Applied User Interface Design Case Study

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Step 1 — Chosen Interfaces

For this case study, I selected two real and frequently used digital interfaces:

Interface	Platform	Description	Design Style
WhatsApp	Mobile messaging app	Used for instant communication through text, audio, video, and status updates.	Material Design
Spotify	Music streaming app	Allows users to stream, download, and organize songs and podcasts.	Flat Design / Minimalist

These two interfaces represent different interaction goals and design philosophies. WhatsApp focuses on communication clarity and fast interaction, while Spotify emphasizes visual engagement and emotional connection through music.

Step 2 — Deep UI Element Analysis

WhatsApp UI Elements

UI Element	Type	Purpose	Good Design Practice?
Chat Text Box	Input	Allows user to type messages	Yes
Send Button	Input	Sends typed message	Yes
Voice Note Button	Input	Records and sends audio	Yes

Chat List	Output	Displays active conversations	Yes	
Message Bubbles	Output	Displays messages from both users	Yes	
Notification Badge	Output	Shows unread messages	Yes	
Search Bar	Input	Finds messages or contacts	Yes	
Status Section	Output	Displays temporary updates	Partial	

Spotify UI Elements

UI Element	Type	Purpose	Good Design Practice?
Play Button	Input	Starts or pauses music	Yes
Progress Slider	Input	Seeks within song	Partial
Volume Control	Input	Adjusts sound level	Yes
Album Art	Output	Displays song artwork	Yes
Playlist Titles	Output	Shows track list	Yes
Search Bar	Input	Finds songs/artists	Yes
Library Tabs	Helper	Navigate between Playlists, Albums, Artists	Yes

Shuffle & Repeat Buttons	Input	Controls playback mode	Partial
Now Playing Bar	Output	Shows currently playing track	Yes

Step 3 — Principles Evaluation

WhatsApp

Principle	Application	Example
Hierarchy	Primary actions (Send, Call) are emphasized using color contrast.	Green color indicates primary action.
Consistency	Uniform icon design across Android/iOS.	Message icons and colors remain constant.
Contrast	White and green provide excellent legibility.	Message bubbles have clear differentiation.
Alignment	Elements are grid-aligned; messages align left/right by sender.	Clean chat flow.
Proximity	Related actions are grouped (text box + send button).	Enhances usability.
Accessibility	Some icons may be small for users with motor issues.	Could benefit from larger tappable areas.
Feedback	Haptic and visual cues when sending/receiving messages.	Double-tick and blue ticks show delivery/read status.

Spotify

Principle	Application	Example
Hierarchy	Play button large and centered; clear focal point.	Immediate recognition.

Consistency		Icons, colors, and typography consistent throughout.	Cohesive brand experience.
Contrast		Dark theme reduces visibility in bright light.	Needs better contrast for accessibility.
Alignment		Balanced use of whitespace; centered album art.	Clean minimal layout.
Proximity		Grouped controls under Now Playing bar.	Logical structure aids learnability.
Accessibility		Small sliders for volume and progress.	Could improve for low dexterity users.
Feedback		Animated transitions when starting or pausing songs.	Reinforces interactivity.

Step 4 — Design Style Analysis

Feature	WhatsApp (Material Design)	Spotify (Flat Design)
Shadows & Depth	Uses elevation and shadows to indicate hierarchy.	Flat layers, minimal shadows.
Color Palette	High-contrast green and white.	Muted dark tones with green accent.
Usability Impact	Strong visual cues enhance discoverability.	Clean visuals reduce cognitive load but may hide affordances.
Performance Impact	Slightly heavier (uses elevation/shadows).	Faster loading due to minimalism.
Visual Clarity	Strong separation of sections.	More aesthetic but occasionally ambiguous.

Material Design (WhatsApp) prioritizes clarity and accessibility. Flat design (Spotify) emphasizes elegance and simplicity. Overall, WhatsApp is more user-friendly for alot users because it communicates hierarchy and feedback more clearly.

Step 5 — Redesign Challenge

Chosen App: Spotify

Issue	Redesign Proposal	Justification
Low contrast icons	Use brighter green for active icons and subtle animation	Improves feedback and visibility
Small slider	Thicken progress bar and enlarge drag handle	Enhances accessibility and motor usability
Hidden download	Add a download icon near the play button	Increases discoverability and efficiency

The redesigned 'Now Playing' screen features a thicker white progress bar, larger playback icons with clearer contrast, and a visible download icon placed beside the heart button. The layout remains minimal but more accessible.

Step 6 — Reflection & Accessibility Review

Through this analysis, I learned that good interface design is not only about aesthetics but also communication. Small details like spacing, color contrast, and immediate feedback dramatically affect usability.

Designing for accessibility—such as users with visual or motor impairments—changes how we prioritize features. A small button or low-contrast icon may look elegant but excludes certain users.

In a nut shell, my redesigned Spotify screen could include a high-contrast mode toggle for visually impaired users, and use larger touch targets to accommodate people with motor difficulties. This project strengthened my understanding that accessible design equals better design for everyone.

References

Google Material Design Guidelines: https://m3.material.io
Spotify Design System: https://spotify.design
WCAG 2.1 Accessibility Principles: https://www.w3.org/WAI/