

Developing a Trip Planning Application with a Focus on People with Disabilities

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Reasoning

Mobile technologies are increasingly used to support independence and quality of life. In 2023, 63% of all global travel bookings were made via mobile platforms, and the number of downloads of travel apps increased by 13% compared to 2022.

However, not everybody can equally experience those apps. An estimated 1.3 billion people experience significant disability.

Accessibility ensures that individuals with limited vision, hearing, motor skills, or cognitive capabilities can interact with digital products effectively.

Object & Subject

OBJECT

Inclusive mobile
development

SUBJECT

Various tools and
methods to ensure the
principles of developing
an inclusive Android
travel planning
application

Goal & Tasks

GOAL

Filling the gap in the currently available resources designed to assist people with disabilities in enhancing their trip planning experience

TASKS

Studied current standards for digital accessibility



Conducted an analysis of travel planning applications



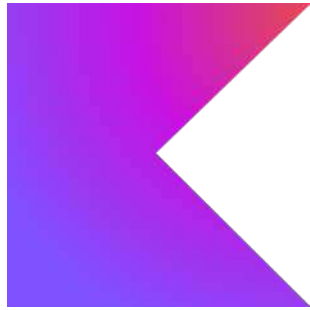
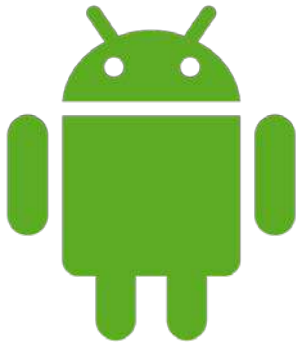
Developed an application ensuring compatibility with assistive technologies

Analysis of travel planning apps

	Tripadvisor	TripCase	Wanderlog	Triplt	Stipp	Funliday	Lambus
Small touch targets	✓	✓	✓		✓		✓
Insufficient colour contrast	✓		✓	✓	✓	✓	✓
Text size fixed in dp instead of sp				✓			✓
Missing labels and descriptions			✓			✓	✓
Poor labelling of feature status				✓			
Custom behaviour		✓			✓		
Focus on off-screen elements							✓
Duplicate content descriptions	✓						

- ✓ Issue is present in the app
- Visual perception barriers
- Motor and dexterity barriers
- Auditory and screen reader barriers

Technologies



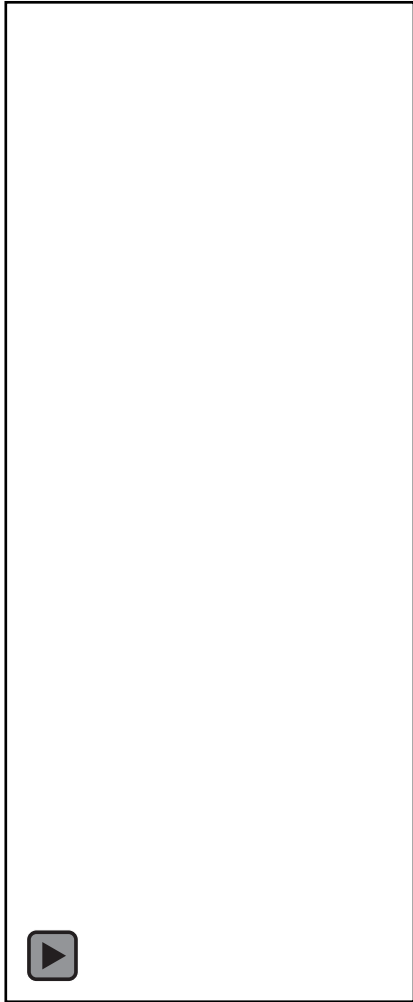
Functionality

TRIP CREATION AND MANAGEMENT

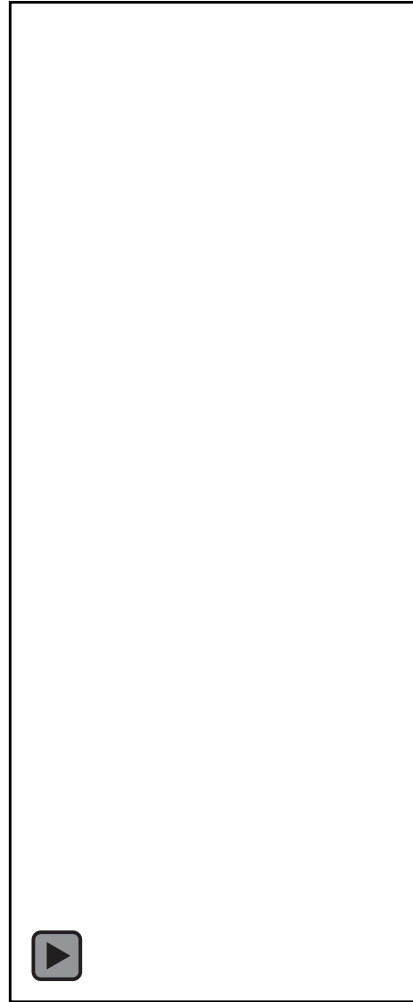
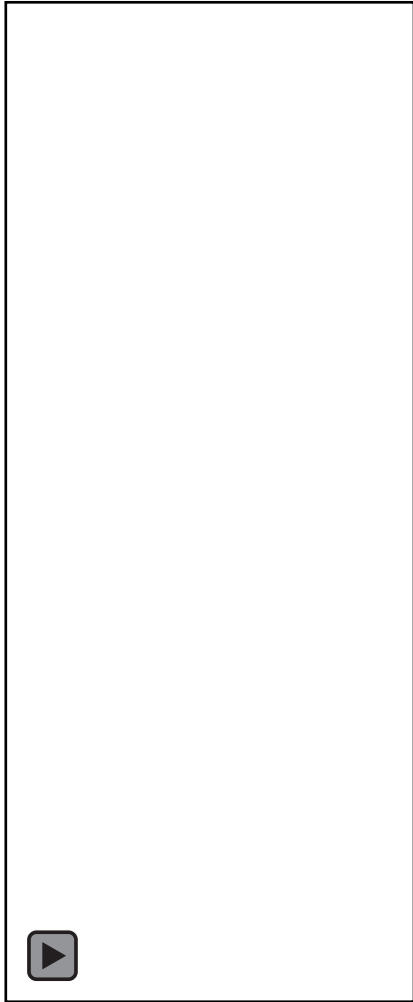
PACKING LIST MANAGEMENT

EVENT SCHEDULING

TICKET STORAGE



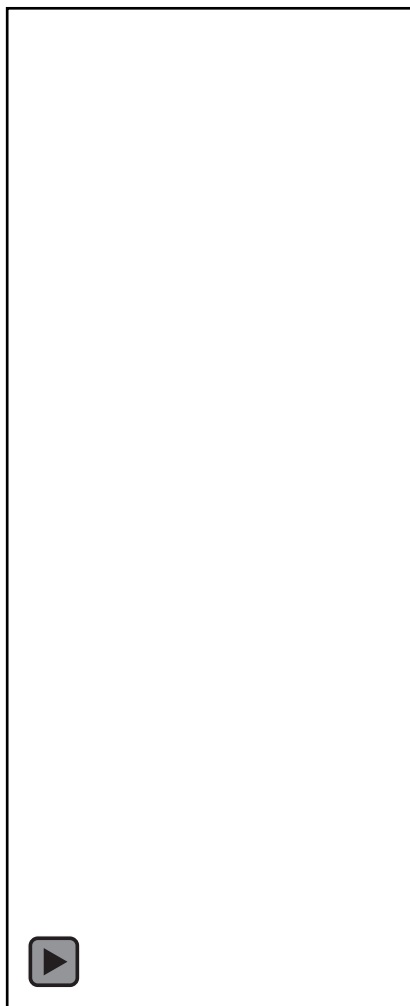
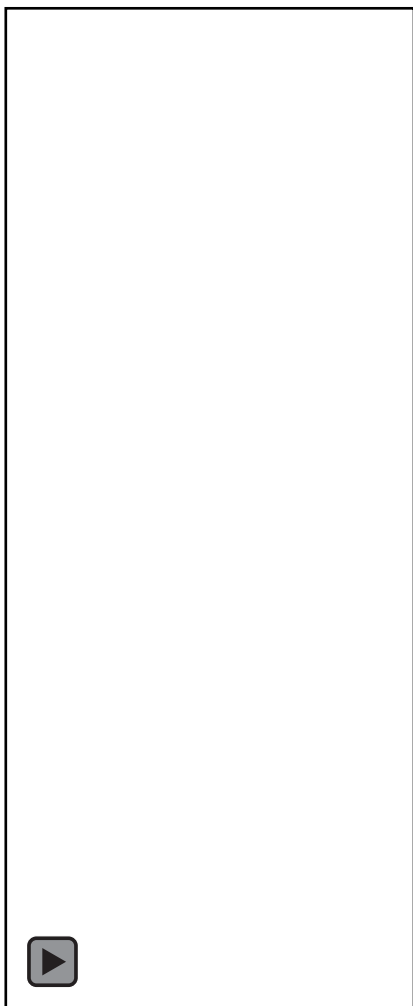
Trip Creation and Management



Packing List Management

Event Scheduling





Tickets Storage

Conclusions

The goal was achieved, as the gaps in available mobile applications was addressed.

The tasks were accomplished due to the following:

- Android travel planning applications were tested;
- accessibility issues were systemically identified;
- a travel planning application satisfying accessibility guidelines was developed.

The result of the research was a mobile application that enables people with disabilities to conveniently organize their journey and store necessary information in one place. This research demonstrates practical ways to implement digital accessibility principles in mobile solutions and can be used as a guideline for all mobile developers.

Thank you
