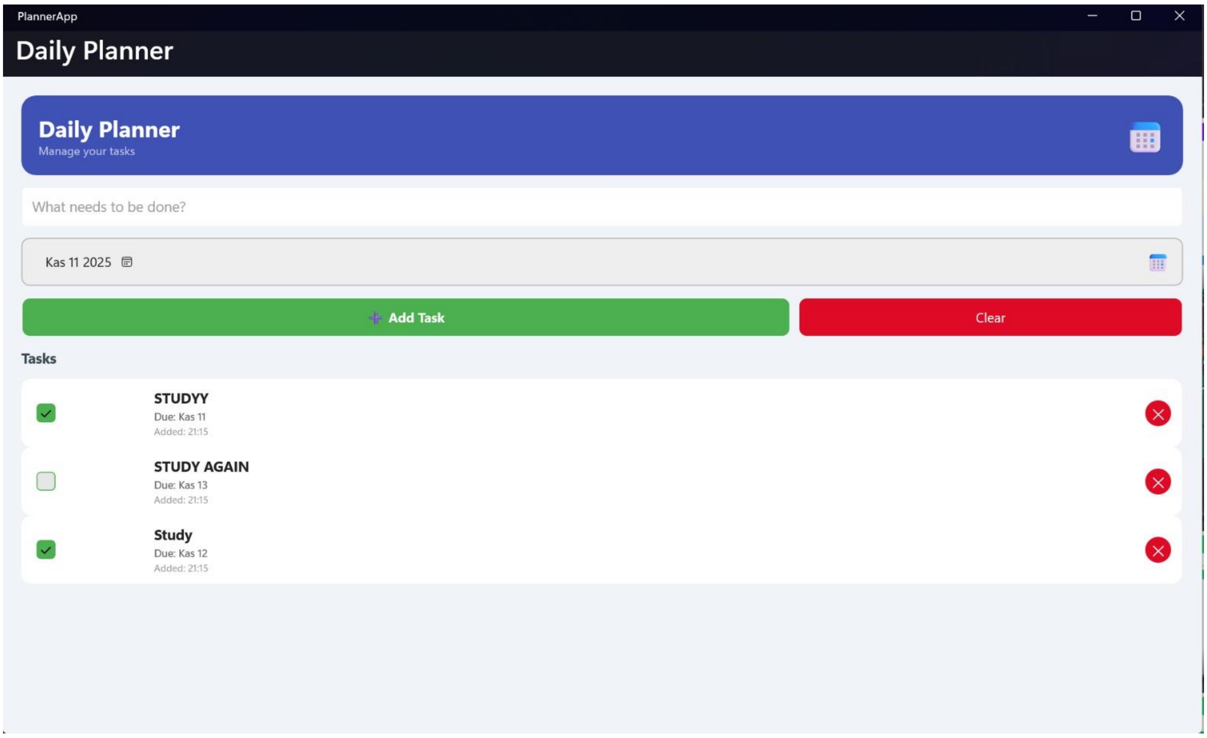
Warning

Select a mood.

Be liberal in what you accept". We accept the user's "imperfect input" (clicking "Save" with no selection) without crashing, and we are "conservative in what we send" (preventing the invalid data from being added) by showing a helpful alert.

10-Doherty’s Treshold:

In HabitTrackerApp, MoodJournalApp, and PlannerApp, we used ObservableCollection for all lists. When a user adds an item, it appears in the CollectionView instantly.



What needs to be done?

Kas 11 2025

☑ STUDYY
Due: Kas 11
Added: 21:15

□ STUDY AGAIN
Due: Kas 13
Added: 21:15

☑ Study
Due: Kas 12
Added: 21:15

Productivity soars when the system responds in <400ms . Using ObservableCollection provides this immediate feedback, assuring the user their action was successful and keeping them "in the flow."

Layout and Design Decisions

Our design philosophy was centered on creating a clean, consistent, and predictable user experience across all four applications, adhering to the core principles of cognitive psychology discussed in our course materials Statistics Area: Labels that display summary information, such as completion rates.

Our primary layout structure for all four applications (DashboardApp, HabitTrackerApp, MoodJournalApp, PlannerApp) was the VerticalStackLayout. Given that each app is a single screen with a clear top-to-bottom information flow (Header - Input -List), this layout provided the most straightforward and maintainable structure.

However, we did not place controls directly into the main VerticalStackLayout. To apply the Gestalt Principles (specifically *Common Region*), we "chunked" related UI elements by grouping them inside <Frame> elements, which function as visual cards . For example, in PlannerApp and MoodJournalApp , all input controls (Entry, DatePicker, Picker) are grouped in a single "Input" <Frame> , visually separating them from the CollectionView list . Where horizontal alignment was needed for multiple buttons (e.g., "Add" and "Clear" in

HabitTrackerApp), we utilized a <Grid> with proportional column definitions (ColumnDefinitions="2*,*") to ensure balanced and responsive spacing.

To support the Aesthetic-Usability Effect , we ensured that while each app has a unique theme, the underlying typography is consistent. All four projects are configured in MauiProgram.cs to register and use the "OpenSans-Regular" and "OpenSans-Semibold" fonts. We also used distinct, high-contrast colors for primary and secondary actions. This serves the Von Restorff Effect : in each app, the "safe" action (e.g., "Add") and the "destructive" action (e.g., "Clear") , are given sharply different colors (e.g., Green vs. Red) to immediately signal their different functions to the user.

Our layout was also driven by cognitive limits. The MoodJournalApp is a prime example of Hick's Law . Instead of an open Entry field for mood, we provide a Picker with only four pre-defined options ("Happy," "Sad," etc.). This simplifies the decision-making process, reducing cognitive load . Similarly, in the C# code for HabitTrackerApp, MoodJournalApp, and PlannerApp, we explicitly limit the ObservableCollection to 7 items (e.g., if (Habits.Count > 7) Habits.RemoveAt(Habits.Count - 1);). This is a direct implementation of Miller's Law , which states that working memory is limited (to roughly 4-7 items), preventing cognitive overload.

Finally, we adhered to Jakob's Law by using familiar patterns. The list structure in all data-driven apps (HabitTracker , Planner) follows a standard "to-do list" pattern: a CheckBox on the left, primary text in the center, and a Delete button on the right . This matches the user's existing mental model , making our apps instantly intuitive and usable.

Functional Features

Our project implements all core functional requirements specified in the project definition . A summary of features across the four applications is provided below.

Feature: Dynamic List Display

Description: Displays user-created tasks, habits, or moods in a scrollable list . Implementation Details: We used a CollectionView in HabitTrackerApp, MoodJournalApp , and PlannerApp. The ItemsSource property was bound to an ObservableCollection<T> (e.g., Habits, Entries, Tasks) defined in the code-behind.

Feature: Data Input

Description: We provided users with a variety of controls to enter data, as required by the "User Input Variety" objective . Implementation Details: We used a simple Entry (x:Name="habitEntry") for HabitTrackerApp. For MoodJournalApp, we used a Picker (x:Name="moodPicker") bound to a string collection . For PlannerApp, we used both an Entry (x:Name="taskEntry") and a DatePicker (x:Name="datePicker") .

Feature: Data Manipulation (Add, Delete, Clear) Description: Users can add

new items, delete individual items, and clear the entire list in all three data-driven apps. Implementation Details: All data manipulation is handled by ICommand bindings. For example, PlannerApp uses AddTaskCommand, DeleteTaskCommand, and ClearTasksCommand. The DeleteTaskCommand is an ICommand<T> that receives the specific item to be deleted via CommandParameter="{Binding .}".

Feature: Navigation (Event vs. ICommand)

Description: The DashboardApp provides a main menu to access the other modules . Implementation Details: We implemented this using TapGestureRecognizer. This app demonstrates both interaction models: the "Habits" card is bound to an ICommand (OpenHabitCommand), while the "Mood" and "Planner" cards use traditional event handlers (OnMoodClicked, OnPlannerClicked).

Feature: Input Validation (Postel's Law)

Description: The system gracefully handles invalid or missing user input without crashing, fulfilling Postel's Law . Implementation Details: In PlannerApp, if the user tries to add an empty task, the AddTask method checks if (string.IsNullOrEmpty(title)) and shows a DisplayAlert. In MoodJournalApp, an empty note is handled by the system saving a default value of "No note".

Feature: Timestamping Description: All habits, tasks, and moods are timestamped upon creation. Implementation Details: The AddHabit, AddTask, and AddEntry methods assign DateTime.Now to the model. This is then displayed in the CollectionView using XAML's StringFormat (e.g., StringFormat='Added: {0:MMM dd, HH:mm}').

Feature: Data Conversion Description: In PlannerApp, completed tasks (IsCompleted = true) are visually struck through. Implementation Details: We implemented a custom IValueConverter named BoolToTextDecorationConverter. This converter is registered as a resource in App.xaml and bound to the Label.TextDecorations property in the DataTemplate.

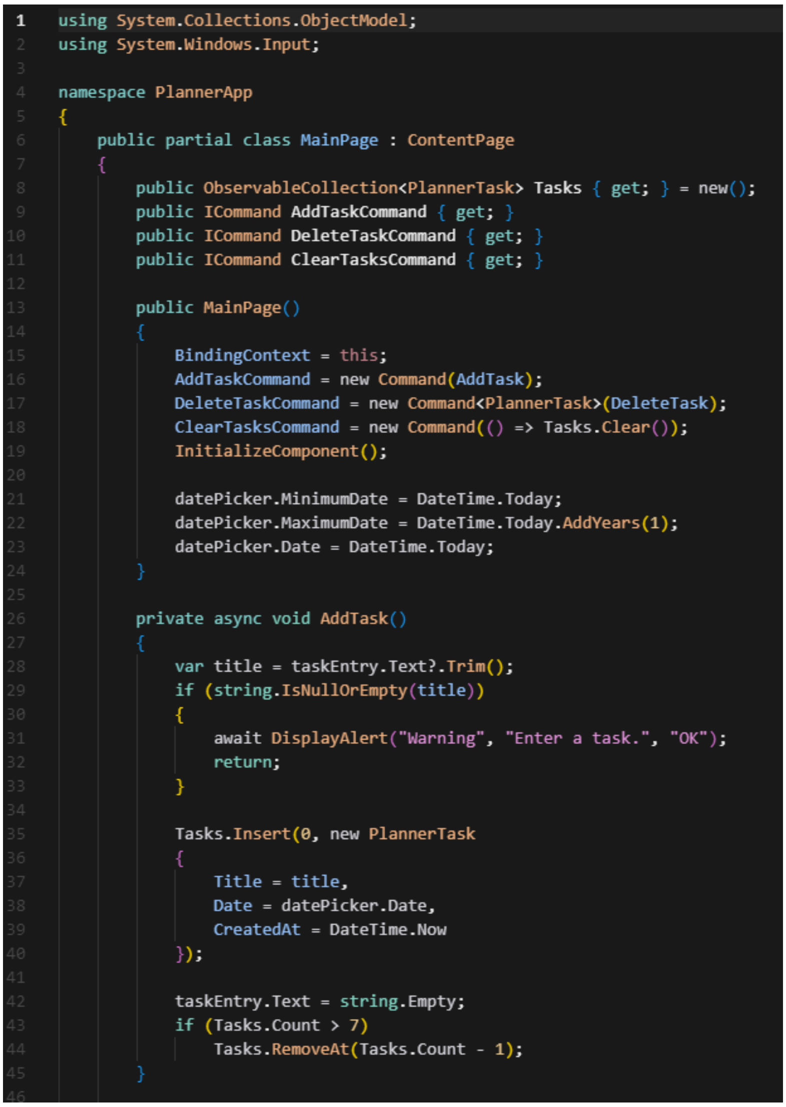
Binding and Command Demonstration Summary

This section demonstrates how we fulfilled the project's core technical requirements: implementing data binding and using at least one ICommand bound from XAML . We implemented these patterns across all four applications. We present one advanced ICommand example from PlannerApp and one foundational data binding example from HabitTrackerApp.

1. ICommand Example (with CommandParameter)

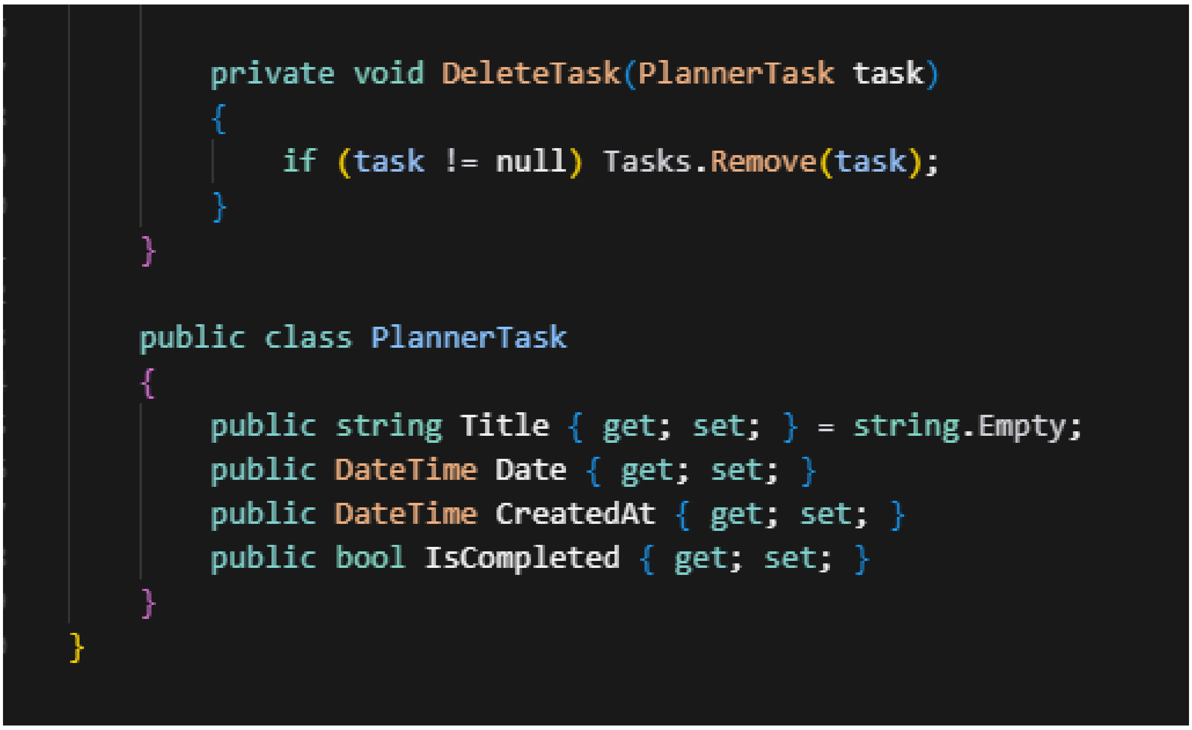
The ICommand interface was used to separate UI interaction from business logic, making our code cleaner and fulfilling **Tesler's Law** . Our most comprehensive implementation is the "delete task" feature in PlannerApp , which uses a generic ICommand<T> to pass data.

C# Code-Behind (PlannerApp/MainPage.xaml.cs): First, we defined a generic ICommand property that expects a PlannerTask object. In the constructor, we initialized this command, pointing it to our DeleteTask method. The BindingContext was set to this to allow XAML to find the command.



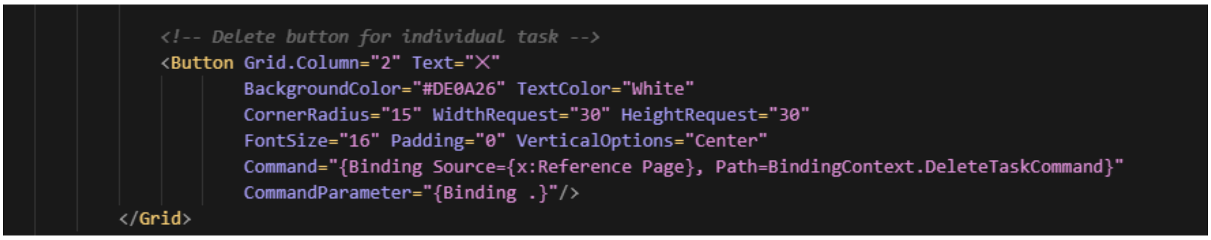
```
using System.Collections.ObjectModel;
using System.Windows.Input;

namespace PlannerApp
{
    public partial class MainPage : ContentPage
    {
        public ObservableCollection<PlannerTask> Tasks { get; } = new();
        public ICommand AddTaskCommand { get; }
        public ICommand DeleteTaskCommand { get; }
        public ICommand ClearTasksCommand { get; }

        public MainPage()
        {
            BindingContext = this;
            AddTaskCommand = new Command(AddTask);
            DeleteTaskCommand = new Command<PlannerTask>(DeleteTask);
            ClearTasksCommand = new Command(() => Tasks.Clear());
            InitializeComponent();

            datePicker.MinimumDate = DateTime.Today;
            datePicker.MaximumDate = DateTime.Today.AddYears(1);
            datePicker.Date = DateTime.Today;
        }

        private async void AddTask()
        {
            var title = taskEntry.Text?.Trim();
            if (string.IsNullOrEmpty(title))
            {
                await DisplayAlert("Warning", "Enter a task.", "OK");
                return;
            }

            Tasks.Insert(0, new PlannerTask
            {
                Title = title,
                Date = datePicker.Date,
                CreatedAt = DateTime.Now
            });

            taskEntry.Text = string.Empty;
            if (Tasks.Count > 7)
                Tasks.RemoveAt(Tasks.Count - 1);
        }

```

C# Logic (DeleteTask method): The DeleteTask method accepts the PlannerTask object passed from the XAML binding and removes it from the main ObservableCollection.



```csharp
            private void DeleteTask(PlannerTask task)
            {
                if (task != null) Tasks.Remove(task);
            }
        }

        public class PlannerTask
        {
            public string Title { get; set; } = string.Empty;
            public DateTime Date { get; set; }
            public DateTime CreatedAt { get; set; }
            public bool IsCompleted { get; set; }
        }
    }
```

XAML View (PlannerApp/MainPage.xaml): Inside the CollectionView's DataTemplate, the Button binds its Command property to the DeleteTaskCommand defined on the page. Crucially, it uses CommandParameter="{Binding .}" to pass the specific PlannerTask object of that row directly to the command.

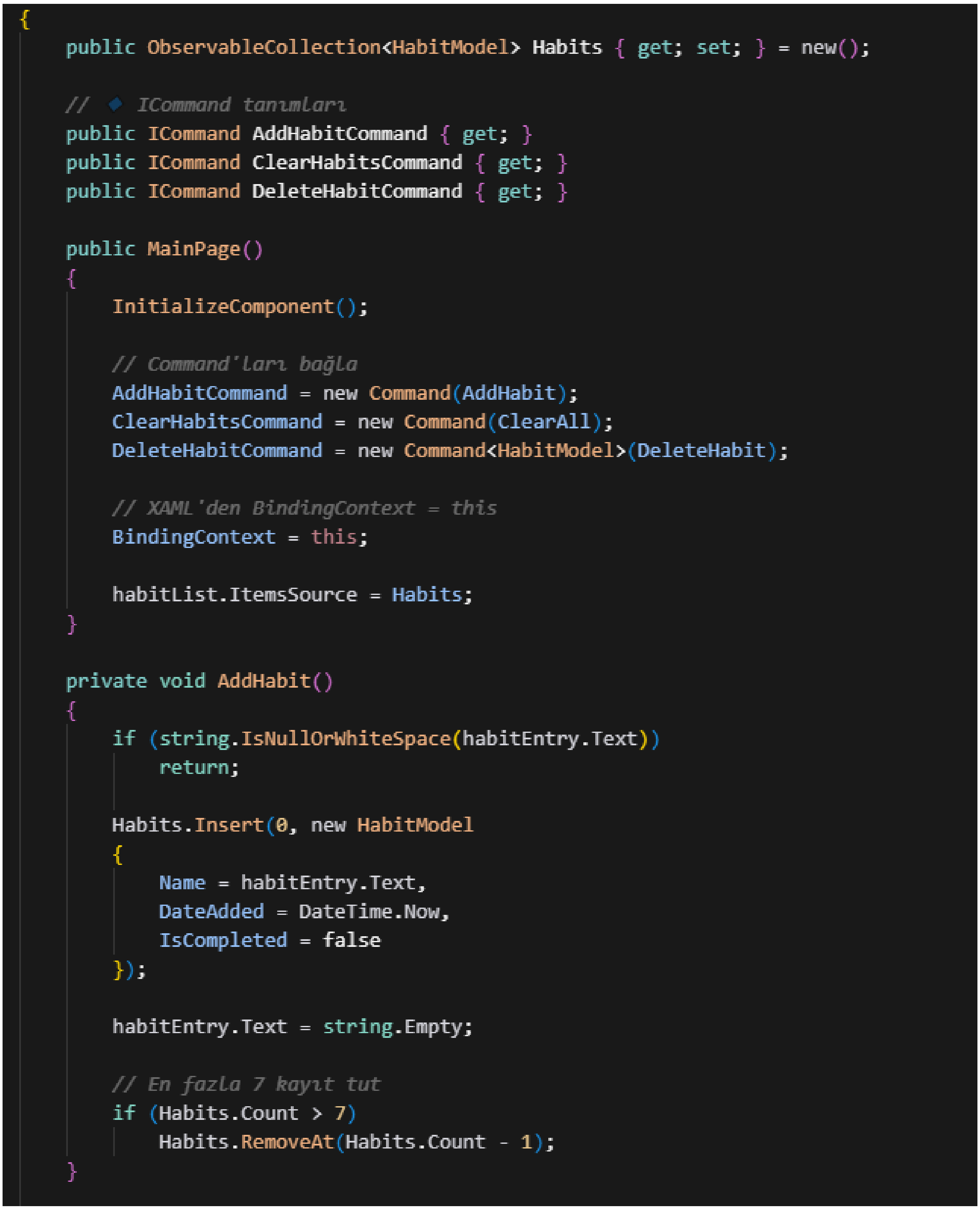


```xml
                <!-- Delete button for individual task -->
                <Button Grid.Column="2" Text="✕"
                        BackgroundColor="#DE0A26" TextColor="White"
                        CornerRadius="15" WidthRequest="30" HeightRequest="30"
                        FontSize="16" Padding="0" VerticalOptions="Center"
                        Command="{Binding Source={x:Reference Page}, Path=BindingContext.DeleteTaskCommand}"
                        CommandParameter="{Binding .}"/>
            </Grid>
```

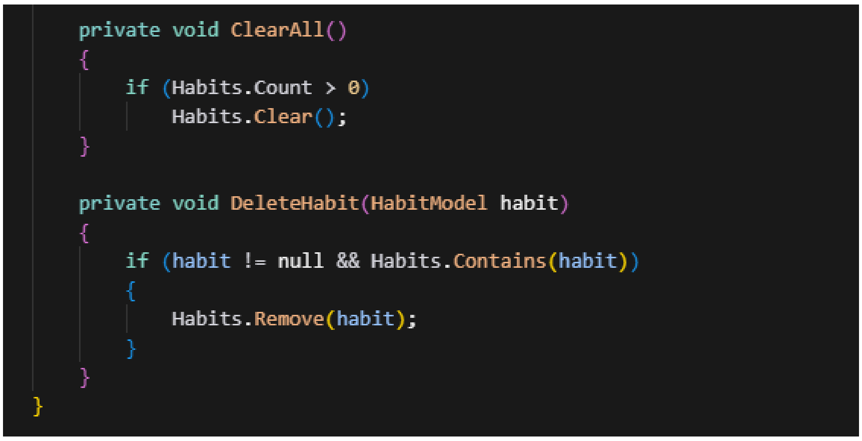
2. XAML Binding Example (ItemsSource)

Data binding was used in all data-driven apps to automatically synchronize the UI with our code-behind data. A clear example is the HabitTrackerApp .

C# Code-Behind (HabitTrackerApp/MainPage.xaml.cs): We defined a public ObservableCollection<HabitModel> named Habits. This specific collection type is essential because it automatically notifies the UI of any changes (adds or removes), fulfilling the **Doherty Threshold** by providing instant feedback.

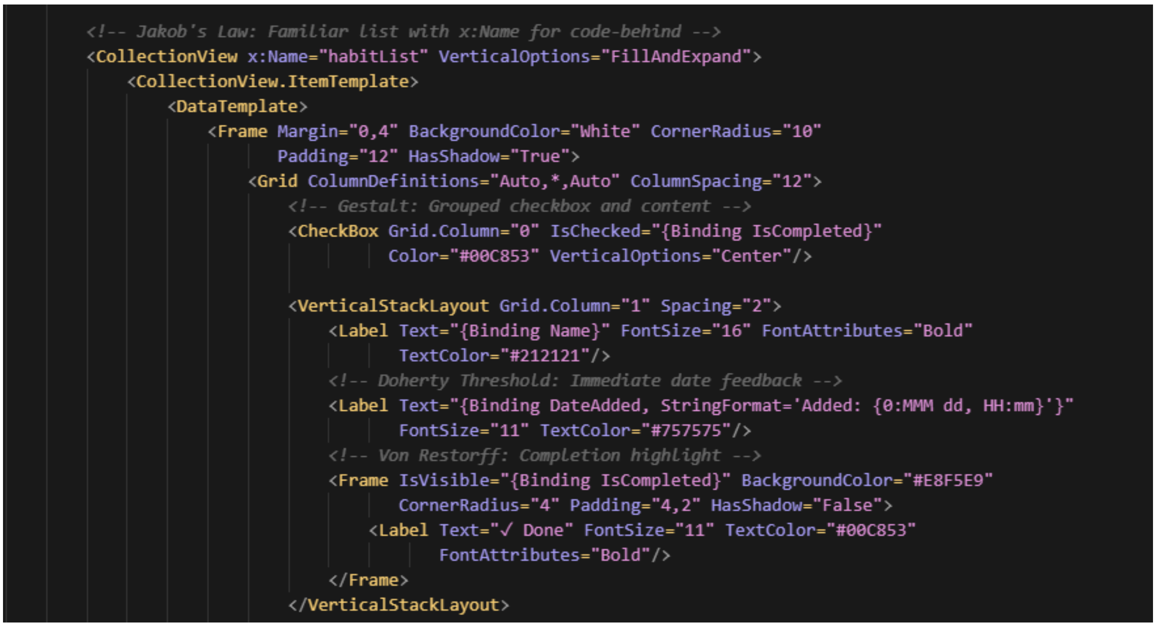


```
{
    public ObservableCollection<HabitModel> Habits { get; set; } = new();

    // ◆ ICommand tanımları
    public ICommand AddHabitCommand { get; }
    public ICommand ClearHabitsCommand { get; }
    public ICommand DeleteHabitCommand { get; }

    public MainPage()
    {
        InitializeComponent();

        // Command'ları bağla
        AddHabitCommand = new Command(AddHabit);
        ClearHabitsCommand = new Command(ClearAll);
        DeleteHabitCommand = new Command<HabitModel>(DeleteHabit);

        // XAML'den BindingContext = this
        BindingContext = this;

        habitList.ItemsSource = Habits;
    }

    private void AddHabit()
    {
        if (string.IsNullOrWhiteSpace(habitEntry.Text))
            return;

        Habits.Insert(0, new HabitModel
        {
            Name = habitEntry.Text,
            DateAdded = DateTime.Now,
            IsCompleted = false
        });

        habitEntry.Text = string.Empty;

        // En fazla 7 kayıt tut
        if (Habits.Count > 7)
            Habits.RemoveAt(Habits.Count - 1);
    }
```

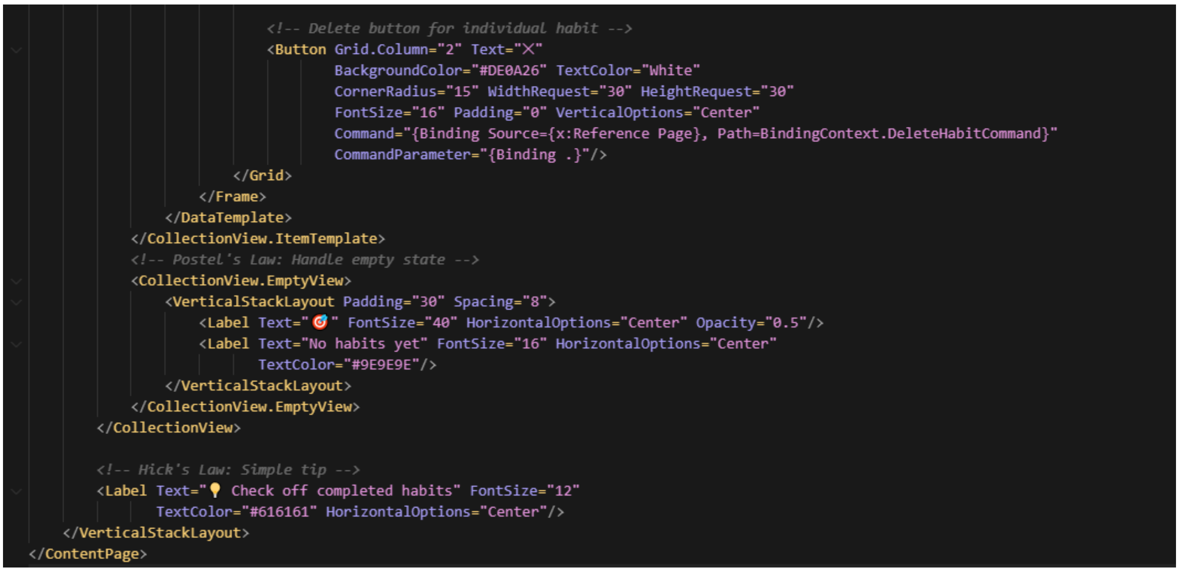


```
    private void ClearAll()
    {
        if (Habits.Count > 0)
            Habits.Clear();
    }

    private void DeleteHabit(HabitModel habit)
    {
        if (habit != null && Habits.Contains(habit))
        {
            Habits.Remove(habit);
        }
    }
}
```

XAML View (HabitTrackerApp/MainPage.xaml): In the XAML file, we bound the CollectionView's ItemsSource property directly to the Habits collection in our code-behind. We did not need to set the ItemsSource manually in C#; setting the BindingContext = this; was enough for the XAML binding to find its source.



```
        <!-- Jakob's Law: Familiar list with x:Name for code-behind -->
        <CollectionView x:Name="habitList" VerticalOptions="FillAndExpand">
            <CollectionView.ItemTemplate>
                <DataTemplate>
                    <Frame Margin="0,4" BackgroundColor="White" CornerRadius="10"
                           Padding="12" HasShadow="True">
                        <Grid ColumnDefinitions="Auto,*,Auto" ColumnSpacing="12">
                            <!-- Gestalt: Grouped checkbox and content -->
                            <CheckBox Grid.Column="0" IsChecked="{Binding IsCompleted}"
                                      Color="#00C853" VerticalOptions="Center"/>

                            <VerticalStackLayout Grid.Column="1" Spacing="2">
                                <Label Text="{Binding Name}" FontSize="16" FontAttributes="Bold"
                                       TextColor="#212121"/>
                                <!-- Doherty Threshold: Immediate date feedback -->
                                <Label Text="{Binding DateAdded, StringFormat='Added: {0:MMM dd, HH:mm}'}"
                                       FontSize="11" TextColor="#757575"/>
                                <!-- Von Restorff: Completion highlight -->
                                <Frame IsVisible="{Binding IsCompleted}" BackgroundColor="#E8F5E9"
                                       CornerRadius="4" Padding="4,2" HasShadow="False">
                                    <Label Text="✓ Done" FontSize="11" TextColor="#00C853"
                                           FontAttributes="Bold"/>
                                </Frame>
                            </VerticalStackLayout>
```



```
                            <!-- Delete button for individual habit -->
                            <Button Grid.Column="2" Text="✕"
                                    BackgroundColor="#DE0A26" TextColor="White"
                                    CornerRadius="15" WidthRequest="30" HeightRequest="30"
                                    FontSize="16" Padding="0" VerticalOptions="Center"
                                    Command="{Binding Source={x:Reference Page}, Path=BindingContext.DeleteHabitCommand}"
                                    CommandParameter="{Binding .}"/>
                        </Grid>
                    </Frame>
                </DataTemplate>
            </CollectionView.ItemTemplate>
            <!-- Postel's Law: Handle empty state -->
            <CollectionView.EmptyView>
                <VerticalStackLayout Padding="30" Spacing="8">
                    <Label Text="🎯" FontSize="40" HorizontalOptions="Center" Opacity="0.5"/>
                    <Label Text="No habits yet" FontSize="16" HorizontalOptions="Center"
                           TextColor="#9E9E9E"/>
                </VerticalStackLayout>
            </CollectionView.EmptyView>
        </CollectionView>

        <!-- Hick's Law: Simple tip -->
        <Label Text="💡 Check off completed habits" FontSize="12"
               TextColor="#616161" HorizontalOptions="Center"/>
    </VerticalStackLayout>
</ContentPage>
```

Reflection on Design and UX

The LifeHub application suite successfully integrates all ten required UX laws while maintaining design simplicity and a consistent aesthetic. Our layout decisions, based on a primary VerticalStackLayout scaffold and a <Frame>-based card system , were designed to avoid clutter, present users with minimal choices (Hick's Law) , and group related information logically (Gestalt Principles) .

Implementing command-based interactions (ICommand) for all primary data actions (Add, Delete, Clear) provided a robust and maintainable alternative to procedural event handlers. This separation of concerns was a core objective . The DashboardApp explicitly demonstrates this contrast by using both an ICommand (for Habits) and standard Tapped events (for Mood/Planner).

The result is a set of four functional, visually harmonious prototypes that align with modern mobile design philosophy and successfully demonstrate all key technical deliverables of the LifeHub specification

UI/UX Notes

Applied UX Laws and Principles:

Ali Osman Taş - PlannerApp & MoodJournalApp

1. Hick's Law (in MoodJournalApp): To streamline the core function of the app—logging a mood—we intentionally limited the user's choice. Instead of an open text field that could cause "choice paralysis," we implemented a Picker control . This Picker offers only four distinct, pre-defined options ("Happy," "Neutral," "Sad," "Angry"). This application of Hick's Law transforms the task into a quick, two-tap process, reducing cognitive load and encouraging daily use.

2. Postel's Law (in PlannerApp): We designed the system to be "liberal in what it accepts" from the user. The AddTask method in PlannerApp does not crash if the user tries to add a task with an empty title. Instead, it checks the input (string.IsNullOrEmpty(title)) , prevents the invalid data from being added, and shows a helpful DisplayAlert warning ("Enter a task."). This robust error handling prevents crashes and guides the user.

3. Tesler's Law (in MoodJournalApp): We moved inherent complexity away from the user and into the system. The "notes" field for a mood entry is optional. If the user leaves it blank (string.IsNullOrWhiteSpace(noteEntry.Text)), the system automatically substitutes a default value ("No note") upon saving. This fulfills Tesler's Law by allowing the user to complete the core task (logging a mood) with minimum effort, without being forced to deal with optional complexity.

4. Jakob's Law (in PlannerApp): We utilized a universally familiar interaction pattern for our task list . When a task's CheckBox is ticked, the IsCompleted property is updated, which is passed to our custom BoolToTextDecorationConverter. This converter applies a TextDecorations.Strikethrough (üstü çizili) style. This "strikethrough on complete" visual feedback is a standard convention in almost all to-do list apps, making our app's behavior immediately intuitive.

5. Gestalt Principles (in PlannerApp & MoodJournalApp): We applied the **Principle of Common Region** to organize our inputs. In both apps, all related controls (Entry , DatePicker , Picker) are grouped inside a single, visually distinct <Frame> element. This "card" visually separates the "input" area from the "list" area, allowing the user's brain to perceive all inputs as one single functional unit.

Kutlu Çağan Akın - DashboardApp & HabitTrackerApp

1. Miller's Law (in HabitTrackerApp): The average person can only keep about 7 (±2) items in their working memory. We applied this law directly in our C# logic. The AddHabit method checks the list count after adding a new item and enforces a limit (if (Habits.Count > 7) Habits.RemoveAt(Habits.Count - 1);). This "chunking" ensures the list never becomes an overwhelming, infinitely scrolling burden, keeping the user focused.

2. Doherty Threshold (in HabitTrackerApp): This law states that productivity soars when a system responds in <400ms. We achieved this by using an ObservableCollection<HabitModel> for our list. When the user hits the "Add" button, the CollectionView (which is bound to this collection) updates instantly, without any lag or need for a manual refresh. This immediate feedback makes the app feel responsive and fast.

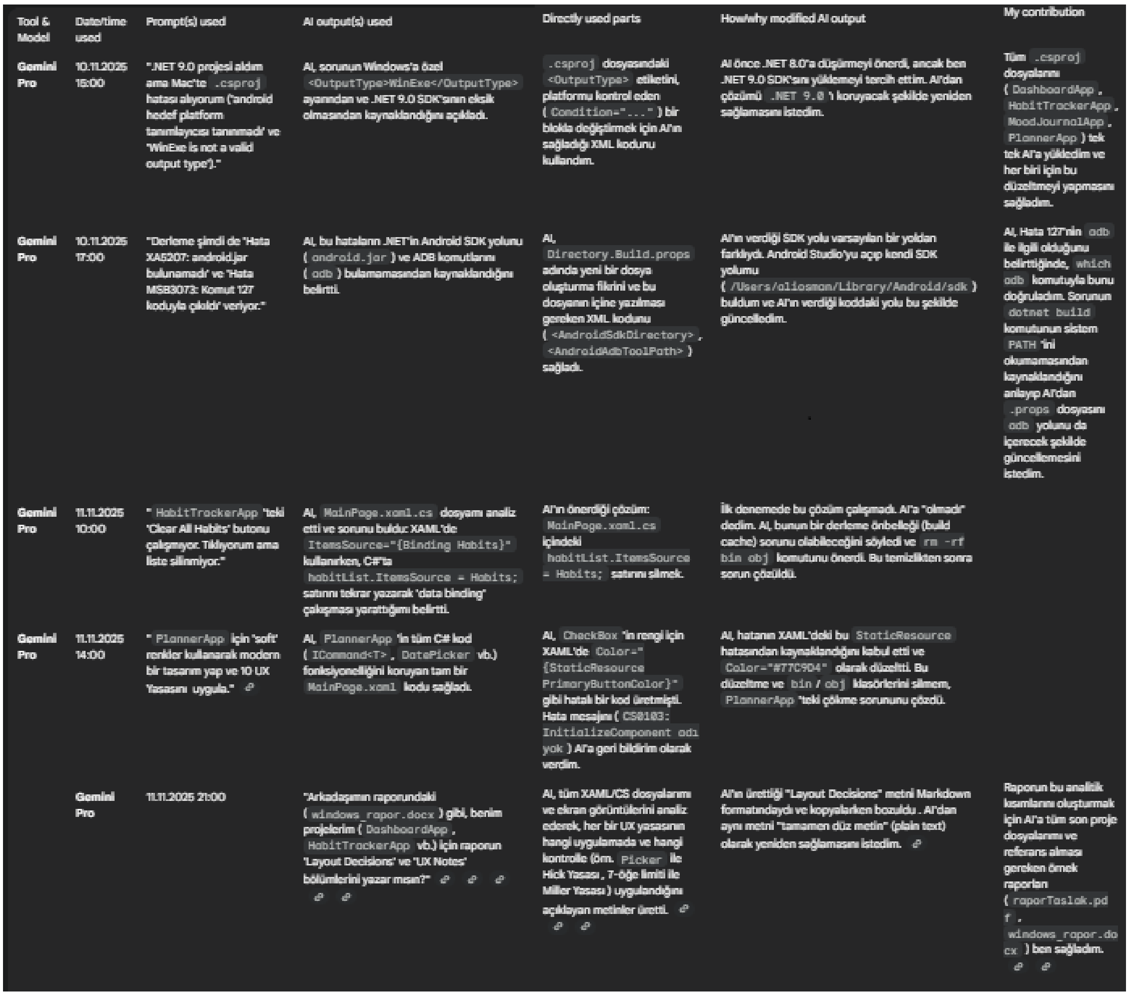
3. Von Restorff Effect (in HabitTrackerApp): We used color and visual distinction to guide the user. The primary action ("Add") is a solid, positive green (#00C853), while the destructive action ("Clear") is a contrasting red (#FF5252) . This makes the "Clear" button visually unique, fulfilling the law that distinct items are more easily remembered. This contrast highlights the main action and prevents accidental deletion.

4. Fitts's Law (in DashboardApp & HabitTrackerApp): We made targets large and easy to tap. In DashboardApp, the navigation links are not small text but large, full-width <Frame> elements (cards) . In HabitTrackerApp, the "Add" and "Clear" buttons have a large HeightRequest="44" to be easily reachable, reducing miss-taps and improving efficiency, as Fitts's Law dictates.

5. Aesthetic-Usability Effect (in DashboardApp): The DashboardApp serves as the user's first impression. We used polished <Frame> elements with CornerRadius , consistent spacing, and large, clear icons (🎯, 😊, 📅). This aesthetically pleasing design builds user trust and creates a positive emotional response, which makes the entire application suite *feel* more usable and professional.

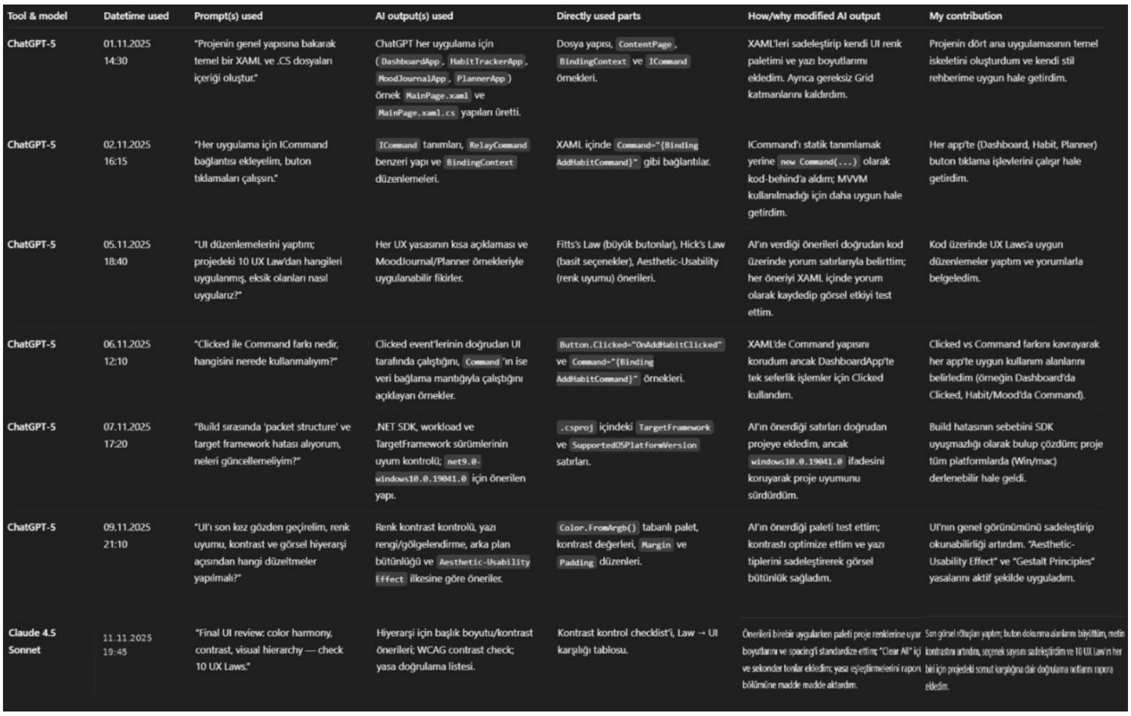
AI Usage Logs

Ali Osman Taş



Tool & Model	Date/time used	Prompt(s) used	AI output(s) used	Directly used parts	How/why modified AI output	My contribution
Gemini Pro	10.11.2025 16:00	"`.NET 9.0` projesi aldım ama Mac'te `.csproj` hatası alıyorum ('android hedef platform tanımlayıcısı tanınmadı' ve 'WinExe is not a valid output type')."	AI, sorunun Windows'a özel `<OutputType>WinExe</OutputType>` ayarından ve .NET 9.0 SDK'sının eksik olmasından kaynaklandığını açıkladı.	`.csproj` dosyasındaki `<OutputType>` etiketini, platformu kontrol eden (`Condition="..."`) bir blokla değiştirmek için AI'ın sağladığı XML kodunu kullandım.	AI önce .NET 8.0'a düşürmeyi önerdi, ancak ben .NET 9.0 SDK'sını yüklemeyi tercih ettim. AI'dan çözümü `.NET 9.0` 'ı koruyacak şekilde yeniden sağlamasını istedim.	Tüm `.csproj` dosyalarını (`DashboardApp` , `HabitTrackerApp` , `MoodJournalApp` , `PlannerApp`) tek tek AI'a yükledim ve her biri için bu düzeltmeyi yapmasını sağladım.
Gemini Pro	10.11.2025 17:00	"Derleme şimdi de 'Hata XA5207: android.jar bulunamadı' ve 'Hata MSB3073: Komut 127 koduyla çıkıldı' veriyor."	AI, bu hataların .NET'in Android SDK yolunu (`android.jar`) ve ADB komutlarını (`adb`) bulamamasından kaynaklandığını belirtti.	AI, `Directory.Build.props` adında yeni bir dosya oluşturma fikrini ve bu dosyanın içine yazılması gereken XML kodunu (`<AndroidSdkDirectory>` , `<AndroidAdbToolPath>`) sağladı.	AI'ın verdiği SDK yolu varsayılan bir yoldan farklıydı. Android Studio'yu açıp kendi SDK yolumu (`/Users/aliosman/Library/Android/sdk`) buldum ve AI'ın verdiği koddaki yolu bu şekilde güncelledim.	AI, Hata 127'nin `adb` ile ilgili olduğunu belirttiğinde, `which adb` komutuyla bunu doğruladım. Sorunun `dotnet build` komutunun sistem `PATH` 'ini okumamasından kaynaklandığını anlayıp AI'dan `.props` dosyasını `adb` yolunu da içerecek şekilde güncellemesini istedim.
Gemini Pro	11.11.2025 10:00	" `HabitTrackerApp` 'teki 'Clear All Habits' butonu çalışmıyor. Tıklıyorum ama liste silinmiyor."	AI, `MainPage.xaml.cs` dosyamı analiz etti ve sorunu buldu: XAML'de `ItemsSource="{Binding Habits}"` kullanırken, C#'ta `habitList.ItemsSource = Habits;` satırını tekrar yazarak 'data binding' çakışması yarattığımı belirtti.	AI'ın önerdiği çözüm: `MainPage.xaml.cs` içindeki `habitList.ItemsSource = Habits;` satırını silmek.	İlk denemede bu çözüm çalışmadı. AI'a "olmadı" dedim. AI, bunun bir derleme önbelleği (build cache) sorunu olabileceğini söyledi ve `rm -rf bin obj` komutunu önerdi. Bu temizlikten sonra sorun çözüldü.	
Gemini Pro	11.11.2025 14:00	" `PlannerApp` için 'soft' renkler kullanarak modern bir tasarım yap ve 10 UX Yasasını uygula."	AI, `PlannerApp` 'ın tüm C# kod (`ICommand<T>` , `DatePicker` vb.) fonksiyonelliğini koruyan tam bir `MainPage.xaml` kodu sağladı.	AI, `CheckBox` 'ın rengi için XAML'de `Color="{StaticResource PrimaryButtonColor}"` gibi hatalı bir kod üretmişti. Hata mesajını (`CS0103: InitializeComponent adı yok`) AI'a geri bildirim olarak verdim.	AI, hatanın XAML'deki bu `StaticResource` hatasından kaynaklandığını kabul etti ve `Color="#77C9D4"` olarak düzeltti. Bu düzeltme ve `bin` / `obj` klasörlerini silmem, `PlannerApp` 'teki çökme sorununu çözdü.	
	Gemini Pro	11.11.2025 21:00	"Arkadaşımın raporundaki (`windows_rapor.docx`) gibi, benim projelerim (`DashboardApp` , `HabitTrackerApp` vb.) için raporun 'Layout Decisions' ve 'UX Notes' bölümlerini yazar mısın?"	AI, tüm XAML/CS dosyalarımı ve ekran görüntülerini analiz ederek, her bir UX yasasının hangi uygulamada ve hangi kontrolle (örn. `Picker` ile Hick Yasası , 7-öğe limiti ile Miller Yasası) uygulandığını açıklayan metinler üretti.	AI'ın ürettiği "Layout Decisions" metni Markdown formatındaydı ve kopyalarken bozuldu . AI'dan aynı metni "tamamen düz metin" (plain text) olarak yeniden sağlamasını istedim.	Raporun bu analitik kısımlarını oluşturmak için AI'a tüm son proje dosyalarımı ve referans alması gereken örnek raporları (`raporTaslak.pdf` , `windows_rapor.docx`) ben sağladım.

Kutlu Çağan Akın



Tool & model	Datetime used	Prompt(s) used	AI output(s) used	Directly used parts	How/why modified AI output	My contribution
ChatGPT-5	01.11.2025 14:30	"Projenin genel yapısına bakarak temel bir XAML ve .CS dosyaları içeriği oluştur."	ChatGPT her uygulama için (`DashboardApp` , `HabitTrackerApp` , `MoodJournalApp` , `PlannerApp`) örnek `MainPage.xaml` ve `MainPage.xaml.cs` yapıları üretti.	Dosya yapısı, `ContentPage` , `BindingContext` ve `ICommand` örnekleri.	XAML'leri sadeleştirip kendi UI renk paletimi ve yazı boyutlarımı ekledim. Ayrıca gereksiz Grid katmanlarını kaldırdım.	Projenin dört ana uygulamasının temel iskeletini oluşturdum ve kendi stil rehberime uygun hale getirdim.
ChatGPT-5	02.11.2025 16:15	"Her uygulama için ICommand bağlantısı ekleyelim, buton tıklamaları çalışsın."	`ICommand` tanımları, `RelayCommand` benzeri yapı ve `BindingContext` düzenlemeleri.	XAML içinde `Command="{Binding AddHabitCommand}"` gibi bağlantılar.	ICommand'ı statik tanımlamak yerine `new Command(...)` olarak kod-behind'a aldım; MVVM kullanılmadığı için daha uygun hale getirdim.	Her app'te (Dashboard, Habit, Planner) buton tıklama işlevlerini çalışır hale getirdim.
ChatGPT-5	05.11.2025 18:40	"UI düzenlemelerini yaptım; projedeki 10 UX Law'dan hangileri uygulanmış, eksik olanları nasıl uygularız?"	Her UX yasasının kısa açıklaması ve MoodJournal/Planner örnekleriyle uygulanabilir fikirler.	Fitts's Law (büyük butonlar), Hick's Law (basit seçenekler), Aesthetic-Usability (renk uyumu) önerileri.	AI'ın verdiği önerileri doğrudan kod üzerinde yorum satırlarıyla belirttim; her öneriyi XAML içinde yorum olarak kaydedip görsel etkiyi test ettim.	Kod üzerinde UX Laws'a uygun düzenlemeler yaptım ve yorumlarla belgeledim.
ChatGPT-5	06.11.2025 12:10	"Clicked ile Command farkı nedir, hangisini nerede kullanmalıyım?"	Clicked event'lerinin doğrudan UI tarafında çalıştığını, `Command` 'ın ise veri bağlama mantığıyla çalıştığını açıklayan örnekler.	`Button.Clicked="OnAddHabitClicked"` ve `Command="{Binding AddHabitCommand}"` örnekleri.	XAML'de Command yapısını korudum ancak DashboardApp'te tek seferlik işlemler için Clicked kullandım.	Clicked vs Command farkını kavrayarak her app'te uygun kullanım alanlarını belirledim (örneğin Dashboard'da Clicked, Habit/Mood'da Command).
ChatGPT-5	07.11.2025 17:20	"Build sırasında 'packet structure' ve target framework hatası alıyorum, neleri güncellemeliyim?"	.NET SDK, workload ve TargetFramework sürümlerinin uyum kontrolü; `net9.0-windows10.0.19041.0` için önerilen yapı.	`.csproj` içindeki `TargetFramework` ve `SupportedOSPlatformVersion` satırları.	AI'ın önerdiği satırları doğrudan projeye ekledim, ancak `windows10.0.19041.0` ifadesini koruyarak proje uyumunu sürdürdüm.	Build hatasının sebebini SDK uyuşmazlığı olarak bulup çözdüm; proje tüm platformlarda (Win/mac) derlenebilir hale geldi.
ChatGPT-5	09.11.2025 21:10	"UI'ı son kez gözden geçirelim, renk uyumu, kontrast ve görsel hiyerarşi açısından hangi düzeltmeler yapılmalı?"	Renk kontrast kontrolü, yazı rengi/gölgelendirme, arka plan bütünlüğü ve `Aesthetic-Usability Effect` ilkesine göre öneriler.	`Color.FromArgb()` tabanlı palet, kontrast değerleri, `Margin` ve `Padding` düzenleri.	AI'ın önerdiği paleti test ettim; kontrastı optimize ettim ve yazı tiplerini sadeleştirerek görsel bütünlük sağladım.	UI'nın genel görünümünü sadeleştirip okunabilirliği artırdım. "Aesthetic-Usability Effect" ve "Gestalt Principles" yasalarını aktif şekilde uyguladım.
Claude 4.5 Sonnet	11.11.2025 19:45	"Final UI review: color harmony, contrast, visual hierarchy — check 10 UX Laws."	Hiyerarşi için başlık boyutu/kontrast önerileri; WCAG contrast check; yasa doğrulama listesi.	Kontrast kontrol checklist'i, Law → UI karşılığı tablosu.	Önerileri birebir uygularken paleti proje renklerine uyar boyutlarını ve spacing'i standardize ettim; "Clear All" içi ve sekonder tonlar ekledim; yasa eşleştirmelerini rapora bölümüne madde madde aktardım.	Son görsel rötuşları yaptım; buton dokunma alanlarını büyüttüm, metin kontrastını artırdım, seçenek sayısını sadeleştirdim ve 10 UX Law'ın her biri için projedeki somut karşılığına dair doğrulama notlarını rapora ekledim.