

Standards and Assessment Guide

Mobile Applications Development

Introduction

Welcome to the Standards and Assessment Guide (SAG), a comprehensive resource designed to support excellence in assessment practices for all skills competitions hosted at the WorldSkills Competition. A key component of the SAG is the commitment to continuous improvement through ongoing review, ensuring that these guides consistently reflect the latest industry innovations and high standards of assessment in an open and transparent manner.

Purpose

The primary purpose of this guide is to provide a structured framework for the consistent and fair assessment of each skill competition. It aims to ensure that all assessments are conducted with a high degree of accuracy, reliability, validity, and reflect global industry standards. By adhering to these guidelines, assessors can maintain the integrity of the competition and uphold the high standards associated with WorldSkills.

Note: this guide is not a replacement for the Marking Scheme and should only be used as a reference when required during the assessment process. Competitors are not allowed to have a copy of this SAG in the workshop in either digital or paper form.

Scope

This document covers general assessment practices applicable to a diverse range of industry sectors including:

- Manufacturing and Engineering Technology
- Information and Communication Technology
- Construction and Building Technology
- Transportation and Logistics
- Social and Personal Services
- Creative Arts and Fashion

Each skill competition has its unique requirements and benchmarks, which are detailed within sections of this guide. The consistency of assessment across each skill is the overarching principle, ensuring a unified approach to evaluating Competitor performance to the highest standards.

Key Components

The guide is structured into several key components, each addressing critical aspects of the assessment process:

Assessment Principles and Objectives

- Emphasis on fairness, transparency, and objectivity in assessments.
- Alignment with global industry standards and best practices.

Assessment Methods and Tools

- Description of various assessment methods in Measurement and Judgement.
- Guidance on the application of appropriate assessment tools and equipment (if applicable).

Criteria and Benchmarks

- Examples of assessment criteria and aspects for each skill, outlining the expected competencies and performance standards.
- Benchmarks for different levels of proficiency i.e. Judgement award range 0, 1, 2, 3 or Yes/No criteria alongside clear measurable descriptors.

Expert assessment requirements

- Completion of the Access Programme.
- Approved Curriculum Vitae (CV).
- Reaching **100%** Expert preparedness.
- Full participation of online and in-person Mandatory Assessment Training (MAT).
- Completion of practical assessment testing at the Competition.

Quality Assurance and Improvement

- Monitoring and evaluation: Ensuring assessments are carried out correctly and produce reliable results.
- Continuous improvement: Using feedback from Experts and Skill Competition Managers to enhance future assessments.
- Periodic review: Regularly updating processes to reflect current industry and WorldSkills standards.

Implementation

For effective implementation, this guide should be used for guidance purposes only and in parallel with the Technical Description for each skill. Experts are encouraged to familiarize themselves thoroughly with both the general guidelines and the particular requirements of their respective skill areas. Collaborative efforts between the Skill Management Team, Experts, and Competitors are vital for achieving the ultimate goal of global skills development.

Conclusion

The Standards and Assessment Guide embodies the commitment of the WorldSkills movement to nurturing talent and promoting the highest standards of vocational education and training worldwide. By providing clear and comprehensive guidance, we aim to empower Experts to conduct marking and assessment practices that are not only rigorous and equitable but also inspiring and transformative for all participants.

Thank you for your dedication to upholding these standards and contributing to the success of the WorldSkills Competition. Together, we can continue to champion skills excellence and celebrate the achievements of talented individuals from around the globe.

Skill 08 – Mobile Applications Development

Measurement

Measurement is used to assess accuracy, precision, and other performance that can be measured objectively. It is used where ambiguity must be avoided. The total marks allocated to measurement marking may vary from competition to competition depending on the Test Project. Measurement is used to assess accuracy, precision, and other performance that can be measured objectively. It is used where ambiguity must be avoided

- The total marks over the 4 modules are 90.
- Measurement marking in TOTAL is 90% of the overall score.

Aspect	WSOS section as per TD	Question	Descriptor	Points/marks
Configure the project for production according to the user requirement	02	Set the project bundle identifier / package name to “com.worldskills.app”.	The bundle identifier is set correctly according to the given identifier.	1
Use of version control system	03	The competitor is provided with a remote git repository with credential information, which the competitor needs to push the application project to the Git repository	The project is pushed to the given repository successfully.	1
The size, shape, colour and other styles of the login button are consistent with the wireframe.	05	The competitor is provided with a wireframe that he/she needs to follow. According to the description of the Test Project, the competitor needs to make the login button the same as the wireframe.	Deduct 0.5 for each difference 0.5	2

Click the filter icon, corresponding product information is shown accordingly.	05	The competitor is provided with the product data, and each product corresponds to a category. Click the filter icon, only the corresponding product information should be shown.	Need to be completely correct.	2
Correct use of the App entry icon	05	The competitor is provided with the icon in a specific format as the development material, which the competitor needs to apply the material to the App as its entry icon.	The use of icon in the App is consistent with the Test Project.	2
State persistence	05	After navigating between pages or returning to the previous screen, the application should maintain the previously selected state or user input according to the Test Project requirements.	Any loss or incorrect restoration of state will result in deduction of 1 mark.	2
Input validation	05	The application must validate required user input fields and prevent submission when mandatory information is missing or invalid.	Missing validation or incorrect handling of invalid input deducts 0.5 per case.	2
Feature completeness	05	All functional requirements defined in the Test Project for the specified module must be fully implemented and accessible.	Each missing or non-functional required feature deducts 1 mark.	2
Orientation Lock according to the Test Project	05	Configure the application to lock the screen orientation according to the Test Project requirement. The required orientation may be portrait-only or landscape-only depending on the module.	The application remains locked to the required orientation when the emulator or device is rotated. No mark is awarded if the application rotates to an orientation not allowed by the Test Project.	0.5

Interactive Navigation Routing	05	Configure the 4 Bottom Navigation Bar items to route the user to the required pages specified in the Test Project, such as "Home", "Explore", "Tickets", and "User".	Deduct 0.4 mark for each navigation item that routes to an incorrect target page.	1.6
Implement animation via programming.	06	Apply a typewriter effect on the title "My App".	Need to be completely correct	1
Implement automated test	06	Write an automated UI test to validate the interaction of a switch. 1. Trigger a click on the switch, validate if the statusLabel is set to "on" 2. Trigger another click on the switch, validate if the statusLabel is set to "off"	Deduct 1 mark for each missing steps.	2
Case-Insensitive Search	06	Implement a search function that filters results regardless of character case. For example, searching "paris", "Paris", or "PARIS" must return the same matching results when the data contains "Paris".	Search results are returned correctly regardless of uppercase or lowercase input. No mark is awarded if search results differ only because of character case.	0.5
Password Masking	06	Set the password input field so that entered characters are masked by default using dots, asterisks, or the platform-standard secure text display.	Password characters are masked by default and are not displayed as plain text. No mark is awarded if the password is visible as plain text by default.	0.4
Map Marker Positioning Accuracy	06	Place exactly 5 map markers using the latitude and longitude values provided in the data. Each marker must be displayed at the correct location and must correspond to the correct data item.	Deduct 0.2 mark for each missing marker, extra marker, or incorrectly positioned marker.	1.0

Automatic Banner Carousel	06	Implement an automatic image banner carousel that displays at least 3 images and changes to the next image every 2 seconds. The carousel must continue looping after the last image.	The banner automatically changes images at the specified 2-second interval and loops continuously. No mark is awarded if the carousel does not auto-play or does not loop.	1.0
Real-time Email Validation Feedback	06	Show an inline validation message immediately when the email input value does not match the required email format before form submission. The error message must disappear when the input becomes valid.	Validation is triggered during input, and the error message appears and disappears correctly according to the email format. No mark is awarded if validation is performed only after submission.	0.5
Multi-language Switching	06	Provide a language switch that changes the app interface between English and the provided language or languages without restarting the application.	Deduct 0.2 mark for each static text element that does not update to the selected language.	1.0
Screen Recording and Video Saving	06	If the Test Project requires screen recording, start and stop recording at the specified events. The video must be playable and saved to the gallery.	Deduct 2.0 marks (Score 0) if the video is not saved to the system gallery or the specified storage location. Deduct 1.0 mark if the video is saved but cannot be played. Deduct 0.5 mark for each timing error (wrong start/stop event).	2.0

System Clipboard Copy	06	When the required copy control is selected, copy the exact text specified in the Test Project or selected by the user to the system clipboard. The copied text must be available for pasting into another application or input field.	Deduct 0.5 mark if the copied text is incorrect. No mark is awarded if the system clipboard is not updated.	1.0
Swipe Action on List Items	06	When the Test Project requires a swipe action on a list item, such as delete, archive, mark as read, or remove from favorites, the swipe gesture must trigger the correct action only on the selected item. Other list items must remain unchanged.	Deduct 0.5 mark per case for a missing swipe action, incorrect action, or unintended change to another list item.	2.0
Search Result Highlighting	06	Highlight the matching substring within each search result using a visually distinct style, such as a different colour, bold weight, or background highlight.	Matching substrings are visually distinguishable in the search results. No mark is awarded if search results are filtered but the matching text is not highlighted.	0.5

Judgement

Judgement is used to assess the quality of performance about which there may be small differences of view when applying the external benchmarks.

The Resources section in the table below is for all kind of resources: a link to a YouTube video or a website, a picture, a reference to a book, etc. It needs to be as detailed as possible.

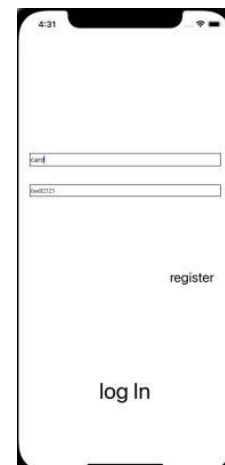
Generic rules:

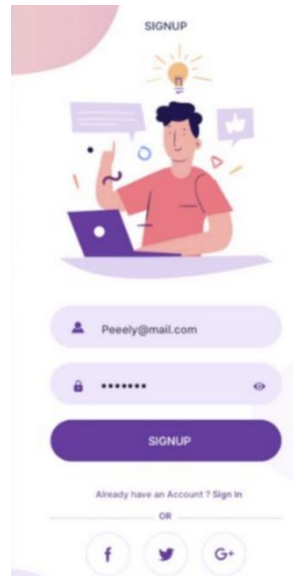
The assessment group comprises three Experts + 1 Expert. It is forbidden for Experts to assess their own compatriot Competitor.

The deviation of the three Experts may not exceed a score of ONE: As long as the three Experts judge within 1 score, the result can be determined for entering into CIS. If Experts have a larger deviation than 1, there must be brief discussion referenced to the descriptors, and a new vote.

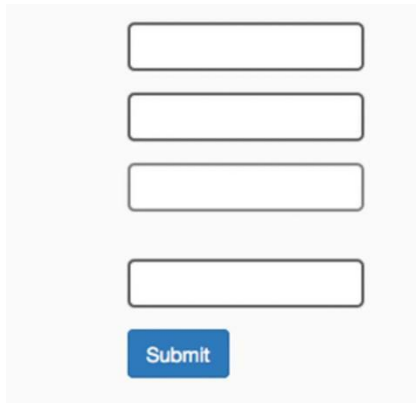
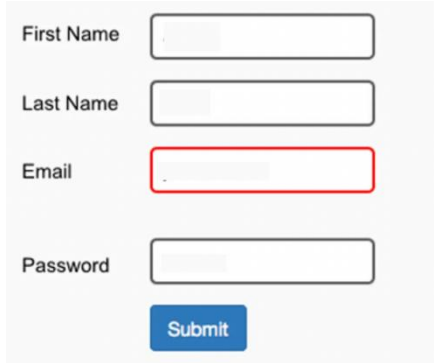
- The total marks over the 4 modules are 10.
- Judgemental marking in TOTAL is 10% of the overall marks.

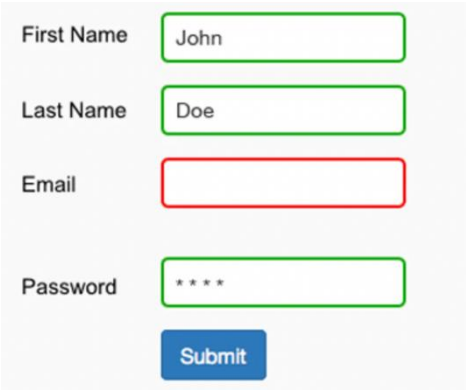
Aspect – Login and Registration Page Design

WSOS section as per TD	Score	Descriptor	Resource
03	0	It looks like it is not designed, and some necessary elements are missing. For example: no login button on the login page; the registration page is lack of required interface elements.	
	1	The basic elements of the login & registration page meet the fundamental requirements of the Test Project. For example: the login page has ID, password, login button elements; the registration page has ID, password, repeat password, button elements	

	2	Meet the objective requirements of the login & registration page and adds some thoughts on convenient operations. For example: Facebook login is added to the login page, and practical elements such as the check box to remember the password are added.	 A login page design mockup featuring a white background. At the top, there are two input fields: 'Username or email' and 'Password'. Below the 'Password' field is a 'Remember me' checkbox and a 'LOGIN' button. Links for 'Register now' and 'Forgot password?' are positioned below the login button. A separator line with the word 'or' is followed by three social login buttons: 'LOGIN WITH FACEBOOK' (blue), 'LOGIN WITH TWITTER' (light blue), and 'LOGIN WITH GOOGLE' (red).
	3	The login & registration page is of delicate quality and unique style. For example: the page effect is amazing	 A signup page design mockup with a light purple and white color scheme. It features an illustration of a person at a laptop with a lightbulb above their head. Below the illustration are input fields for 'Email' (containing 'Peely@mail.com') and 'Password' (masked with asterisks). A prominent purple 'SIGNUP' button is centered below these fields. At the bottom, there is a link 'Already have an Account ? Sign In' and social login icons for Facebook, Twitter, and Google+.

Aspect – App Usability

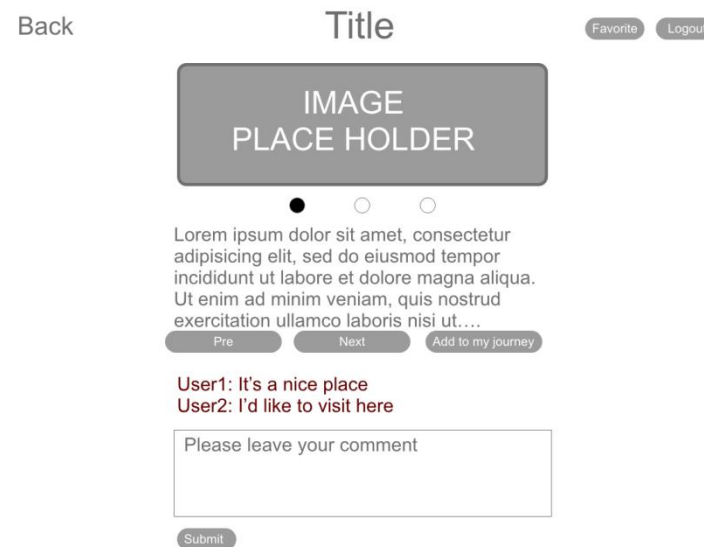
WSOS section as per TD	Score	Descriptor	Resource
03	0	Registration function is not usable	
	1	Registration function is barely usable	

	2	Registration function is complete	 First Name John Last Name Doe Email Password **** Submit
	3	Registration function is completed, and the user experience is very good	 First Name John ✓ Last Name Doe ✓ Email john@email ✗ please enter a valid email Password **** ✓ Submit

Aspect – The overall visual design of Figma / Adobe XD works, every page has got some design improvement

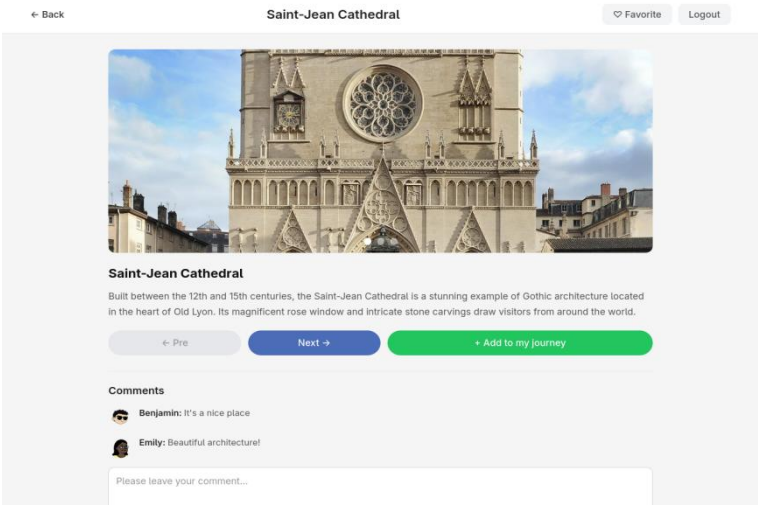
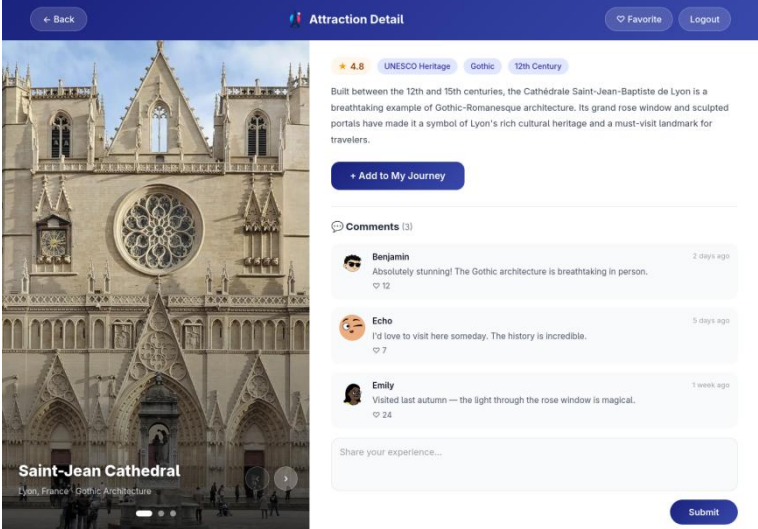
In the Design Module, the Test Project specifies:

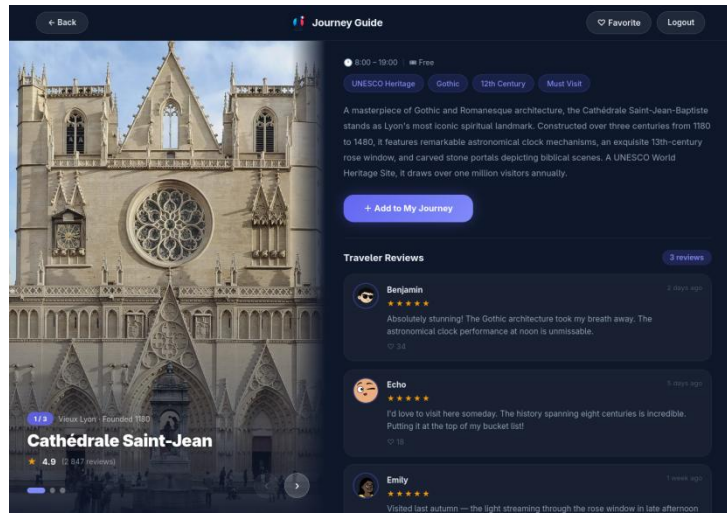
- Every page needs design improvement.
- You can change the text in the wireframes or media-files.
- You can change the icon inside the wireframes.
- You can add additional reasonable elements and interactions as needed based on your design.



Experts must assess the Competitors' designs. Did they just copy the provided wireframes, or did they improve upon them? Did they choose a pleasing colour scheme and typography? Did they improve upon the elements' positions and spacing? Are the pages they designed consistent with each other? Are they visually appealing? Do they fit the theme of the project?

WSOS section as per TD	Score	Descriptor	Resource
04	0	Almost no visual design, similar to wireframes	Back Title Favorite Logout  • ○ ○ Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut... Pre Next Add to my journey User1: It's a nice place User2: I'd like to visit here User3: Beautiful architecture! Please leave your comment Submit

	1	There are certain visual design optimizations.	
	2	The optimization of visual elements such as colour matching, button design, and content layout has effectively improved the effect of the overall prototype map.	

	3	I was impressed by the exquisite design of the high-precision prototypes.	
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Aspect – The experience of using Figma / Adobe XD works

In the Design Module, the Test Project specifies:

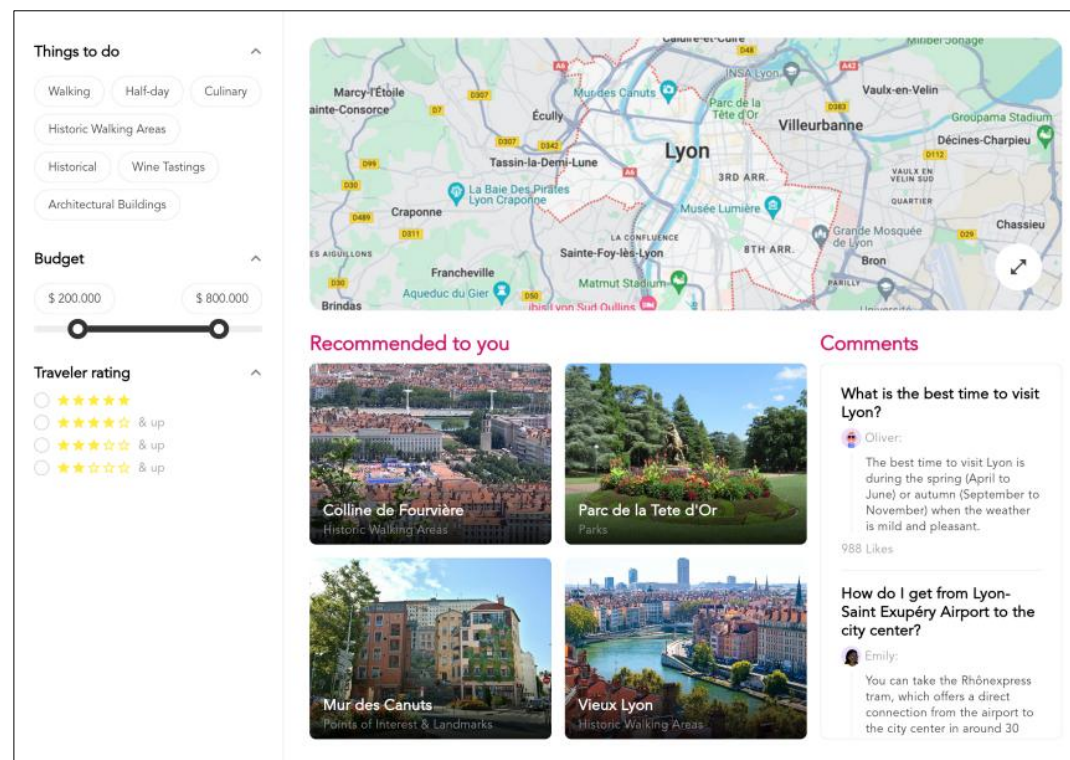
- Ensure that all pages are properly linked together.”
- You should add at least one new page to enrich the App’s theme. The content of the page is up to you, and the entry to the page should be in the User page.”
- You can add additional reasonable elements and interactions as needed based on your design.

Experts must assess the quality and completeness of the interactive prototype, not the visual design itself. Is prototype mode configured correctly, and can users navigate between different pages of the app by clicking on the corresponding buttons?

WSOS section as per TD	Score	Descriptor	Resource
04	0	Figma / Adobe XD works cannot be previewed	The prototype cannot be used or previewed. Prototype mode is not configured, Links are missing or the file is broken.
	1	The operation expectations of Figma / Adobe XD works are consistent with the title,	The prototype functions as expected based on the screens provided. Navigation and interactions match the intended purpose of the app. For example, tapping “Settings” opens the settings screen, buttons behave logically, etc.
	2	Figma / Adobe XD works added new pages and page elements.	The Competitor went beyond the supplied wireframes and added additional screens or UI components. Examples: adding a help screen, onboarding screen, empty-state screens, confirmation dialogs, loading states, etc.
	3	The newly added pages and page elements of Figma / Adobe XD works can effectively improve the operation experience of the works.	The additional screens/components genuinely improve usability, not just presence for its own sake. Examples: a post-purchase confirmation screen, error handling, a better onboarding flow, contextual navigation, or micro-interactions that make the app easier to use

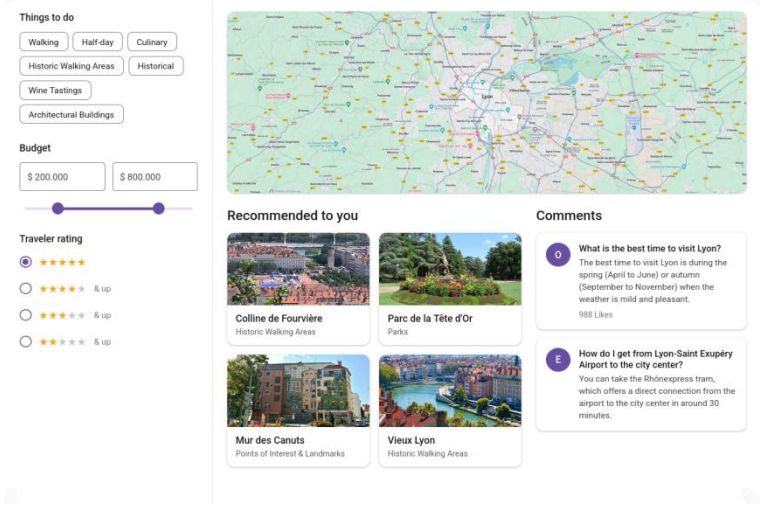
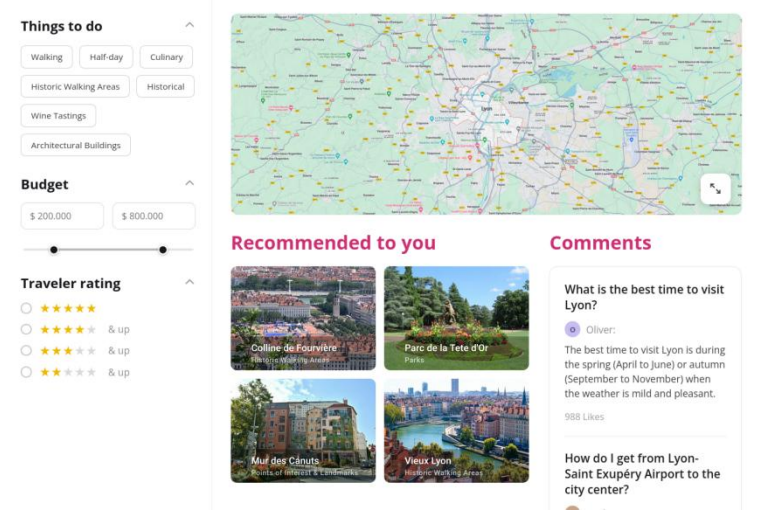
Aspect – Quality of Layout

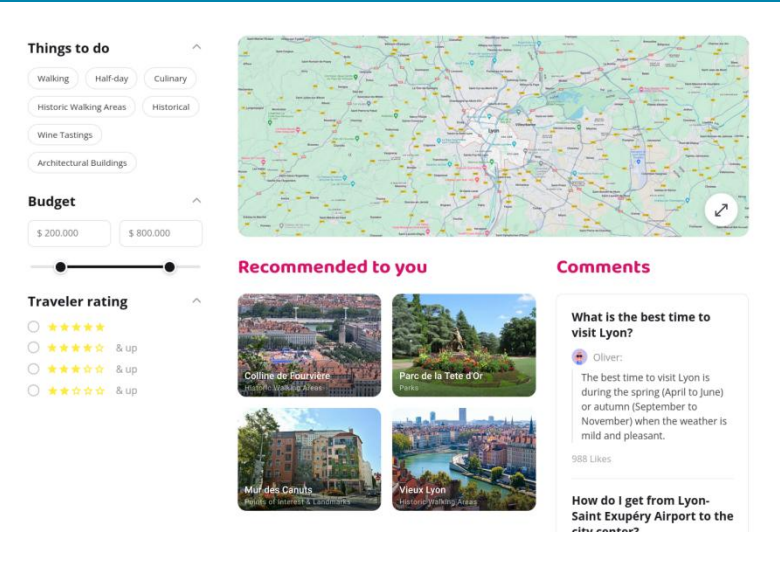
In the Implement Module, the Test Project specifies: “The appearance must strictly follow the details of the prototype.”



Experts must assess how much the submission differs visually from the provided mock-ups. Did the Competitor use the same colours, fonts and icons? Did they place elements at the same position with the same spacing? Are styles like text size, font weight, borders and corner radii the same?

WSOS section as per TD	Score	Descriptor	Resource
04	0	The colours, positions, or styles of various page elements differ greatly from the provided prototypes.	Things to do Walking Half-day Culinary Historic Walking Areas Historical Wine Tastings Architectural Buildings Budget \$ 200.000 \$ 800.000 Traveler rating ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐  Recommended to you     Comments What is the best time to visit Lyon? Oliver: The best time to visit Lyon is during the spring (April to June) or autumn (September to November) when the weather is mild and pleasant. 988 Likes How do I get from Lyon-Saint Exupéry Airport to the city center? Emily: You can take the Rhônexpress tram, which offers a direct connection from the airport to the city center in around 30 minutes. 1189 Likes

1	There are differences in the colours, positions, or styles of some page elements compared to the provided prototypes.	
2	The colours, positions, or styles of various page elements are similar to the provided prototypes.	

	3	The colours, positions, or styles of the page elements and fonts are nearly identical to the provided prototypes	
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Aspect – Quality of Animation

In the Implement Module, the Test Project specifies: “All animation effects should be developed to match those shown in the videos.”



Experts must assess how much the submission differs visually from the provided videos. Does the animation contain all elements and take the same duration? Do the elements move/appear/disappear in the correct order, with the correct position/size/direction?

Videos of the animations: <https://cloud.blz-it.de/s/QqPWEPCrt4r4nnk>

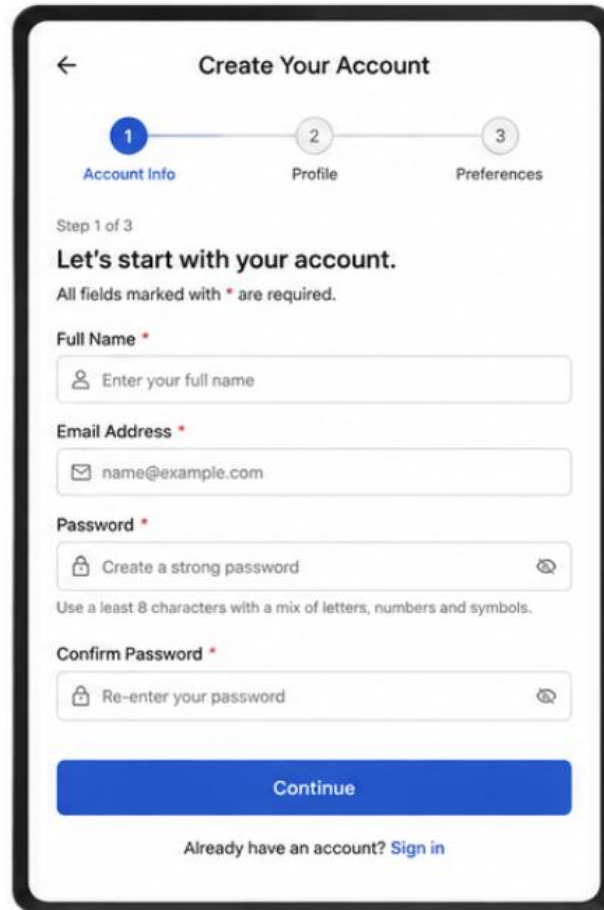
WSOS section as per TD	Score	Descriptor	Resource
04	0	Did not complete any animation effects (No video included)	

	1	Part of animations completed or some effects are flawed	
	2	All animations completed, and the effects are close to the provided videos	

	3	All animations completed, and the effects are the same as the provided videos	
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Aspect – Form Completion Experience

Does the form provide a clear, logical, and efficient input experience through proper field hierarchy, grouping, validation feedback, and submission flow?



← Create Your Account

1 2 3
Account Info Profile Preferences

Step 1 of 3

Let's start with your account.

All fields marked with * are required.

Full Name *

Enter your full name

Email Address *

name@example.com

Password *

Create a strong password

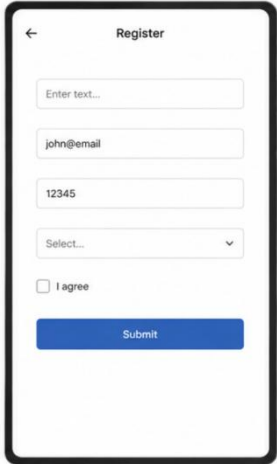
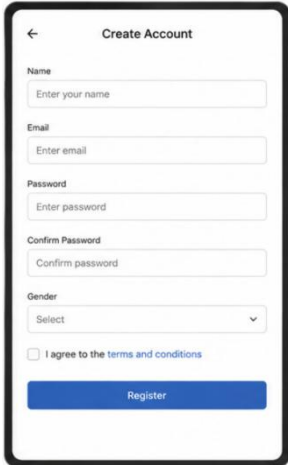
Use a least 8 characters with a mix of letters, numbers and symbols.

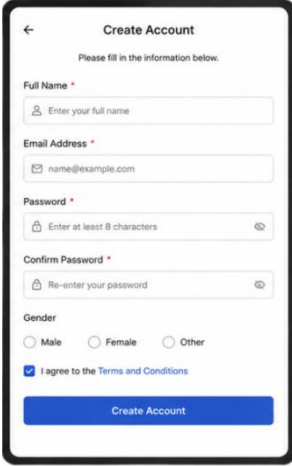
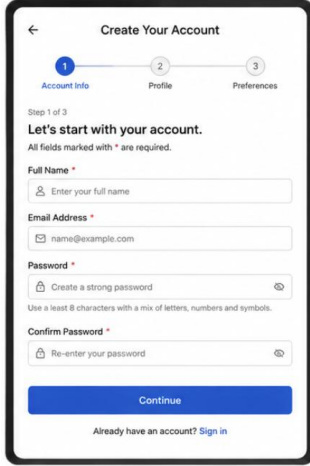
Confirm Password *

Re-enter your password

Continue

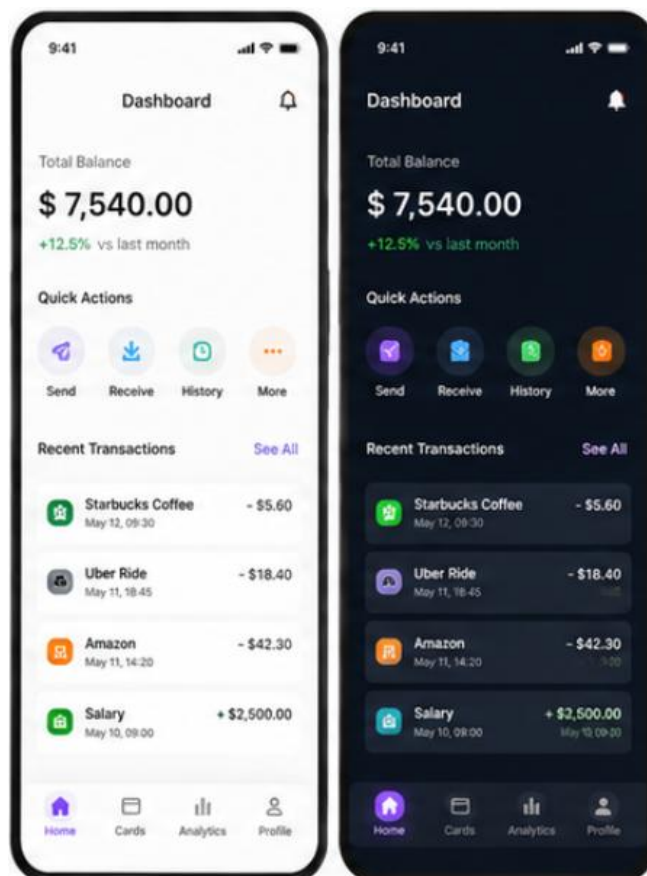
Already have an account? [Sign in](#)

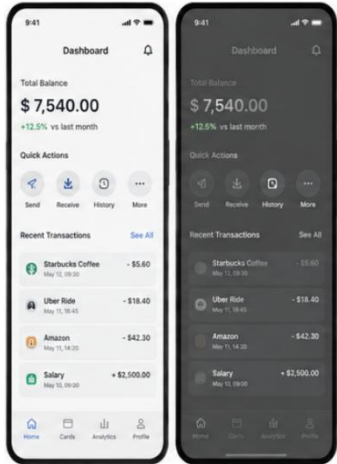
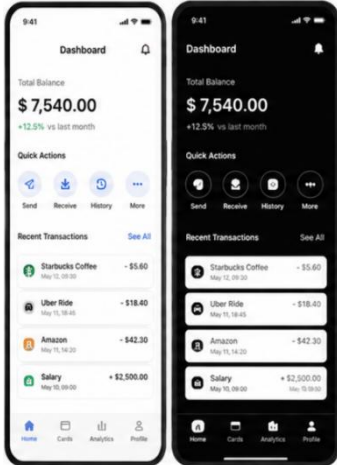
WSOS section as per TD	Score	Descriptor	Resource
05	0	Forms are difficult to use. Input fields, labels, buttons, or validation messages are missing or placed in a confusing way.	 A mobile app mockup of a 'Register' form. It features a back arrow, a title 'Register', and input fields for text, email (pre-filled with 'john@email'), a numeric field (pre-filled with '12345'), and a dropdown menu labeled 'Select...'. Below these is an unchecked checkbox for 'I agree' and a blue 'Submit' button.
	1	Required form elements are present, but the order, grouping, or guidance is weak. Users may not know what information is required.	 A mobile app mockup of a 'Create Account' form. It features a back arrow, a title 'Create Account', and input fields for Name, Email, Password, and Confirm Password. Below these is a dropdown menu labeled 'Gender' with 'Select' as the current selection. At the bottom is an unchecked checkbox for 'I agree to the terms and conditions' and a blue 'Register' button.

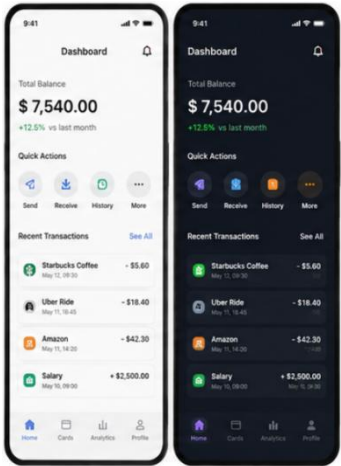
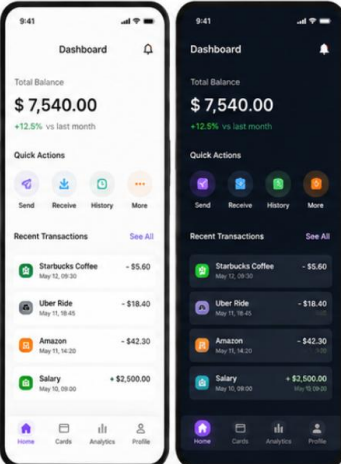
	2	Forms are mostly clear and usable. Labels, placeholders, required fields, and submit actions are understandable.	
	3	Forms are efficient and user-friendly. Field order, grouping, validation guidance, and submission flow reduce user mistakes and effort.	

Aspect: Aesthetic Balance of Dark Mode Palette

Does the dark mode palette maintain readability, visual accessibility, and brand identity while applying appropriate contrast, colour hierarchy, and depth?

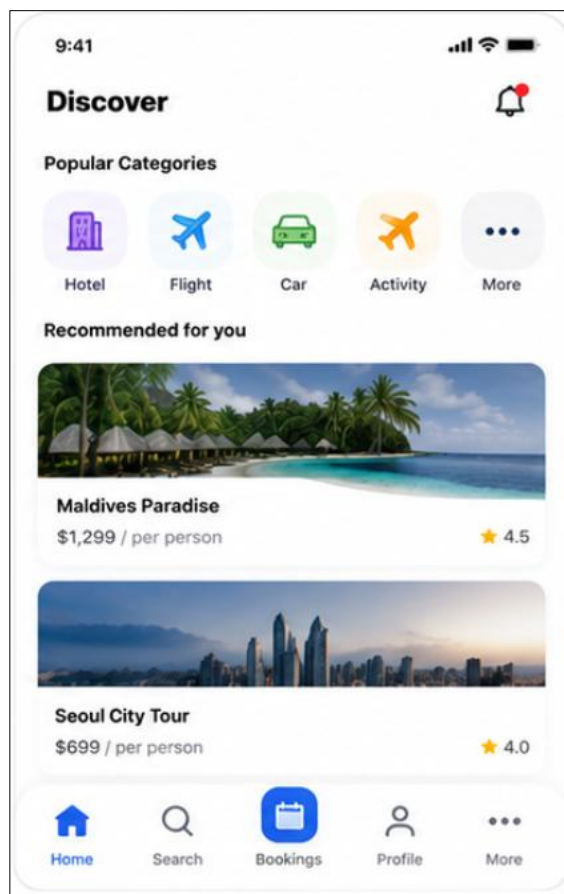


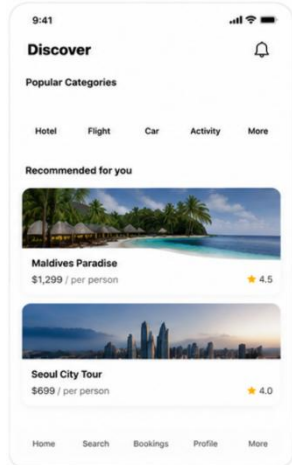
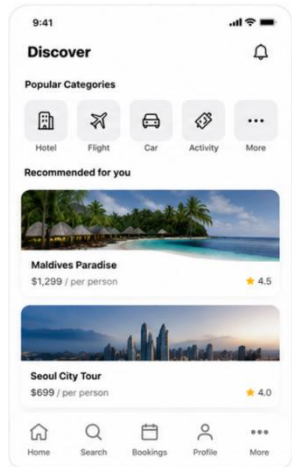
WSOS section as per TD	Score	Descriptor	Resource
04	0	The dark theme has poor contrast, weak semantic colour usage, or inappropriate background tones. Text, icons, and key UI components are difficult to perceive.	
	1	Dark mode is implemented mainly through basic colour inversion. It is usable, but colour tokens, contrast hierarchy, elevation, and brand consistency are not well refined.	

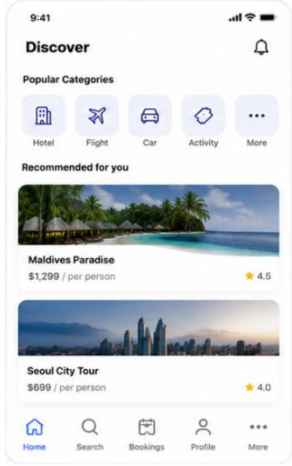
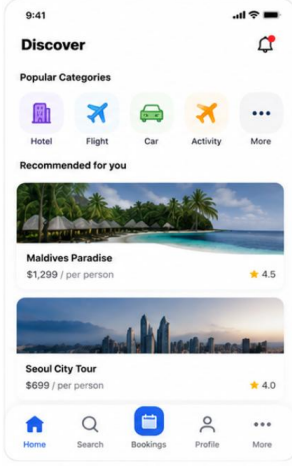
	2	The dark theme is generally refined. Background layers, text contrast, semantic colours, and accent colours are adjusted to reduce eye strain while maintaining the app identity.	
	3	Dark mode provides excellent visual accessibility and aesthetic balance. Contrast ratio, colour hierarchy, elevation, depth, and brand accents are harmonized across the entire interface.	

Aspect: Consistency of Iconography and Asset Style

Do the icons and graphical assets follow a consistent visual system that supports navigation, content meaning, and product identity?

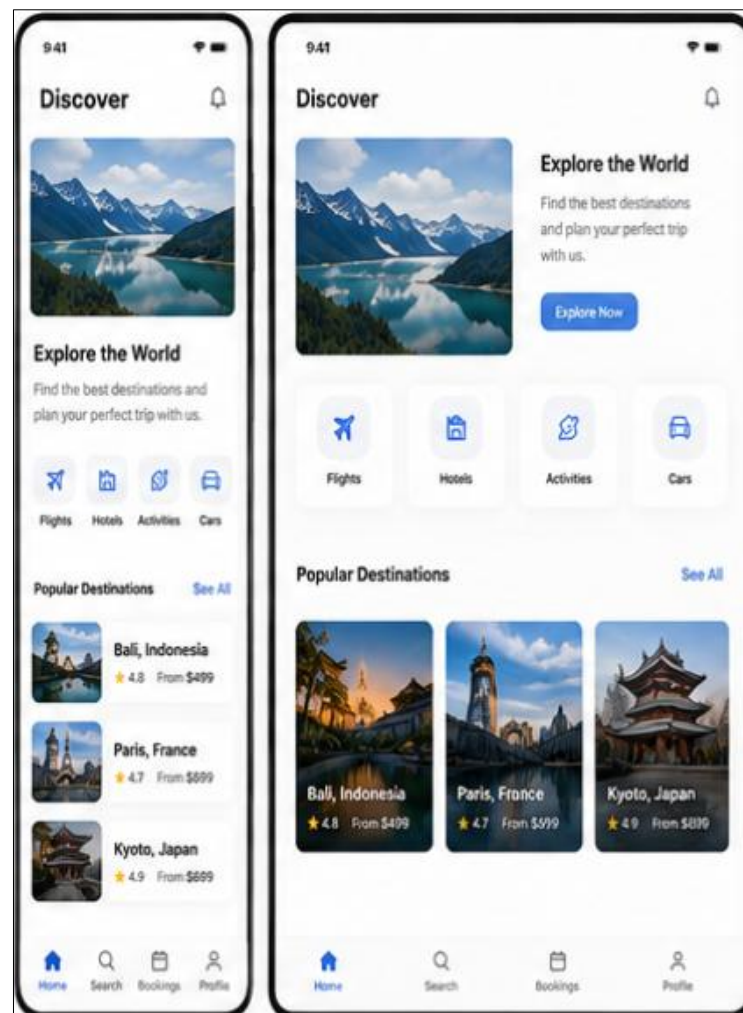


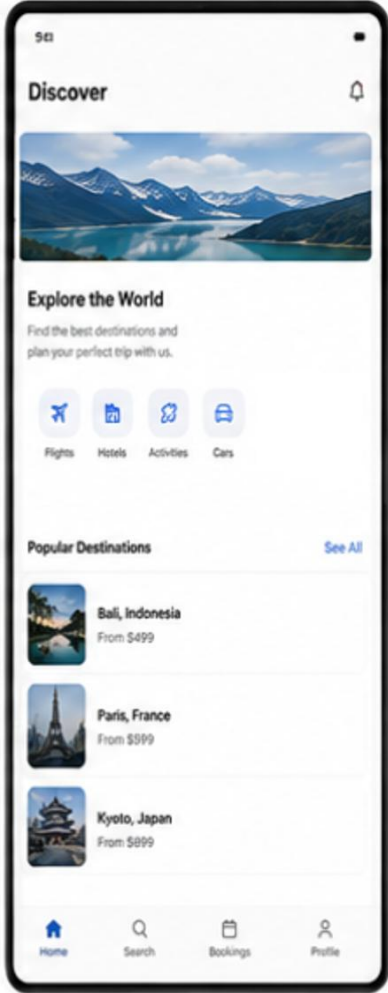
WSOS section as per TD	Score	Descriptor	Resource
04	0	Icons or visual assets are missing, mismatched, or visually inconsistent. The interface lacks a coherent icon system or asset language.	
	1	Icons and assets are placed, but they are used without refinement. Stroke weight, optical size, corner radius, fill style, or visual density is inconsistent.	

	2	Icons and assets are mostly consistent. Stroke weight, icon grid, corner radius, spacing, visual tone, and selected states are adjusted to fit the app style.	
	3	The iconography and asset system establishes a strong product identity. Custom or carefully refined assets are consistently applied with clear visual semantics, active states, and brand alignment.	

Aspect: Visual Balance of Adaptive Layout on Multi-Devices

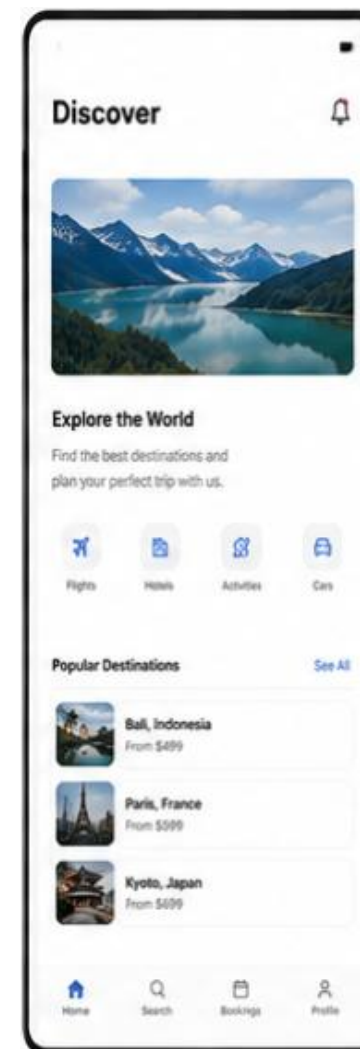
Does the layout adapt appropriately across phone and tablet screens by reorganizing spacing, grid structure, hierarchy, and interaction patterns according to device characteristics?



WSOS section as per TD	Score	Descriptor	Resource
05	0	The layout breaks across device sizes or orientations. Content is clipped, overlapped, misaligned, or difficult to operate on phone or tablet screens.	

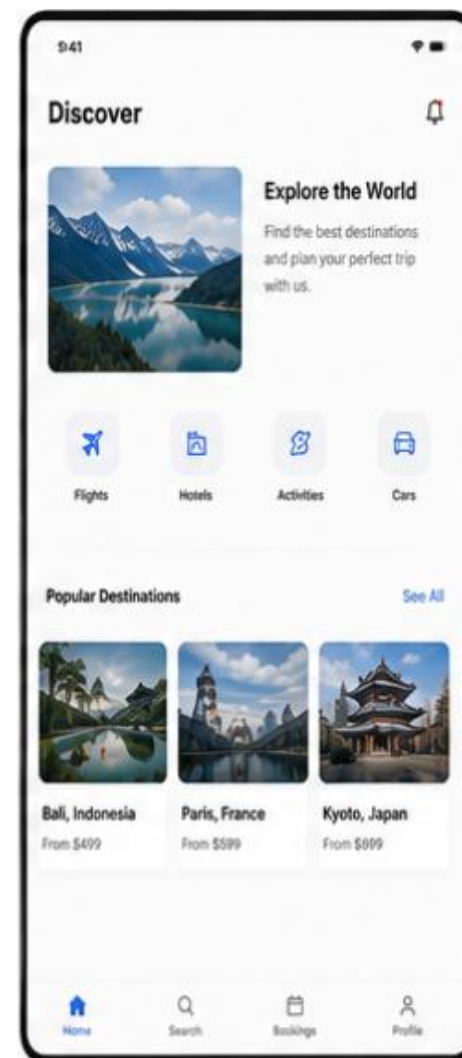
1

The layout only scales proportionally without responsive restructuring. It remains partly usable, but spacing, density, hierarchy, and white space are not optimized for each device.



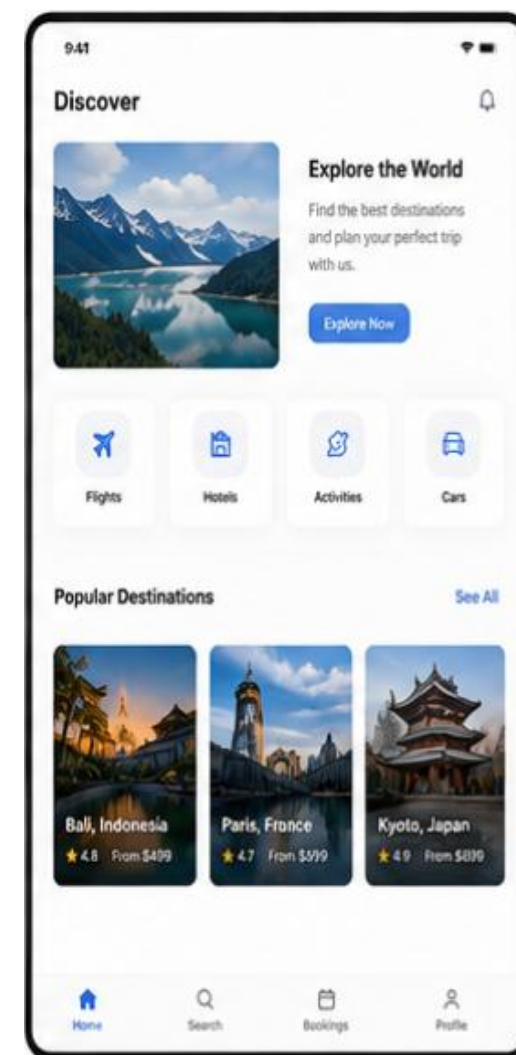
2

The layout applies reasonable responsive behaviour. Breakpoints, grid structure, spacing, navigation placement, and content grouping are adjusted according to the available screen area.



3

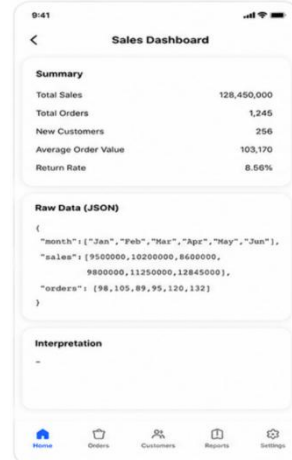
The layout is professionally optimized for multiple devices. Phone and tablet views each demonstrate strong visual hierarchy, balanced density, efficient use of screen real estate, and device-appropriate interaction patterns.

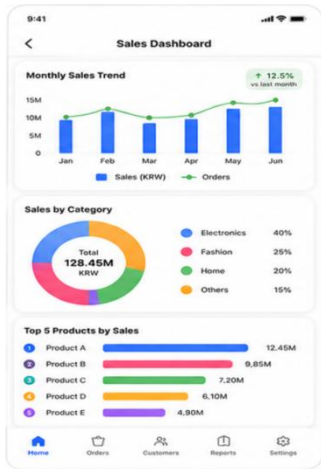


Aspect: Professionalism of Data Visualization

Does the app transform complex JSON or statistical data into clear, accurate, and visually meaningful charts or graphical representations?

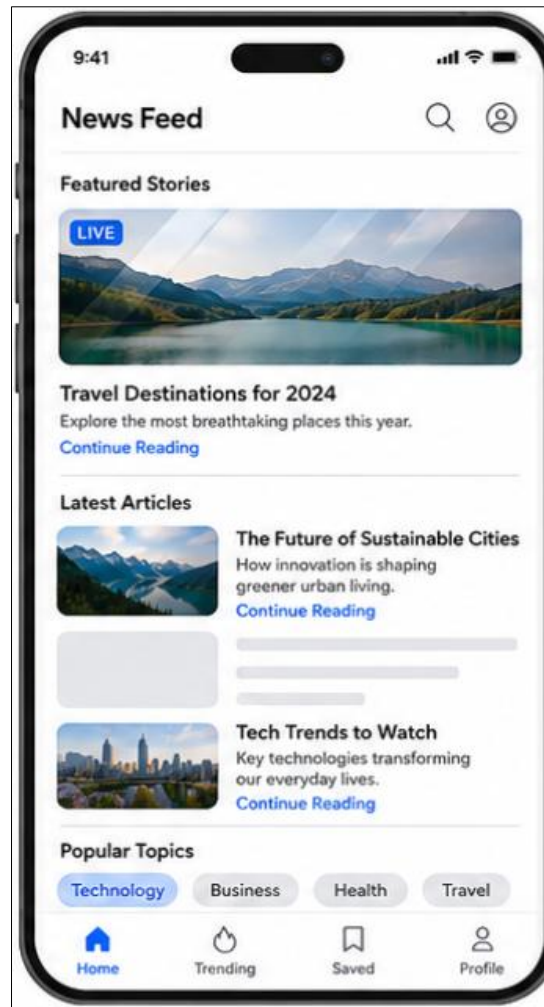


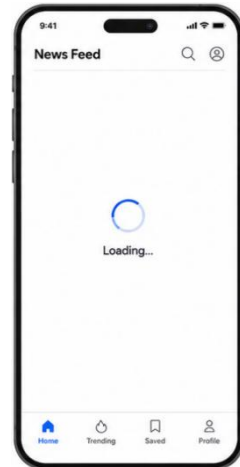
WSOS section as per TD	Score	Descriptor	Resource
06	0	Data visualization is missing or unreadable. Users cannot identify the data structure, trend, comparison, ranking, or status from the screen.	 The screenshot shows a 'Sales Dashboard' with a 'Summary' section containing five metrics: Total Sales (128,450,000), Total Orders (1,245), New Customers (256), Average Order Value (103,170), and Return Rate (8.56%). Below this is a 'Raw Data (JSON)' section displaying a JSON object with arrays for 'month', 'sales', 'orders', and 'return'. The 'Interpretation' section is empty. The bottom navigation bar includes icons for Home, Orders, Customers, Reports, and Settings.
	1	Basic charts are displayed, but visual encoding is weak. Axis labels, legends, scale, colour mapping, spacing, or chart selection make interpretation difficult.	 The screenshot shows a 'Sales Dashboard' with three visualizations. The 'Monthly Sales (Bar Chart)' shows sales from Jan to Jun with a y-axis scale from 0 to 15M. The 'Sales by Category (Pie Chart)' shows the distribution of sales across Electronics (40%), Fashion (25%), Home (20%), and Others (15%). The 'Top 5 Products by Sales' list shows the top products and their sales values. The bottom navigation bar is the same as the previous screenshot.

	2	Data is visualized clearly with appropriate chart types and visual hierarchy. Labels, legends, scale, colour encoding, and emphasis support accurate interpretation of the main insight.	
	3	Data visualization is professional and insight-driven. Chart selection, information hierarchy, data-ink ratio, micro-interactions, animation, and visual emphasis work together to communicate complex data quickly and accurately.	

Aspect: Perceived Performance through Skeleton UI

Does the app use Skeleton UI or equivalent placeholder techniques to communicate the expected content structure and reduce perceived latency during network or data loading?



WSOS section as per TD	Score	Descriptor	Resource
06	0	No loading state is provided during network or data processing. Users may perceive the screen as blank, frozen, or broken	
	1	A basic spinner or generic progress indicator is shown. It indicates loading but does not communicate the expected content structure or reduce perceived waiting time effectively.	

	2	A Skeleton UI is used to represent the layout of the final content. Placeholder blocks, text lines, image areas, and content sections provide a clear preview of the expected screen structure.	
	3	The Skeleton UI is highly refined and integrated with progressive loading. Shimmer effects, image placeholders, staged content population, and smooth transition to real data reduce perceived latency and create a seamless loading experience.	