Egypt’s Trains Mobile Application

HCI Project
UI/UX Redesign

Egypt’s Trains

Team members

Name	ID	Section
اميرة خميس هنداوى خميس ابوسويد	2023050	C1
أسماء أحمد السيد محمد بهنسي عيسى	2023042	C1
اسراء فوزى السيد عبدالقادر	2023035	C1

Egypt's Trains – UI/UX Redesign

Project Analysis

1.Introduction

Egypt's Trains is a mobile application designed to help users search for train trips between different Egyptian cities. The application enables users to select departure and destination stations, choose train types, apply filters, and view available train options.

Although the application provides the required functionality, the original design suffers from multiple usability and interface issues that negatively affect the overall user experience. This project focuses on analyzing the application as a complete system and redesigning it using Human-Computer Interaction (HCI) principles to improve usability, clarity, efficiency, and user satisfaction.

2.Problem Statement

The original Egypt's Trains mobile application offers essential features; however, its overall design creates significant usability problems. Users face difficulties completing basic tasks due to an unclear user flow, weak visual hierarchy, poor information organization, and inefficient interaction design. The interface increases cognitive load, lacks clear guidance, and does not support a smooth end-to-end experience. As a result, users experience confusion, frustration, and reduced trust in the application.

3.Project Goals

The main goals of this redesign project are to:

- Improve overall usability and ease of use
- Provide a clear and complete user flow
- Reduce cognitive load and unnecessary user effort
- Enhance readability and information clarity
- Improve interaction efficiency
- Create an interface that feels easy and reliable to users

4.Overall Analysis of the Old Design

Analyzing the original version of the application as a complete system revealed several global usability issues:

• Incomplete User Flow

The application does not fully support an end-to-end user journey. Essential actions such as account creation, password recovery, and clear confirmation steps are missing, causing interruptions in the overall experience.

• Weak Visual Hierarchy

There is no clear distinction between primary actions, secondary actions, and informational content. Important elements are not visually emphasized, making it difficult for users to determine where to start or what to do next.

• High Cognitive Load

The interface presents too many elements simultaneously without proper grouping or prioritization, increasing mental effort and slowing task completion.

• Poor Information Organization

Content is spread across screens without clear organization, making it hard to read and compare.

• Inconsistent Language and Formatting

The use of mixed languages and inconsistent typography and data formats reduces clarity and professional appearance.

• Inefficient Interaction Design

Simple actions require multiple unnecessary steps due to inappropriate UI components, resulting in slow and frustrating interactions.

• Lack of Visual Guidance

The absence of icons, separators, and visual indicators reduces scanability and makes the interface harder to understand quickly.

• Poor Space Utilization

Some screens appear overcrowded while others contain excessive empty space, leading to an unbalanced layout.

These issues significantly reduce usability, increase user frustration, and reduce users trust in the application.

5. UI Improvements

The user interface was redesigned to improve visual clarity and consistency across the entire application:

- Establishing a clear visual hierarchy for headings, actions, and content
- Improving typography consistency and text readability
- Applying consistent colors and spacing across all screens
- Organizing content into clearly defined sections
- Improving alignment and layout balance
- Adding icons and visual separators to guide user attention

6.UX Improvements

User experience improvements focused on simplifying interaction and supporting efficient task completion:

- Supporting a complete end-to-end user journey
- Reducing the number of steps required to complete tasks

- Simplifying navigation and interaction patterns
- Providing clear feedback for user actions
- Improving learnability for first-time users
- Reducing confusion and user frustration during task execution

7.Design Methodology

The redesign follows a User-Centered Design approach based on HCI principles:

1. Analyzing the existing application to identify usability issues
2. Understanding user goals and expectations
3. Prioritizing essential actions and information
4. Simplifying layouts and interactions
5. Applying consistency across colors, typography, icons, and spacing
6. Improving navigation and feedback throughout the application

8.Overall Improvements in the Redesigned Application

The redesigned version of Egypt's Trains introduces improvements across the entire application, including clearer visual hierarchy, reduced cognitive load, improved information organization, more efficient interactions, better visual guidance, and balanced use of screen space.

9.HCI Principles Applied

- Visibility
- Consistency
- Feedback
- Cognitive Load Reduction
- Usability and Learnability

10.Conclusion

The Egypt's Trains redesign makes the app easier and more efficient to use. It fixes usability problems, organizes layouts clearly, improves visual hierarchy, and simplifies interactions, helping users complete tasks faster. This project shows how applying HCI principles can create a user-friendly design.