

W2 PRACTICE

MOBILE UI HEURISTICS

Group: 2

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In this research work, you will work on a **specific mobile interaction scenario** in terms of UI heuristics

- ✓ This work needs to be **performed and presented in pairs**.

Learning objectives

- ✓ Develop a **deep understanding of Mobile UI heuristics**
- ✓ Take the **right decisions** in terms of **UI components** - given a real-world problem

How to submit?

- ✓ Attach your **report** to the MS Team assignment and **turn it in**
- ✓ Present your research outcomes to the class

Website to should start your researches from!

Material Design Patterns

<https://m1.material.io/patterns/navigation.html>

User Interface Design pattern

<https://ui-patterns.com/patterns>

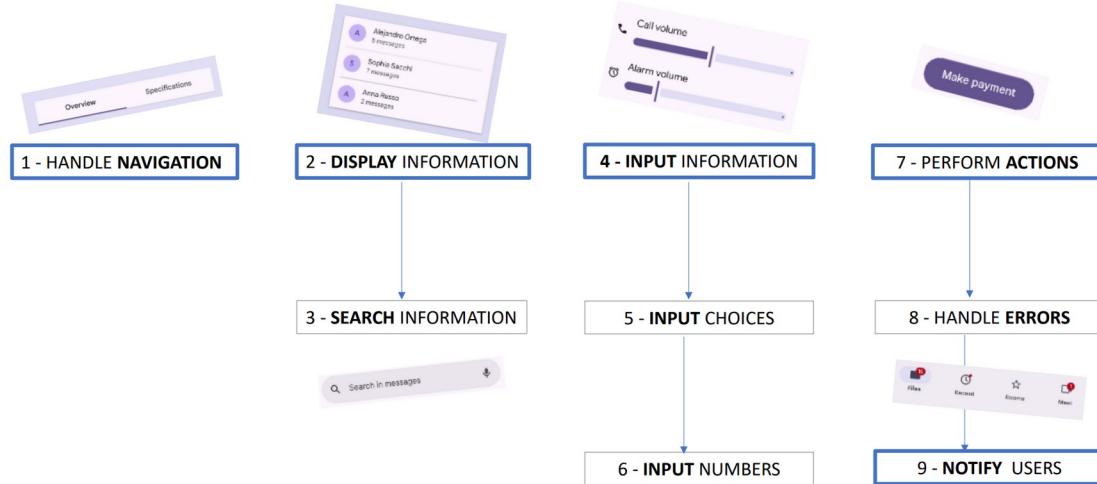
Design-Pattern Guidelines

<https://www.nngroup.com/articles/design-pattern-guidelines>



A - READ UI HEURISTICS

The first step of this activity is to take time to **read UI heuristics resources**:



1 - HANDLE NAVIGATION

COMPONENTS

<https://m3.material.io/components/bottom-app-bar>
<https://m3.material.io/components/navigation-bar>
<https://m3.material.io/components/navigation-drawer>
<https://m3.material.io/components/navigation-rail>
<https://m3.material.io/components/tabs/overview>
<https://m3.material.io/components/dialogs/overview>
<https://m3.material.io/components/top-app-bar/overview>

HEURISTICS

<https://m1.material.io/patterns/navigation.html>
<https://m1.material.io/patterns/navigation.html#navigation-combined-patterns>
<https://www.smashingmagazine.com/2017/05/basic-patterns-mobile-navigation>
<https://ui-patterns.com/patterns/modal-windows>
<https://www.storyly.io/post/basic-patterns-for-mobile-navigation-and-the-best-practices>

2 - DISPLAY INFORMATION

COMPONENTS

<https://m1.material.io/patterns/empty-states.html>
<https://www.nngroup.com/videos/accordions-on-mobile/?lm=mobile-input-fields&pt=youtubevideo>
<https://ui-patterns.com/patterns/cards>

<https://www.nngroup.com/articles/infinite-scrolling-tips/>

<https://ui-patterns.com/patterns/ContinuousScrolling>

<https://ui-patterns.com/patterns/Pagination>

<https://ui-patterns.com/patterns/Carousel>

<https://www.nngroup.com/videos/avoid-accordions/>

HEURISTICS

<https://m3.material.io/components/lists/overview>

<https://m3.material.io/components/cards/overview>

<https://m3.material.io/components/bottom-sheets/overview>

<https://m3.material.io/components/carousel/overview>

4 - INPUT INFORMATION

COMPONENTS

<https://m1.material.io/components/steppers.html>

<https://m3.material.io/components/bottom-sheets/overview>

<https://m3.material.io/components/carousel/overview>

HEURISTICS

<https://www.nngroup.com/articles/wizards/>

<https://blog.mobiscroll.com/building-great-mobile-forms/>

<https://www.nngroup.com/videos/mobile-input-fields/>

<https://ui-patterns.com/patterns/expandable-input>

<https://ui-patterns.com/patterns/WYSIWYG>

5 - INPUT CHOICES

COMPONENTS

<https://m3.material.io/components/checkbox/overview>

<https://m3.material.io/components/switch/overview>

<https://m3.material.io/components/radio-button/overview>

<https://m3.material.io/components/chips/overview>

HEURISTICS

<https://www.nngroup.com/articles/toggle-switch-guidelines/>

<https://www.nngroup.com/articles/checkboxes-vs-radio-buttons/>

6 - INPUT NUMBERS

COMPONENTS

<https://m3.material.io/components/text-fields/overview>

<https://m3.material.io/components/sliders/overview>

<https://m3.material.io/components/chips/overview>

HEURISTICS

<https://www.nngroup.com/articles/input-steppers/>
<https://www.nngroup.com/articles/sliders-knobs/>
<https://www.nngroup.com/articles/mobile-input-checklist/>
<https://www.nngroup.com/videos/mobile-input-fields/>

7 - PERFORM ACTIONS

COMPONENTS

<https://m3.material.io/components/buttons/overview>
<https://m3.material.io/components/floating-action-button/overview>
<https://m3.material.io/components/icon-buttons/overview>
<https://m3.material.io/components/segmented-buttons/overview>

HEURISTICS

<https://uxdworld.com/design-accessible-buttons/>

8 - HANDLE ERRORS

COMPONENTS

<https://m3.material.io/components/buttons/overview>
<https://m3.material.io/components/floating-action-button/overview>
<https://m3.material.io/components/icon-buttons/overview>
<https://m3.material.io/components/segmented-buttons/overview>

HEURISTICS

<https://m1.material.io/patterns/errors.html>
<https://www.nngroup.com/articles/hostile-error-messages/>
<https://www.nngroup.com/videos/mobile-error-handling-alerts/>
<https://www.nngroup.com/articles/confirmation-dialog/>

9 - NOTIFY USERS

COMPONENTS

<https://m1.material.io/patterns/notifications.html>
<https://m3.material.io/components/badges/overview>
<https://m3.material.io/components/dialogs/overview>
<https://m3.material.io/components/snackbar/overview>

HEURISTICS

<https://m1.material.io/patterns/notifications.html>

<https://uxplanet.org/how-to-craft-mobile-notifications-that-users-actually-want-7b585e0e1fa1>

<https://www.toptal.com/designers/ux/notification-design>

UI HEURISTICS – WRAP UP

USE CASE	RELATED UI COMPONENTS	QUESTIONS TO CONSIDER
1- Handle Navigation	Navigation Bar App Bar Bottom bar Drawer / Navigation Rail Tabs Contextual Menu Dialog	<i>How important is the task?</i> <i>How frequent is the task?</i> <i>Does the task should be put with other tasks?</i> <i>Should we interrupt current user's task?</i> <i>Should we catch the user's full attention?</i> <i>How deep in the navigation tree?</i>
2-Display Information	Cards Tables and Lists Bottom Sheet Accordion Carousel	<i>How much data to display?</i> <i>How many items per screen?</i> <i>Consider the empty State pattern</i> <i>Consider infinite scroll or pagination</i>
3-Search Information	Free text to search Components to filter Table to sort Grouping items	<i>Tolerance to typos, synonyms?</i> <i>Multiple filters?</i> <i>Can user remove the filter settings?</i>
4-Create Information	Forms Wizards/ Steppers Bottom Sheet Accordion	<i>Does the data to enter must follow a process?</i> <i>Can we identify optional information?</i> <i>Should default value be provided</i>
5-Input choices	Checkbox Switch Radio Button Dropdown Chips	<i>How many choices are available?</i> <i>How many selections can the user make?</i> <i>Is there a default option?</i> <i>Are the choices depending on each other?</i>
6- Input numbers	TextField Slider Dropdown Chips	<i>How many numbers are available?</i> <i>Can many numbers be selected?</i> <i>Is there a default option?</i>
7- Perform Actions	Call to Action Button Secondary Button Floating Button	<i>What is most important action? Secondary actions?</i> <i>Is the action recoverable?</i> <i>Is the action always available?</i>

8-Handle Errors	Error Labels Snack bar Dialogs	<i>When validation should error? (On edition, on submit, after submitted.)</i> <i>What is the level of error?</i>
9- Inform Users	Badges Dialogs Push Notifications (external) In-App Banners Snack bar	<i>Does the information require to interrupt the user?</i> <i>Does the information need to stay?</i>

B - APPLY UI HEURISTICS

In this practice you will have to work on 2 scenarios (see below)

For each scenario you need to:

1- IDENTITY UI COMPONENTS

Identify **UI components** you want to choose, which **criteria** you **consider** and the **heuristics** that justify your choice (see the heuristics on PART-A).

UI COMPONENTS	CRITERIA	HEURISTIC
Navigation	The registration is a long process . Users need to know which page they are at right now.	Handle Navigation: Show system status. Telling How deep in the navigation tree they are.
Mobile Date Picker	Typing dates manually leads to formatting errors (DD/MM vs MM/DD).	Input Numbers: Prevent errors by constraining input to a specific valid format.
Dropdown with Search	There are nearly 200 countries. Scrolling a standard wheel is too slow.	Search Information: Allow users to filter large datasets quickly rather than scrolling.
Selectable Cards	There are only 2 or 3 options, and they need descriptions/prices attached.	Input Choices: Use cards or segmented buttons for mutually exclusive choices when options are few (<5).
List with Checkboxes + Search Bar	80 items cannot fit on one screen. The user needs to find specific topics and select multiple.	Search Information: Provide search/filter for large lists. Input Choices: Use checkboxes for multi-selection.
Conditional Visibility	Only required for foreign attendees. It should not clutter the screen for locals.	Display Information: Progressive Disclosure. Only show fields that are relevant to the user's specific context.
Checkbox List	The user must explicitly agree to multiple specific terms.	Input Choices: Use checkboxes (not switches) for agreements to ensure deliberate action.
Inline Validation	The user needs to know immediately if	Handle Errors: Validate input

Message	they are ineligible, not after clicking submit.	immediately (on edition) and explain exactly why it failed.
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2- DESIGN THE WIREFLOW

Provide:

- Screen-to-screen wireflow
- Navigation transitions
- Error states
- Alternative paths
- Back navigation behavior



Figma link: <https://www.figma.com/design/EWnPgVU7LFeRWpQE4SC3SS/W2-Test?node-id=0-1&t=YW1TNUB5nk6Do4uP-1>

1. Identity

12:30

< Registration

Full Name
Enter your full name
This field is required.

Date of Birth
Select your date of birth
User must be 18+.

Nationality
Select France Germany USA Others
Select your nationality.

Passport Number
Enter your passport number
Required if nationality is Foreign.

Cancel **Next**

12:30

< Profile Setup

Email Address
Enter your email
Please provide a valid email address.

Phone Number
Enter your phone number
Required for verification.

Back **Continue**

12:30

< Confirmation

Review Your Information

Full Name
Kimhour Loem

Date of Birth
01/01/2005

Nationality
CAM

Passport Number
123456789

Email Address
l.kimhour@example.com

Edit
Back
Submit

2. Attendacne

Attendance

Step 2 of 4

Attendance Type

Full Multiple Day Online

Choose your attendance type

Days Attending

Enter number of days

If attending multiple days, enter the total

Search Sessions...

Use the magnifying glass to search

Keynote A

Workshop B

Panel Discussion C

Networking Event D

Back **NEXT**

3. Add-Ons

Add-Ons

Step 1 Step 2 Step 3 Step 4

Insurance Options

Select the insurance that suits you.

Recommended

Health Insurance in France

Popular

Comprehensive Travel Insurance

Travel Health Insurance
\$100 - Basic Cover...

Comprehensive Coverage
\$200 - All-inclusive

Lunch Option

Vegetarian Non-Vegetarian

Please choose your lunch preference.

Back **Next**

4. Review and Confirm

Step 4 of 4: Review & Confirm

12:30

Your Purchases

Travel Health Insurance
Coverage: \$100

Comprehensive Coverage
Coverage: \$200

Legal Agreement

I agree to Term and Privacy Policy

Enter Card

Pay with Apple Pay

5. Payment Details

12:30

< Payment Information

BACK

Payment Method

Enter your payment method

Please select your preferred payment method.

Billing Country

United States Canada United Kingdom Germany

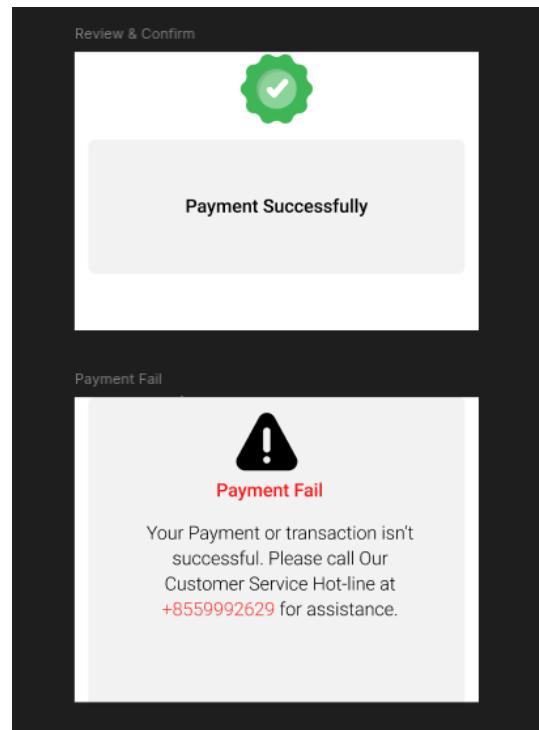
Select your billing country.

Tax Number

Enter your tax number

Optional/Required depending on your selected country.

Pay now



C – SCENARIO PRESENTATION

International Event Registration & Access Pass

As a User, register for a **multi-day international event** (conference / festival / competition).

Identity	
Full name	Kimhour Loem
Date of birth	(18 years or greater)
Nationality	
ID type (Passport / National ID)	Some countries have different ID formats
Attendance Details	
Attendance type	Full / multiple day / online
Days attending	In case of multiple days - event can have multiple days
Sessions	80+ choices - only the ones that applies
Add-Ons	
Lunch attended	Shall be compliant with the attendance
Insurance	Insurance required for foreign attendees
Parking	
Payment Information	
Payment method	
Billing country	
Tax number	optional / required depending on country
Promo code	
Review & confirm	
Summary	
Legal agreements	Many agreements shall be approved
Payment confirmation	