USER EXPERIENCE (UX) DESIGN

For Mobile Application

Ts. Dr. Siti Nurul Mahfuzah Mohamad

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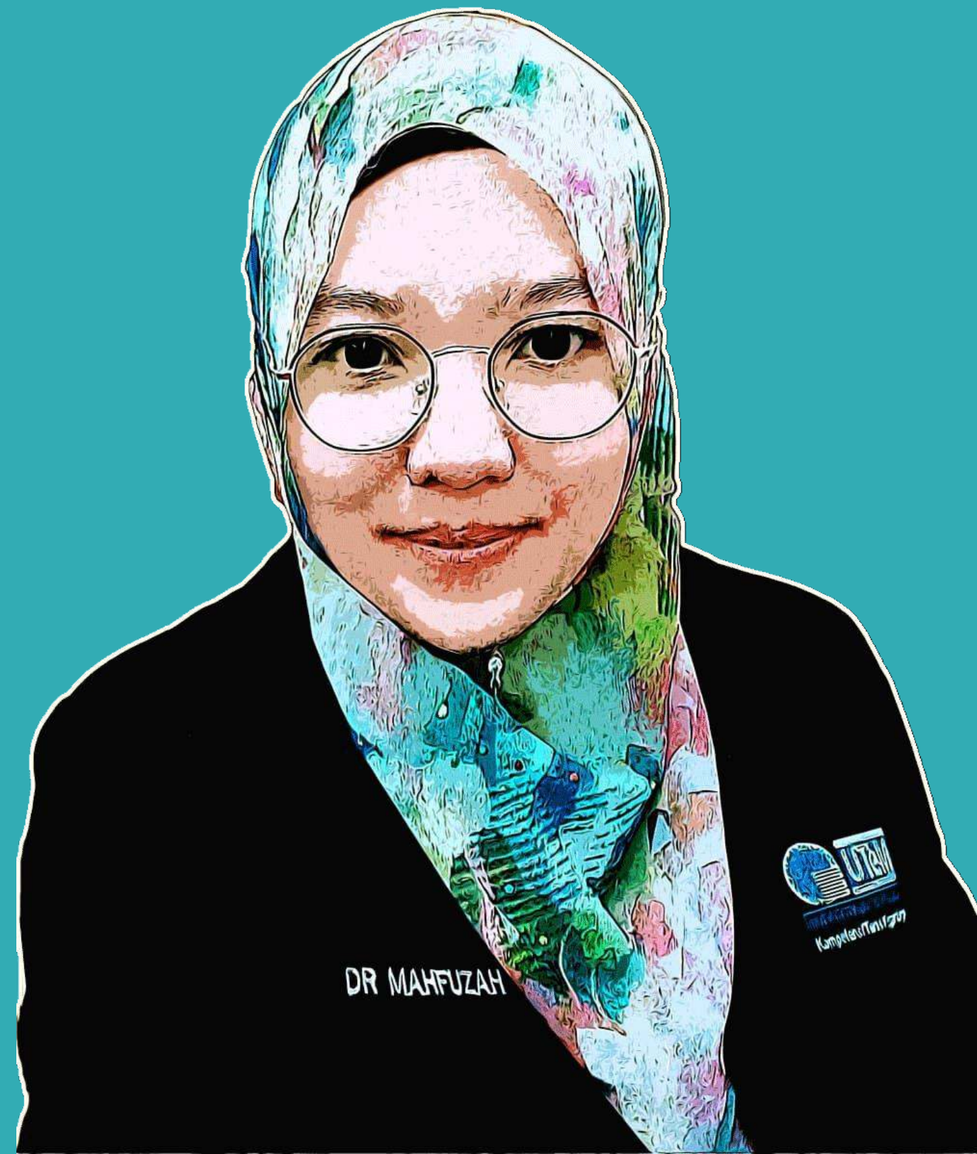

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RESEARCH

- Advanced Manufacturing & Computing Technology

ACADEMIC

- 8 Faculties
- 86 Programs (PhD, Master, Bachelor, Diploma)
- 10,930 Students Enrolled
- 677 International Students

HUMAN RESOURCE

- 2,065 staff (880 academicians, 1,185 administrative)
- 326 Professional Certified staff – Technologist, Ir., C.Eng, Gs., L.Ar ., etc
- 55.1% staff with PhD
- Academics appointed as experts and consultants – OIC Cert, Blockchain Technology, CTFL Cert, etc.

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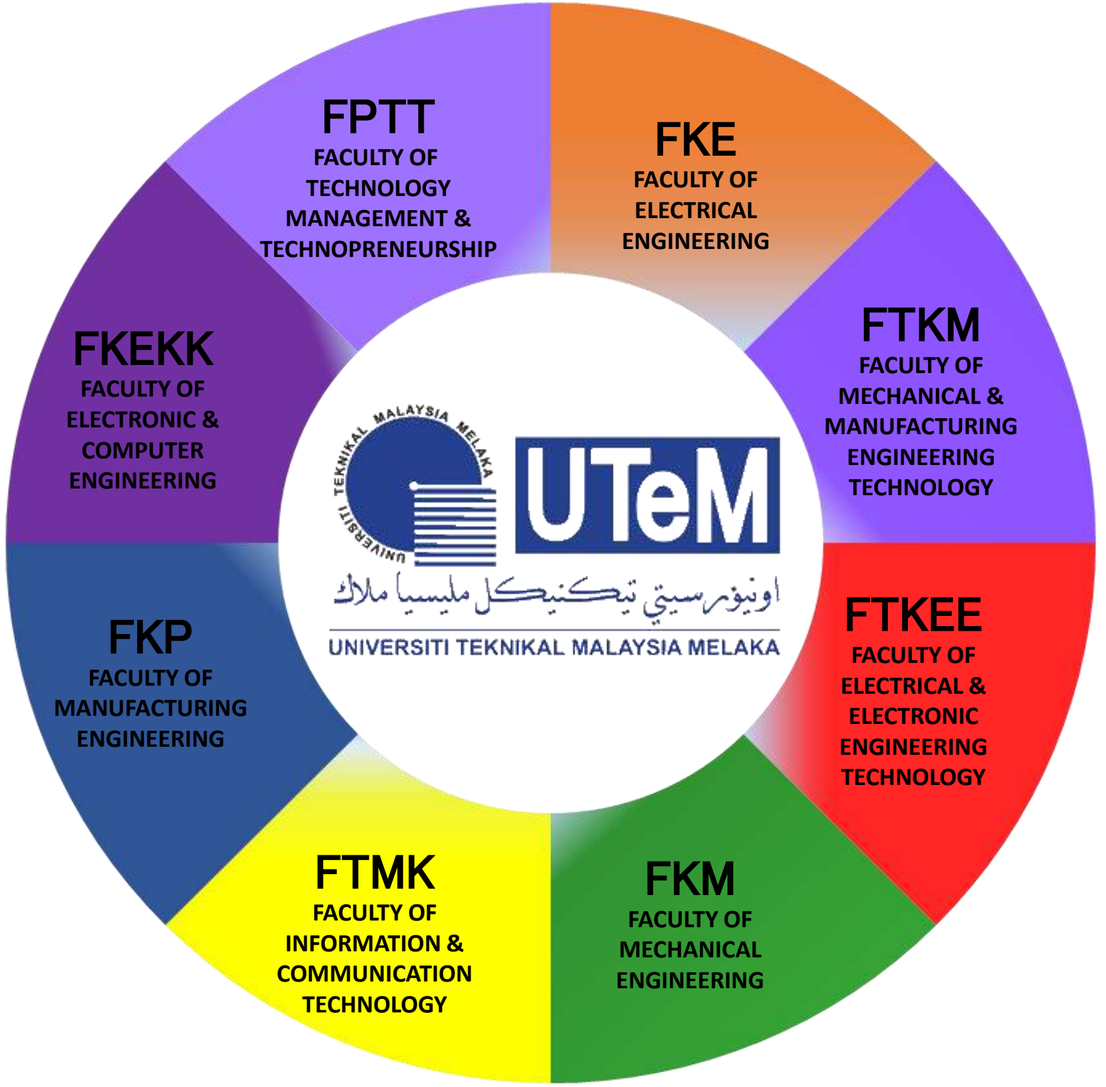
IPTK
INSTITUTE OF TECHNOLOGY MANAGEMENT AND ENTREPRENEUSHIP

Faculty, Centre And Institute



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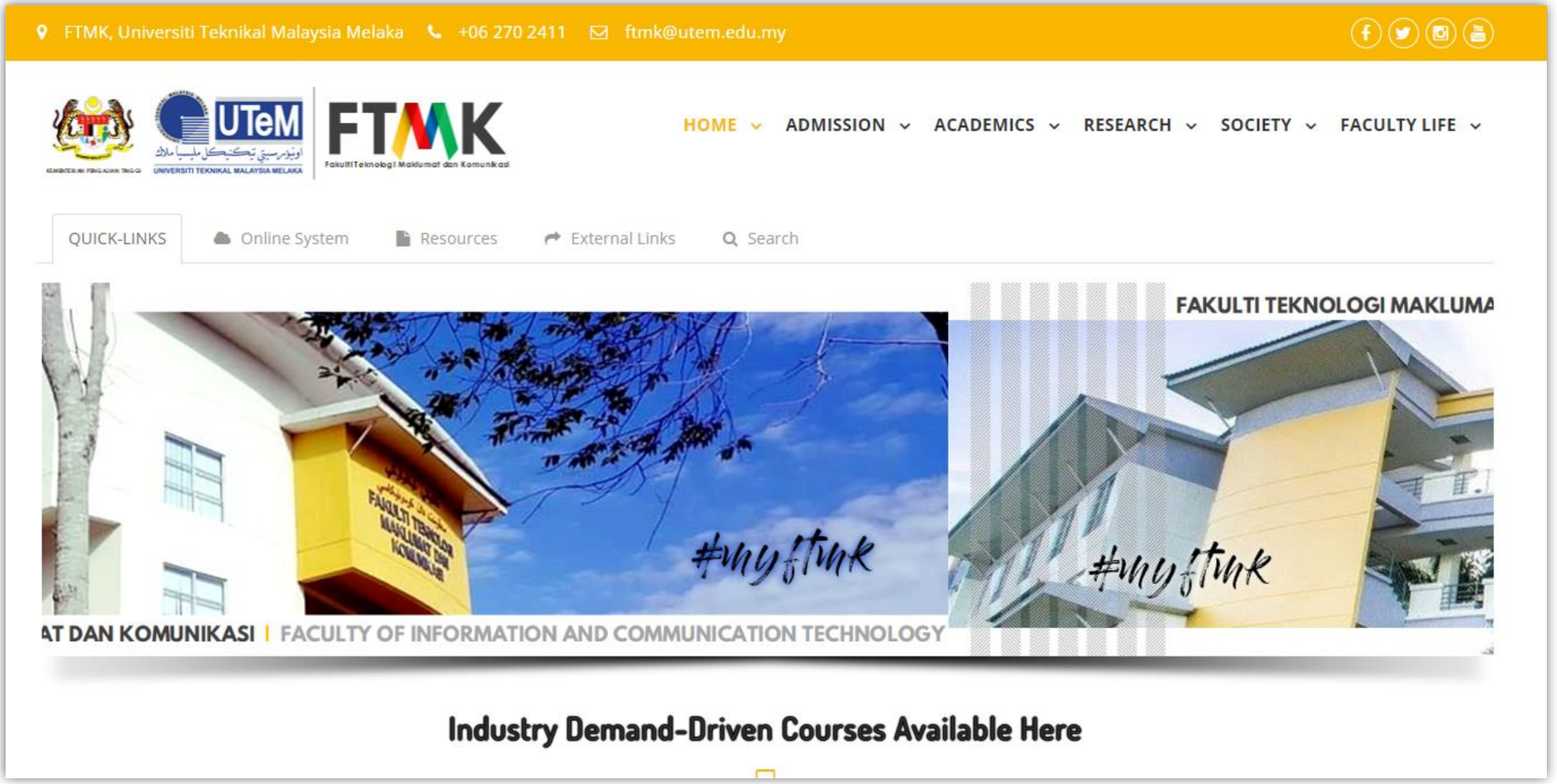

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Education

- PhD (Interactive Media)
- MSc (Multimedia System)
- BIT (Artificial Intelligence)
- Diploma in Education

Career

- Senior Lecturer (2003-present)
- Director- UTeM Press (2019-2022)
- Publisher | Writer (2011-present)
- Program Manager-Training & Consultation | Life Long Learning Centre (2011-present)
- Research Group Leader (2018-2019)
- President AKRAB (2017-2018)
- Secretary KAUTeM (2019-present)
- Head of Research & Innovation Unit (2014-2015)
- Head of Programme (2007-2011)
- Freelancer (2003 - present)

> Deliver More Than 100 Workshop & Training As Invited Speaker/ Trainer/ Advisor/Jury. Published More Than 100 Journals, Proceeding, Books, Book Chapter, MOOC, OCW, Ebook, Ibook, Creative Book, Article, IP etc.

Honors

- The Best UTeM OCW Award (2019)
- Candidate Anugerah Akademik Negara (2018)
- The Most Active UTeM MOOC Award (2018)
- Anugerah Akademik Universiti (2017)
- Anugerah Perkhidmatan Cemerlang (2016, 2008)
- Anugerah Gemilang Akademik JPPKK (2015)

Also received - 9 Special Awards, 8 Teaching Awards, 30 Innovation Awards, 8 Service Awards, 4 Book Awards

Professional

- HRDC Certified Trainer – HRD Corp
- Member of Association of Certified Trainers (ACT)
- Adobe Campus Leader | Creative Educator
- Master Trainer Virtual Learning Environment (VLE), JPT
- Wakelet Community Leader
- Master Microsoft Office Master
- Microsoft Innovative Educator Trainer
- Microsoft Teams Coach
- Digital Storytelling with Ms. Sway
- Adobe Certified Expert
- Oracle Academy: Database Design & Programming with SQL | CCNA etc.

Expertise

21st Century Educational Tools | Gamification | MOOC | Augmented Reality | Virtual Learning | Adaptive Learning | Game Design | Game Development | Microsoft Office Specialist | E-Learning | M-Learning | Digital Teaching Portfolio | Multimedia Application | I-Book | e-Book | Wearable Technology | Instructional Design | Edutainment | Digital Storytelling | Alternative Assessment | HCI | E-Commerce | Book Publishing etc.

CREATIVE EDUCATOR | *UTEM*

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Table of Contents

Points of discussion

CS11005 :
User Interface Design

Module 6: **Mobile User Experience Design**

Introduction – Occupational Framework (OF)

Mobile Ecosystem

What Is UX?

What is Mobile UX Design?

How To Create A Wireframe

Mobile App Design Trend

UI/UX Design For People With Disabilities

Adobe Education Exchange

Related info

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01

Introduction

UX, which stands for “**user experience**” - referring to how people **interact with a product.** For example, when we want to turn on a light in our room, we interact with a light switch. The design of the switch—including the color, material, and physical appearance—may impact how we feel about the interaction.

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Occupational Framework

MSIC 2008

Section

J: Information & Communication

Division

- **J58: Publishing Activities**
  - 581: Publishing of Books, Periodicals and Other Publishing Activities
  - **582: Software Publishing**
- J59: Motion Picture, Video and Television Programme Production
- J60: Programming and Broadcasting Activities
- J61: Telecommunications
- J62: Computer Programming, Consultancy and Related Activities
- J63: Information Service Activities

Group

Group
582

Software Publishing

Graphic Design | Interactive Media | Animation | Computer Games | Operating System

* MSIC – Malaysia Standard Industrial Classification 2008

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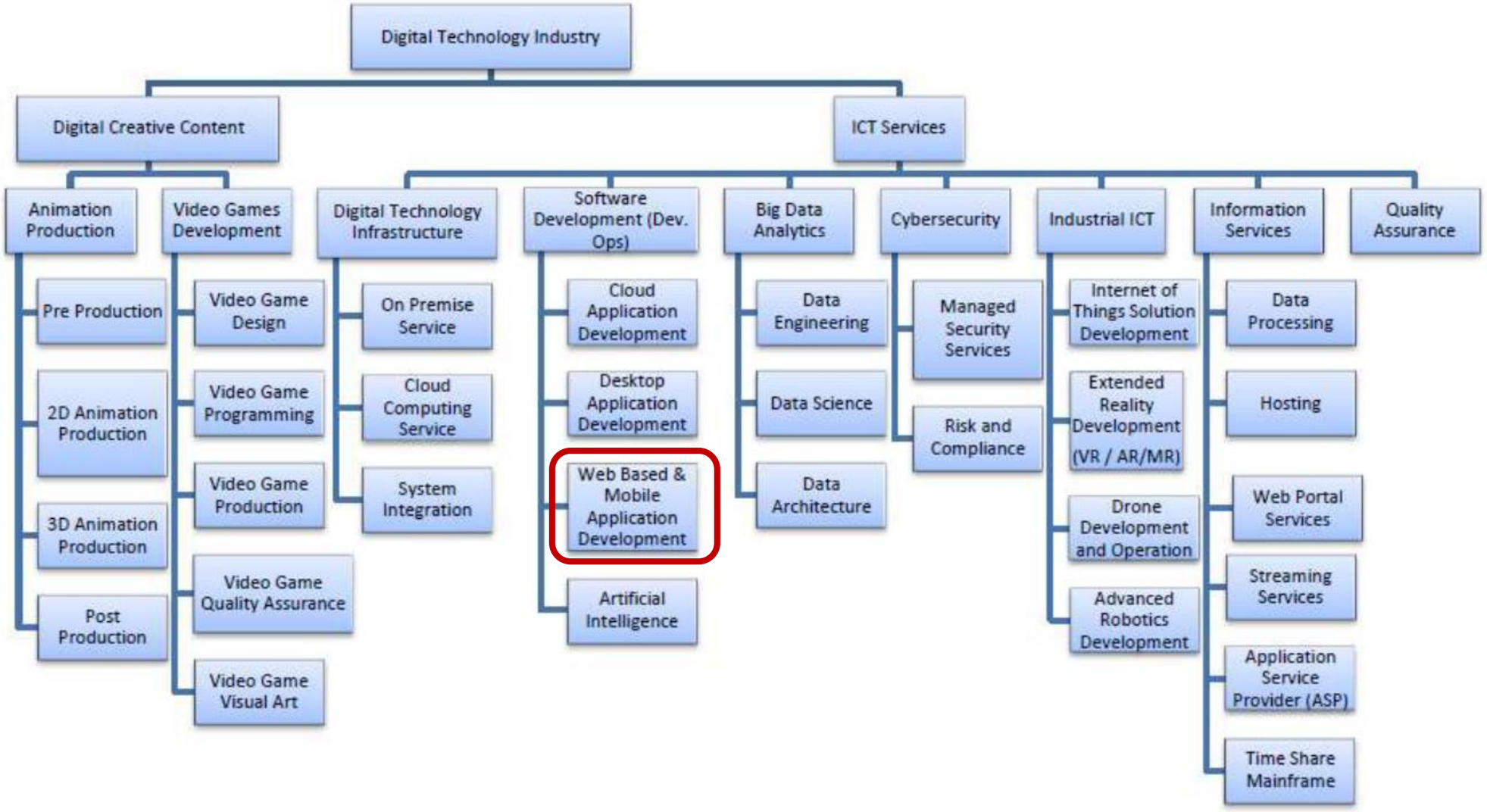

HRDF-MDEC, 2020

Figure 4.1: Digital Technology Industry Job Areas

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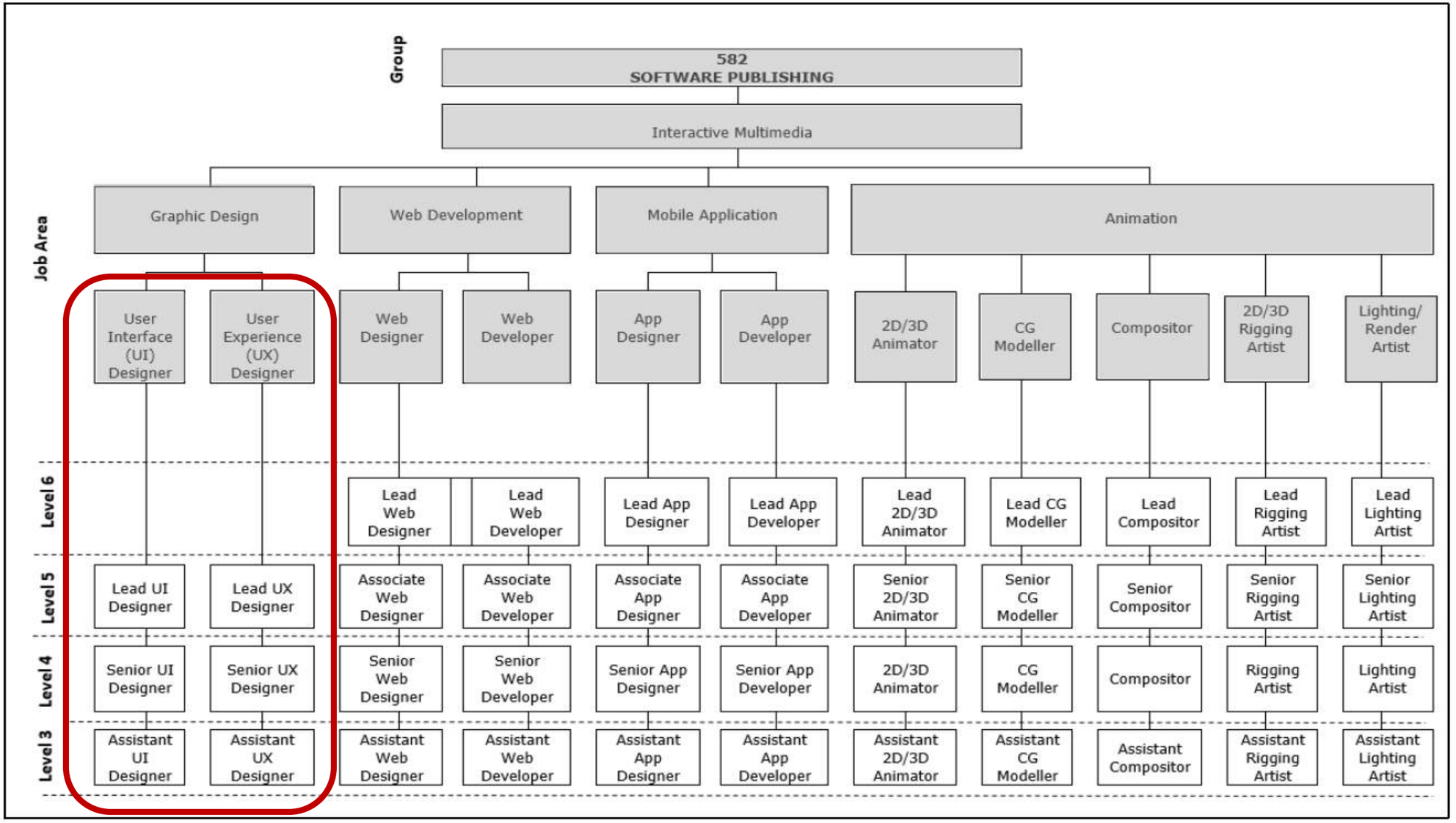

Figure 4.8: Job Areas for Group J582 (Software Publishing- Interactive Multimedia)

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- The feel
- User experience
- Information architecture
- User flows and wire framing
- User testing

- The look
- Visual design – typography, buttons, colors
- Interaction design – animation, interactivity
- Cohesive branding

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USER INTERFACE (UI) DESIGNER

Career Pathway

Lead UI Designer
SFIA *Level 5*
NOSS *IT-058-5:2016 Communication Design (Digital)*

↑

Senior UI Designer
SFIA *Level 3 & 4*
NOSS *IT-058-4:2016 Graphic Design Application (Digital)*

↑

UI Designer
SFIA *Level 3*
NOSS *IT-058-3:2014 Graphic Design (Digital)*
NOSS *J582-001-3:2019 Interactive Multimedia Design*

Skills Framework for the Information Age (SFIA)
Level 7 - Set strategy, inspire, mobilise
Level 6 - Initiate/influence
Level 5 - Ensure/advise
Level 4 - Enable
Level 3 - Apply
Level 2 - Assist
Level 1 - Follow

Commonly Used Tools/New Tech

- User Flows
- Figma (Software)
- Mockups
- Prototyping
- UX Research
- Adobe XD
- Visual Design
- Adobe Photoshop
- Adobe Illustrator
- Mobile Application Design

Job Description

- Determines business needs and user requirements for UI design.
- Formulates technical specifications and delivery platform requirements for UI.
- Translates content and layout into an intuitive and responsive experience for users, and manages the design of UI elements for projects to ensure consistency and alignment to overall concept.
- Ensures that the UI visually communicates the path that a user experience designer has laid out.
- Oversees the conduct of usability testing to validate UIs, implementation of UIs, and analyses design audits for improvements.
- Works in a team and is proficient in programming languages required by the organisation to design and develop user interfaces.
- Familiar with various graphic designing tools, as well as Universal Principles of Design and commonly used Design Methods.
- Imaginative and innovative in designing new and improved user interfaces.
- Adopts a structured approach when managing projects and performing testing.
- Keeps an open mind and leverages varying sources of information and data analytics to derive trends and identify potential design improvements.
- Able to communicate his ideas to team members and other stakeholders in a clear and compelling manner.

Competencies

- Liaise with stakeholders to understand business needs and user requirements
- Perform the requirements analysis for the design of user interfaces
- Formulate specifications and definition of delivery platforms for UI
- Develop the design of each screen or page with which a user interacts
- Program interfaces to accomplish specific tasks
- Ensure that the user interface visually communicates the path that a user experience designer has laid out
- Create a cohesive style guide to ensure that a consistent design language is applied across the product
- Apply user interface design performance indicators, monitoring and reporting standards Support user interface design audits and regulatory inspections
- Evaluate the effectiveness of user interface to visually guide the user through a product's interface across all platforms
- Recommend modifications in the design of user interface based on usability test findings
- Monitor the user interface to ensure effective reflection of a brand's strengths and visual assets to a product's interface
- Design frameworks for quantitative analysis and inspection procedures
- Conduct quantitative analysis and inspection
- Measure outcomes of user interface design improvements using metrics and benchmarking criteria

Soft Skills

- Critical Thinking & Problem-solving
- Excellent organisational & time management
- Continuous Learning (Understands the latest trends and their role in a commercial environment
- Communication & Teamwork
- Self-development (keep up to date on fast-changing trends)
- Agile Methodology
- Design Thinking
- Business Analysis & User Research
- ArtSense, Creativity & Innovative
- Empathy & Persuasive Skills

Essentials/Core Skills

- User Interface and User Experience Design
- Storyboarding
- Web and Graphic Design
- Design Thinking
- User Experience (UX) Research

Common Certifications

- Nielsen Norman Group: UX and UX Master Certification
- GeneralAssemb.ly: User Experience Design Immersive
- Certified Usability Analyst or Certified User Experience Analyst
- Udemy: The Ultimate Guide to Usability and UX
- React Development (REA) Certification
- UI Certification : Wireframe & Prototyping
- Adobe Certified Associate (ACA): Adobe Illustrator

USER EXPEREINCE (UX) DESIGNER

Career Pathway

Lead UX Designer
SFIA *Level 5*
NOSS *IT-053-5:2013 Concept Design*

↑

Senior UX Designer
SFIA *Level 3 & 4*
NOSS *IT-053-4:2013 Concept Design*

↑

UX Designer
SFIA *Level 3*

Skills Framework for the Information Age (SFIA)
Level 7 - Set strategy, inspire, mobilise
Level 6 - Initiate/influence
Level 5 - Ensure/advise
Level 4 - Enable
Level 3 - Apply
Level 2 - Assist
Level 1 - Follow

Commonly Used Tools/New Tech

- User Experience Design (UED)
- Adobe Photoshop
- Graphis Design
- Interaction Design
- Wireframing
- Adobe XD
- MS Visio
- Google Slides
- Draw IO
- Figma (Software)

Job Description

- Designs and develops engaging user experiences (UX) for a variety of applications.
- Studies and evaluates how users feel about the interface.
- Supports the translation of user needs and business requirements into features and functionalities that enhance app experiences.
- Involved in the development of process flows, wireframes, and prototypes to effectively conceptualise and communicate high-level design strategies.
- Works under limited supervision to effectively deal with unfamiliar issues.
- Analytical in the evaluation of user feedback and offers fresh perspectives and suggestions to optimise the user experience.
- Articulate and comfortable with brainstorming and putting forth his ideas to team members and other stakeholders to co-create an ideal user experience.

Competencies

- Analyse which design option best satisfies user needs
- Support refinements and iterations based on usability testing results to create the best user experience
- Support the exploration of different approaches to solving a specific user problem
- Collect user feedback on user interface performance
- Implement application site improvements to functionalities, design and navigation
- Support the development of personas and usage scenarios
- Support the design of user journeys and development of wireframes to enable effortless navigation
- Execute design work consistent with design and brand standards, analytics insight, customer feedback
- Document design standards, design wireframes, mockups, specifications and patterns across channels and products
- Support all phases of usability testing of prototypes in the lab and remote settings
- Designs and develops engaging user experiences for variety of apps.
- Conduct in-person user tests to observe user behaviour
- Support secondary research on market, industry trends, competitors, and comparable experiences
- Support user research conducted through multiple tools
- Focus on enhancing customer satisfaction and loyalty
- Coordinates with the Project Manager to communicate desired requirements and objectives clearly to other teams (i.e. UX team, QA testers)

Soft Skills

- Critical Thinking & Problem-solving
- Excellent organisational and time management skills
- Continuous Learning (Understands the latest trends and their role in a commercial environment)
- Communication & Teamwork
- Self-development (keep up to date with fast-changing trends)
- Agile Methodology & Design Thinking
- Business Analysis & User Research
- ArtSense, Creativity & Innovative
- Empathy & Persuasive Skills

Essentials/Core Skills

- User Experience, flows & journey
- Design Thinking
- Adobe XD
- Mockups
- Mobile Design
- Ergonomics
- Wireframing
- Brand Experience / UI Brand Guideline

Common Certifications

- Nielsen Norman Group: UX and UX Master Certification
- GeneralAssemb.ly: User Experience Design Immersive
- Certified Usability Analyst or Certified User Experience Analyst
- Udemy: The Ultimate Guide to Usability and UX
- React Development (REA) Certification
- Adobe Certified Associate: VFX & motion graphics using Adobe After Effects
- UX Certification : Wireframe & Prototyping

Go to www.menti.com and use the code 6917 7622

Software do you usually use for UI/UX design - Prototype/ Wireframe

Mentimeter

https://www.menti.com/alv7hukv195c

02

Mobile Ecosystem

Mobile Ecosystem is collection of

- **Multiple Devices** (Mobile Phone, Tablet etc)
- **Software** (OS, Development Tools, Testing Tools etc)
- **Companies** (Device Manufacturers, Carrier, Stores, Development/ Testing Companies

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build

native app?

web app?

“Most of the folks I know in app development are moving to standardization on web versus device specific development.”

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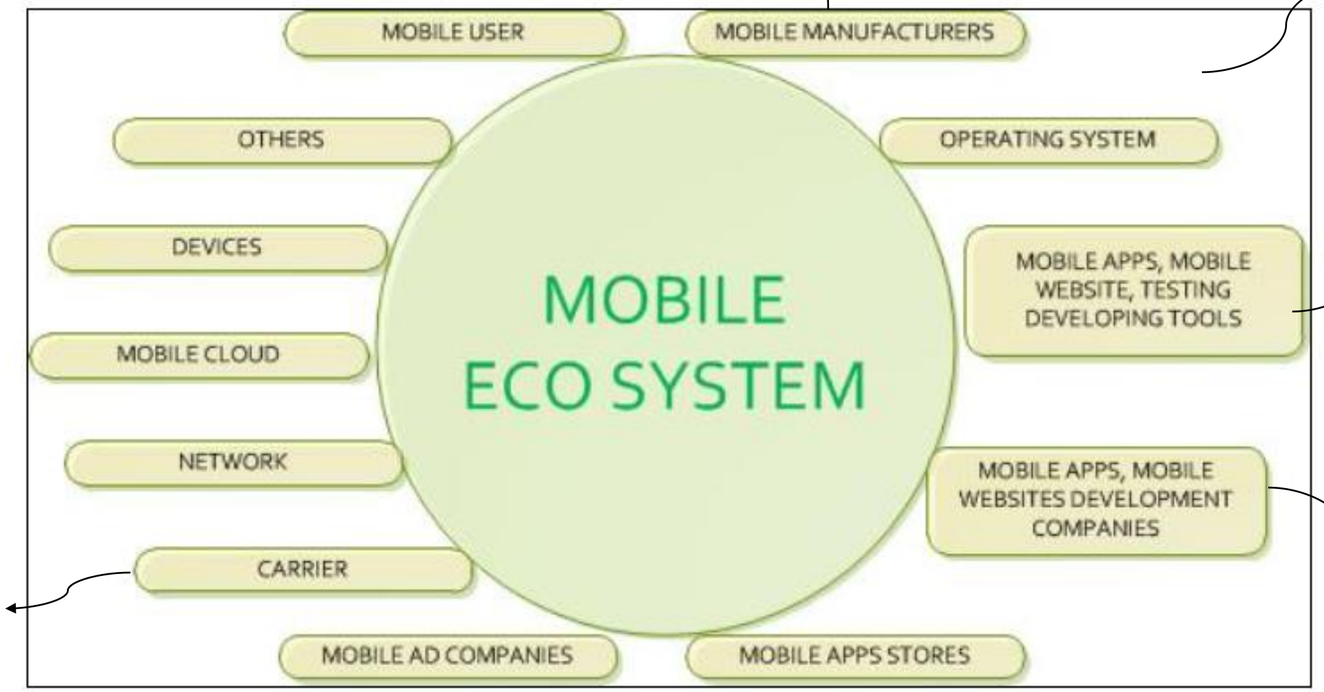
Example:
Samsung, Sony, Oppo etc

Companies rent mobiles and other devices virtually at hourly/weekly/monthly
Example:
DeviceAnywhere (https://www.mobileapplicationtesters.com/)
Perfectomobile (https://www.perfecto.io/)



Example:
IOS, Android etc
https://developer.android.com/guide

Example:
Android – Eclipse, Android Studio etc
IOS – Xcode, AppCode, MonoDevelop, IntelXDK

Example:
HTML5, CSS3, JavaScript etc to create mobile websites

Example:
Voice data (Calling), Text Data (SMS) etc. User subscribe to different plans available with Carriers

Example:
Google's AdMob (https://admob.google.com/home/)

Example:
Google Play Store
App Store

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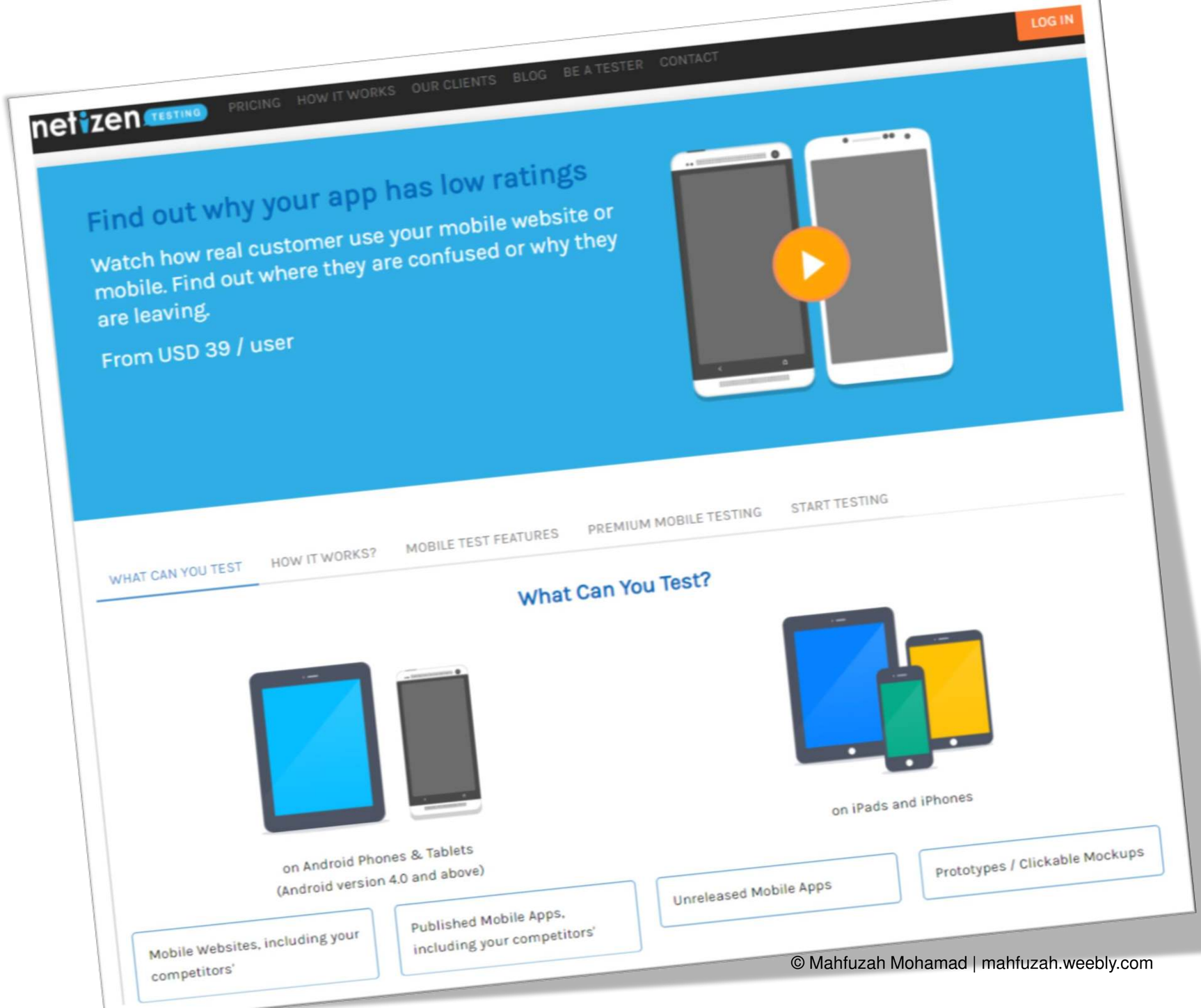
Netizen Testing

https://www.netizentesting.com/mobile-testing/



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Dear Sir / Madam

Our customer, NETIZEN TESTING SDN BHD, would like us to inform you of the following transaction:

Transaction type: GIRO Payment
Name: JANSON LIEW
Account no. and Bank: [redacted]
Transaction amount: MYR 57.40
Value date (when we process the transaction): 30 Mar 2020
OCBC reference no.: MYGP200329093246
Our customer's reference no.: NT JOB PYMT 0303
Details:
NT JOB PAYMENT

Additional details from NETIZEN TESTING SDN BHD:

Description	Inv Date	Amount
JOB ID 1730		28.70
JOB ID 2085M		28.70

If you have any questions about this advice, please contact:

Contact Name: RACHEL
Telephone: +601110882088
E-mail: support@netizentesting.com
Fax: -

Alpha, Beta and Pilot Testing

Example for Software Development

Alpha Testing

Tester Member:
Development Team

Purpose :
To check initial error including unit test, component testing and system testing.

Beta Testing

Tester Member:
Intended audience that will try the product / software.

Purpose :
It can be considered as a pre-release testing. Therefore, developer can upgrade or enhance the system.

Research Instruments : Interview, Survey

Pilot Testing

Tester Member:
Test run to the intended audience and apply sampling technique.

Purpose :
It's a real-world test for researcher to collect data. Observe the test run participants and get feedback for improvement.

Research Instruments : Interview, Survey, Observation, Focus Group Discussion.

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03

What is UX?

UX refers to everything that affects a user's interaction with a digital product. When people use a product, they usually evaluate their experiences according to the following criteria:

- **Value.** Does this product give me value?
- **Function.** Does this product work?
- **Usability.** Is it easy to use?
- **General Impression.** Is it pleasant to use?

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The Origins & Goals Of UX

Don Norman, co-founder of the Nielsen Norman Group, coined the term “user experience” in the 1990s. According to Norman, “User experience encompasses all aspects of the end-user’s interaction with the company, its services, and its products.”

https://youtu.be/9BdtGjoIN4E

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UX is almost always followed by the word “design.” By the nature of the term, people who work in this field are “UX designers.”

Does this mean that UX designers are people who design user experiences? The answer is no. You cannot design user experience, because it refers to a user’s impression of the product. But you can create conditions that are more likely to lead to a positive impression. So, you could say that UX designers are people who design for UX.

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User Experience design

UX design is the process of creating products (digital or physical) that are practical and usable.

Usable : A product needs to be simple, easy to use, and familiar.

Useful : A product must fill a need. If the product isn't filling a perceived gap in the users' lives, then there is no real reason for them to use it.

Desirable : The visual aesthetics of the product need to be attractive and evoke positive emotions.

Findable : If the user has a problem with a product, they should be able to quickly find a solution.

Accessible: The product or service needs to be accessible to everyone, including those with disabilities.

Credible : The company and its products need to be trustworthy.

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Other essential things that you need to know about UX include:

- User experience is about what users both **think** and **feel.** Humans are both rational and emotional; both sides play a significant role in how users think about a product.

- User experience also depends on the context in which the product is used. To design a great product, you need a good understanding of this context. It's also essential **to understand the role** that a product plays in users' lives.

- A user's experience with your product may change over time. When people start using a new product, they may have **mixed feelings** about it. However, as they become more familiar with it, they might easily change their minds.

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04

What is Mobile UX Design?

Mobile UX designs are interfaces for hand-held and wearable devices. Designers focus on accessibility and efficiency to optimize these on-the-go interactions.

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A large number of users abandon an app after using it for the first time. Since users are picky about which apps they use and so quick to abandon those they don't enjoy, it's essential to invest time and effort in creating a great user experience. The better the design, the better the chance that a user will engage with it and thus keep using it.

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Five things to remember

01 UX design is more than good usability

Usability is just one attribute of good UX. **Usability helps us create well-functioning products**, but the fact that a product is easy to use doesn't guarantee that people will use it.

02 UX design is not the same as UI design

UX design is often **mistakenly referred to as UI (user interface) design**. That's because many people associate the word "design" with visuals. Even though user interface is an important part of the user experience, it's just the surface layer of a product.

03 UX design is about people

"You cannot understand good design if you do not understand people." Simply put, UX **requires a deep understanding of the user:** their **needs, wants, behaviors**, and the context in which they will use a product. The ability to empathize and understand the needs of users is critical for UX designers.

04 UX design is an ongoing process

Receive new **feedback from users.** You may need to **refresh your design to satisfy new needs**.

05 UX design should account for business needs

It's no use having a product that people love if it doesn't also help achieve a business goal. That's why product creators must **consider both the goals of users** and the goals of the business. It's important to find a balance between these two sides to create useful and practical solutions.

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The role of the UX designer

A UX designer is a person that designs for the user experience—how a product looks and works for end-users. But how is this different from other designers on the team? What does a UX designer do, exactly?

There is no single right answer to this question because the role of a UX designer is complex and multifaceted. The responsibilities of an individual UX designer may vary in different companies. However, it's possible to define a few areas of interest that UX designers typically work in**—user research, information architecture, front-end design, interaction design, information design, visual design**, and **usability testing**.

When UX designers create a new product, they typically follow a user-centered design process, taking care to evaluate each decision. Does this feature make sense to our users? Does it bring value to them? Designers will attempt to answer these questions at every step of the design process.

At the early stages of this process, **UX designers invest time in user research**, including **defining the target audience (who will use the product)** and learning about the goals and **needs of the audience**. After that, UX designers then **try to satisfy those needs** by defining the user flow, creating the **design language, wireframing, prototyping, user testing,** and **design documentation**. The result? A usable, delightful product that users understand and enjoy.

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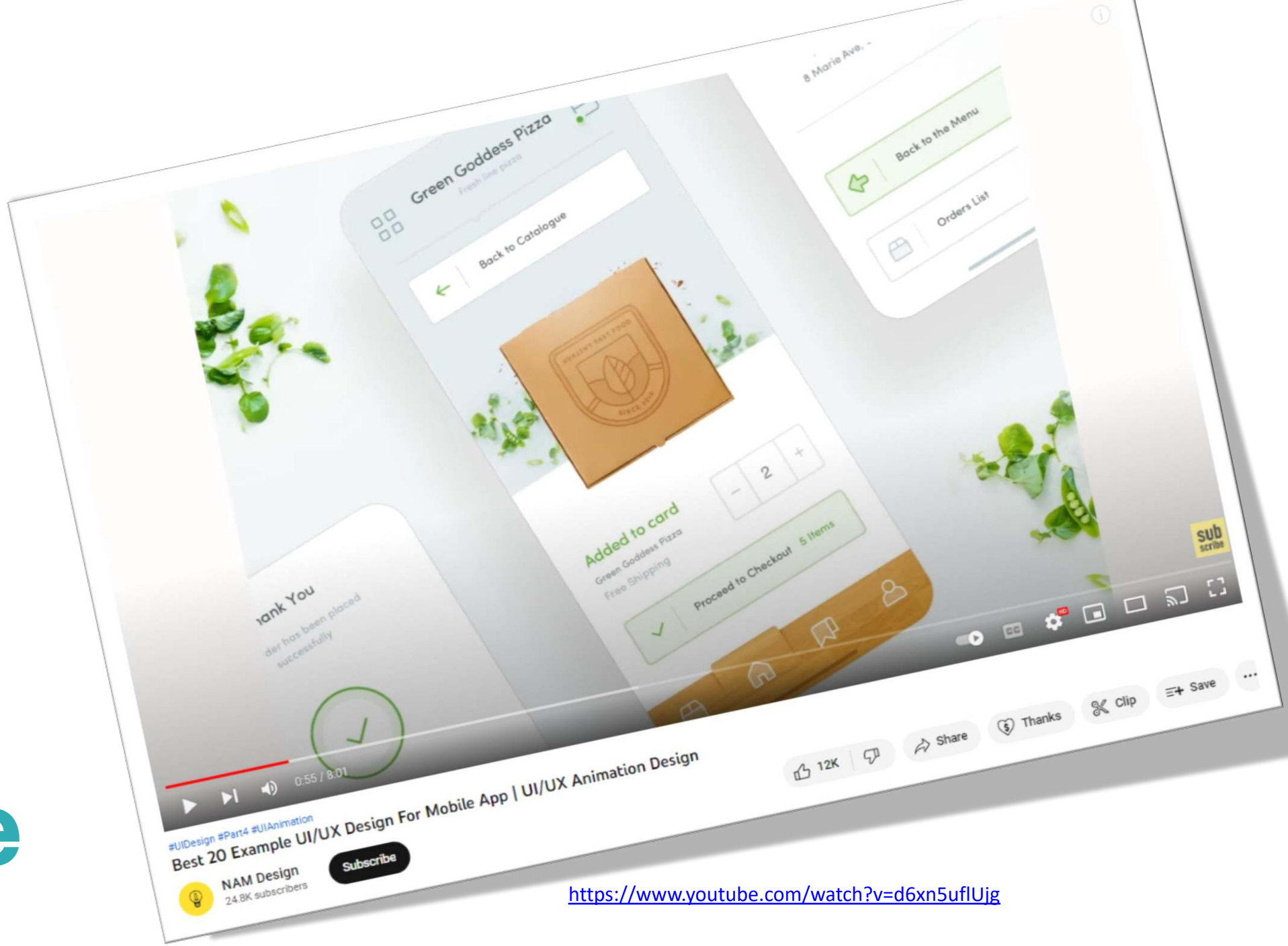
Best Example



https://www.youtube.com/watch?v=d6xn5uflUjg

Tips for Mobile UX

01

Minimize Content

Smaller screens mean essential elements need to be legible on a smaller resolution. You must make a **clean, legible layout** to cater to mobile users.

02

Simplify Navigation

Users might not complete a task all at once. Make sure they don't get lost easily. Also, most users **use one hand**, and some fingertips are larger than others.

03

Restrict User Inputs

Users become frustrated when they have to continuously tap buttons. So, design to offer maximum effect for **minimum interaction/effort.**

04

Ensure Continuity and Consistency

Let users **continue where they left off** so they can switch easily between mobiles and desktops.

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01

Minimize Content

- **Minimize Cognitive Load**
- Design for **minimal page-loading times**. Less than 3 seconds is ideal.
-
- 94% of mobile users use **portrait mode**. Every pixel of width is valuable.
- Keep **images small** and to a minimum.
- Keep a **clear visual hierarchy**.
- Use **color and contrast** to maximize visibility.
- Make **text 11 points or larger**.
- **Reduce clutter**. Compress information into icons where appropriate.
- Complement or **frame content with whitespace**.
- Include **card-style design** patterns to show actionable content easily.
  https://uxplanet.org/using-card-based-design-to-enhance-ux-51f965ab70cb
- Ensure all devices can support content.
- Keep page descriptions short for bookmarks.

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02

Simplify Navigation

- Aim for easy-to-use and self-evident navigation. Consider using progressive disclosure.
- Create 30x30-pixel/7–10-mm (minimum) buttons and tabs.
- Use full-screen navigation menus with the minimum amount of menu levels.
- Use clear menu labeling, including tabs/icons and graphics.
- Prioritize the most-used items at the top of the screen. Consider how far users can comfortably reach.
- Give short-key access to features.
- Don’t mix navigation patterns.
- Clearly show links. Indicate when the user has activated them.
- Allow one primary action per screen.

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03

Restrict User Inputs

- Keep **URLs short.**
- Pre-fill or **minimize required data inputs** on forms.
- Include **alternative input mechanisms** (e.g., voice-controlled).
- Allow **permanent sign-in.**
- Allow minimal, **one-directional scrolling**.
- Retain data in case connections fail.
- Offer obvious **search features** (e.g., a magnifying glass).
- Use **skeleton screens** to reassure that the system is executing background actions. https://www.uxdesigninstitute.com/blog/whats-a-skeleton-screen/

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04

Ensure Continuity and Consistency

- Keep content **consistent between screens**. If you design separate versions, don’t compromise user trust with unsubtle changes.
- **Maintain continuity**; let users track orders, etc. just as easily on mobiles.
- If you design separate versions, **let users switch from mobile to desktop formats freely.**

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Don’t forget the documentation!

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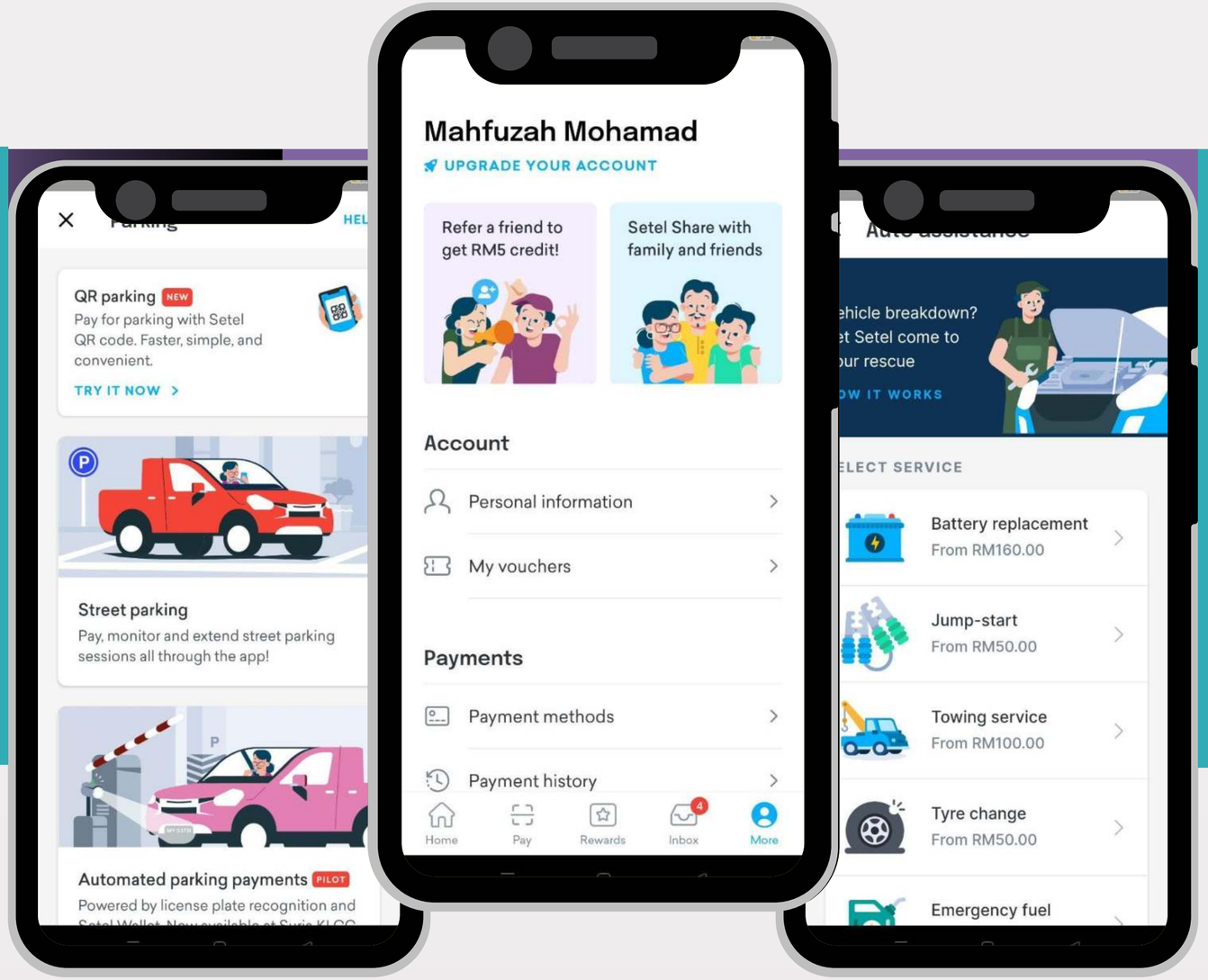
Feb, 2023

What Elements Should be Included in a Good App Design?



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It’s recommended that you conduct usability testing sessions on a regular basis, analyzing results and prioritizing necessary changes according to the impact they will have on users.

To match user expectations, it’s also vital to understand what is happening in app design today. Be aware of **modern design techniques** and **product design trends**. More specifically, pay attention to ones that help product teams create an excellent user experience and make effective design decisions. Read on for more articles about app design best practices and to learn about the latest developments in UX design knowledge.

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Mobile Web (app) design

- standards compliance
- web usability design
- minimalist design
- design and testing
  - ✓ cross-browser
  - ✓ cross-platform

A mobile web app should be as simple as possible, but no simpler.

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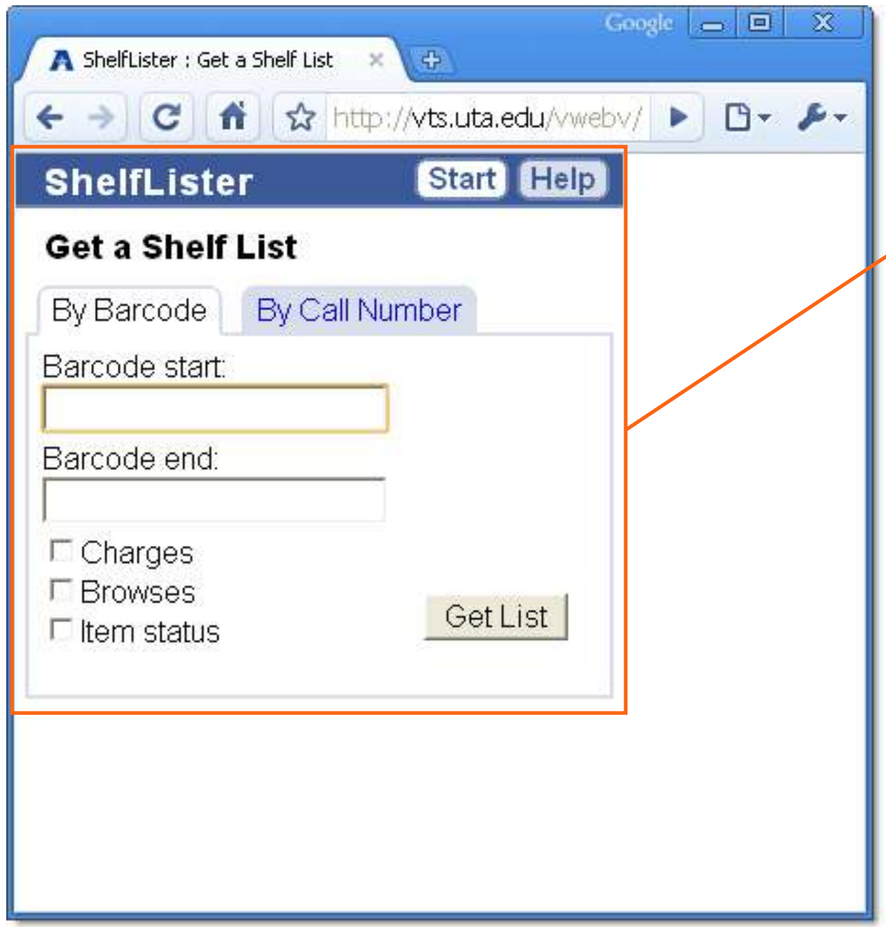
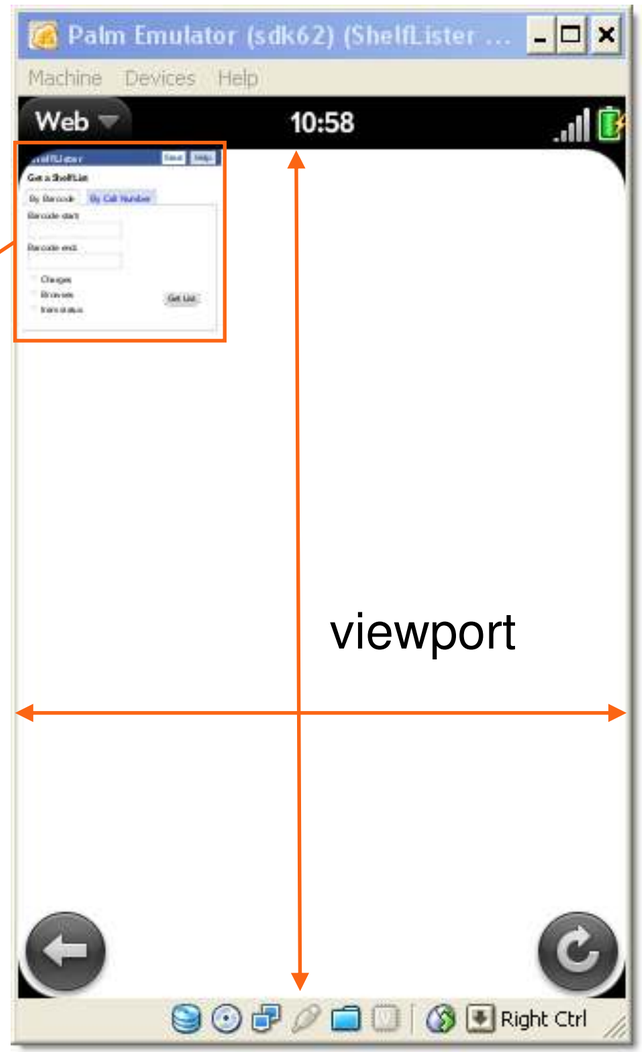
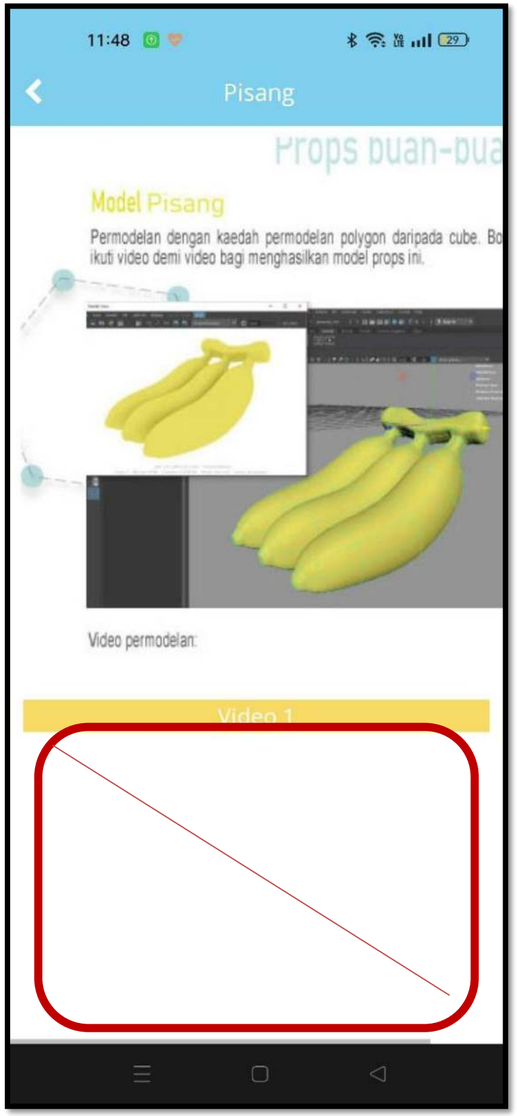
Mobile design – *platform* compatibility







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All misconceptions

MISCONCEPTION 01

MISCONCEPTION 02

MISCONCEPTION 03

MISCONCEPTION 04

MISCONCEPTION 05

MISCONCEPTION 06

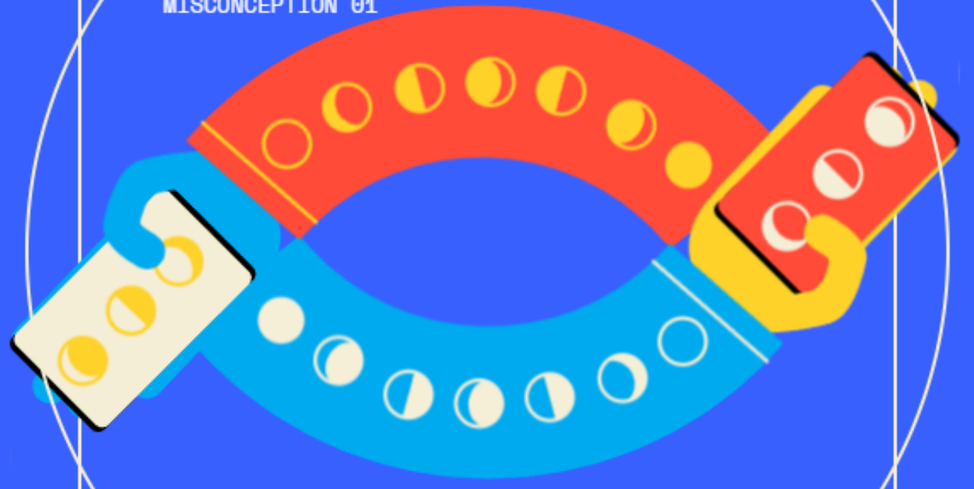
MISCONCEPTION 07

MISCONCEPTION 08

MISCONCEPTION 09

MISCONCEPTION 10

MISCONCEPTION 01



The infinite scroll is a benchmark in designing a good browsing experience

https://10ideesrecuesenuxdesign.castoretpollux.com/en/

05

How To Create A Wireframe

Mobile UX designs are interfaces for hand-held and wearable devices. Designers focus on accessibility and efficiency to optimize these on-the-go interactions.

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Why Create a Wireframe?

- This is a sketch of what the site will look like, **without color, fonts, graphics, or text**.
- This stripped-down version lets you focus on the user experience of the website/ mobile app. It's **easier to fix a UX element** at the wireframe stage, compared with later on down in the design process.
- A wireframe is a **visual map**, much like a **blueprint.**
- A wireframe does not have to be a simple sketch. A low-fidelity wireframe has only the **basic layout**, but a high-fidelity wireframe may introduce more precise design elements. That gives you and your team the flexibility to ease into the perspective of the end users, with increasingly complex details.
- UX is **how a client knows** the website**/ mobile app** is performing its job — attracting and engaging users to ultimately perform a task. You and the team should make it as easy as possible for them to convert, however conversion is defined by the client.

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Six steps you need to use the wireframing process to maximum effect.

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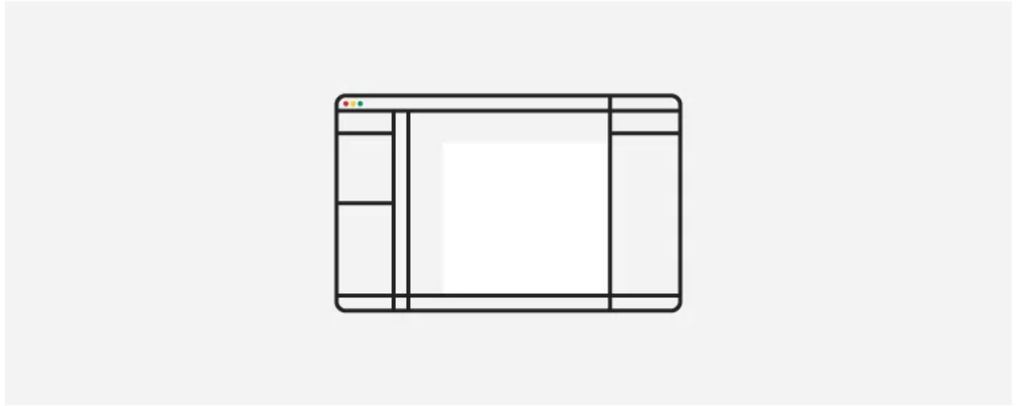
Step 1: Get Acquainted With Your Wireframe Tool



- Pen and paper - there are obvious limitations to this method. You can hardly share your wireframe with your team and it's less impressive to show to your client - that can get messy if you're using the old-fashioned method.
- The **wireframe tool** has all of the features you want when you are **working with a team** to build a high-functioning, high-conversion website/ mobile app, from wireframe to final prototype.
- The design tool can focuses on function as much as aesthetic sensibility.
- Also allows you to build a wireframe under a time crunch. It's a simple feat to share that wireframe with others and **to modify** it appropriately. Once your wireframe is set, you can go immediately to the design phase.
- There's no need to switch to a separate design tool. The platform provides you with access to all graphical elements as well as full interactive prototypes you can use for A/B testing before the site goes live.

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Step 2: Develop a User Persona

- By knowing who the **target user**, and how your client wants them to behave when they start browsing, you can develop a UX-focused wireframe. After all, not all users are going to behave the same way.
- Start by identifying a **user persona** for the website/mobile app. This is a tool often used in marketing. In order to develop sales strategies, businesses assess in detail who it is they are trying to sell to. Beyond the demographics of the website user, you should understand the **user's typical behavior**.
- Translate these tendencies into mobile app flow. As an example, for enterprise-level products, the business may want to offer the user a product demo or to sign up for a free trial. The app should guide the user to read blog posts and promotional materials. For the e-commerce site, it should be quick and easy for customers to fill up their cart and check out.
- User personas are full of important information — from stage in the sales funnel to average time spent on a particular site

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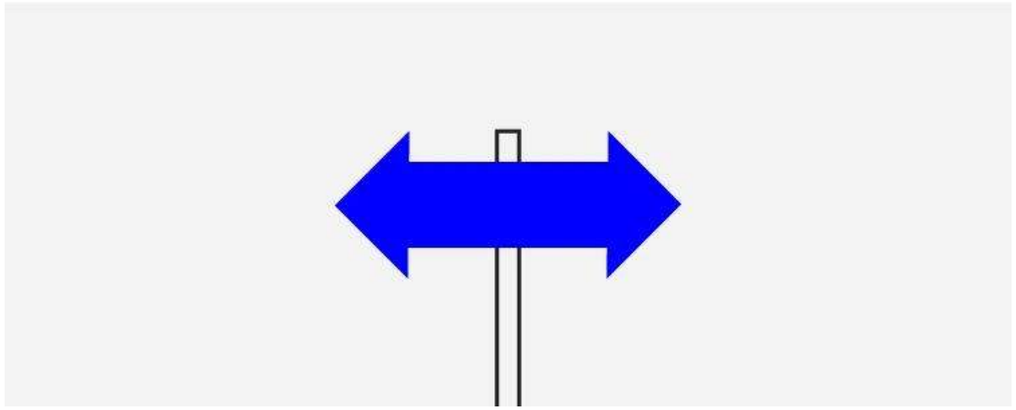
Step 3: Decide Where You Want Users to Go



- This is the crux of the wireframe process. You can determine the flow of traffic, from where they initially land on the site, through to conversion. For example, the user may land on the home page, then go to product demo or resources before answering the call to action. In order to determine this flow, answer a few key questions about the nature of this website user's experience.
- Put yourself in the user's shoes. Determine what you would want to know. At the same time, **determine where you want that user to end up.** Your flow through the site should answer their questions and, in so doing, lead them to take a particular action. Brainstorm important details, like the nature of the core message your users will see when they first arrive at the website.

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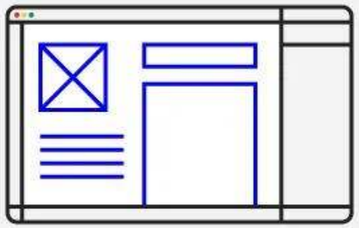
Step 4: Sketch Out Your Wireframe



- At this stage, you can start putting your flow onto the digital page. Include spaces for headers, text, videos, and clickable elements. At this stage, you can even provide important detail about what kind of information to include. For example, in the box where there's a video, you can indicate it's an informational video about the company. At this step, you still want to keep it basic. But it should nonetheless be complete enough to offer a visual representation of the website's construction.
- Focus on a few key items: **navigation, menus, footer text, click-through elements**, and **where you want the client to end up.** There's no need to discuss color schemes, fonts, or other design factors — think only about the **mindset of your user** and what leads them from one stage to the next.

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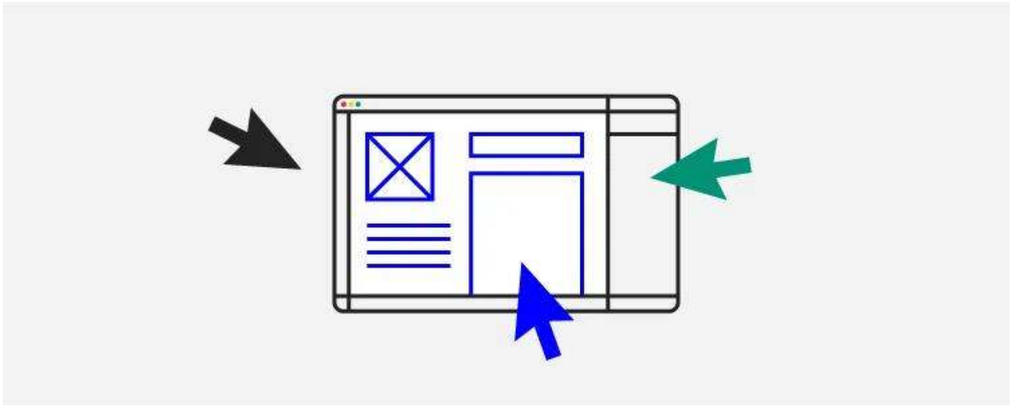
Step 5: Try Out the Wireframe With Others



- With a tool , you can **test the functionality** of the website/mobile app layout — even at the wireframe stage.
- Try out the wireframe in a few different settings. You can meet with your team and share feedback on how the wireframe feels.
- Importantly, many development teams also **test the wireframe with a focus group** that represents potential end users.
- Without knowing the background of the website, nor the objectives of the client, this focus group can offer an **honest opinion** of the efficacy of the flow through the site.
- It allows for feedback on f**unctionality**, instead of on design elements which will come later on in the process.

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Step 6: Create a Prototype

- Using any tools/ software, you can translate your **wireframe into a prototype**.
- At this stage, include all elements of the design. Your product **should be as close as possible** to the final product.
- You and your team, as well as the client, and potentially focus groups, will use the site and offer **feedback** on the entirety of the UX experience.
- That way and revisions to the site can affect all layers of the website, from functionality to its **look and feel**.

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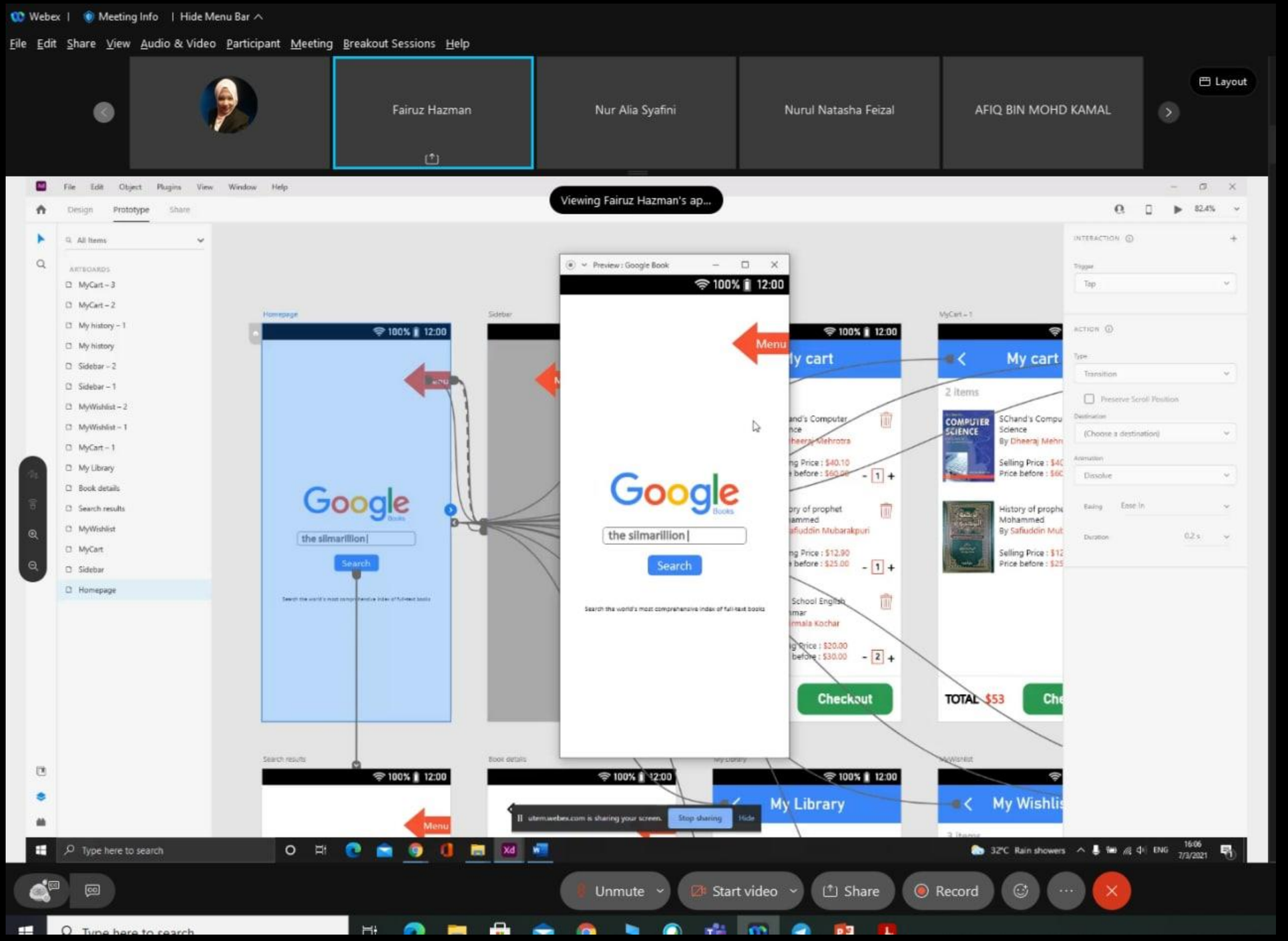
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Nur Alia Syafini
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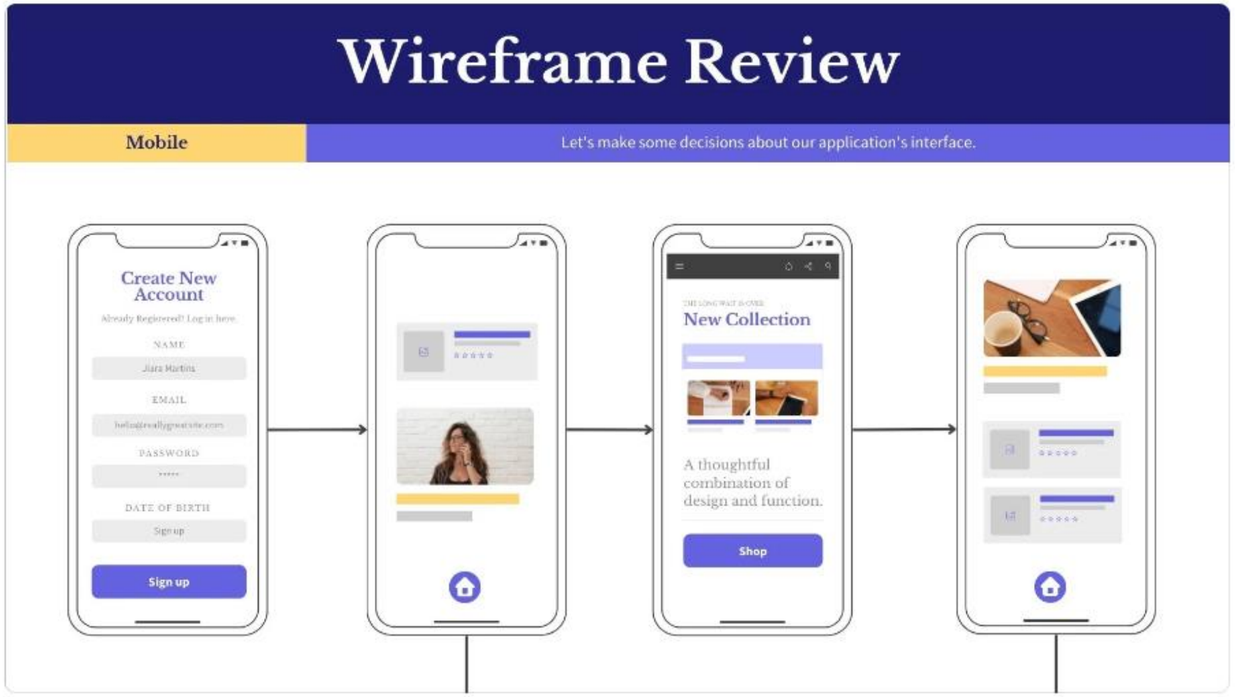

Wireframe Flowchart Whiteboard in Purple Violet Adjacent Color Blocks Style

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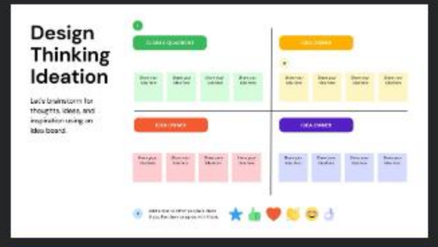

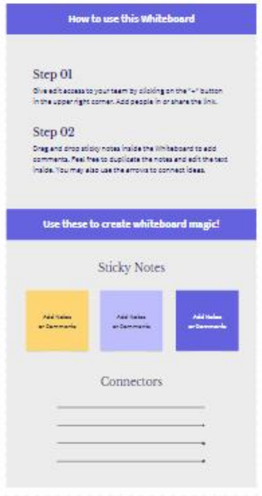

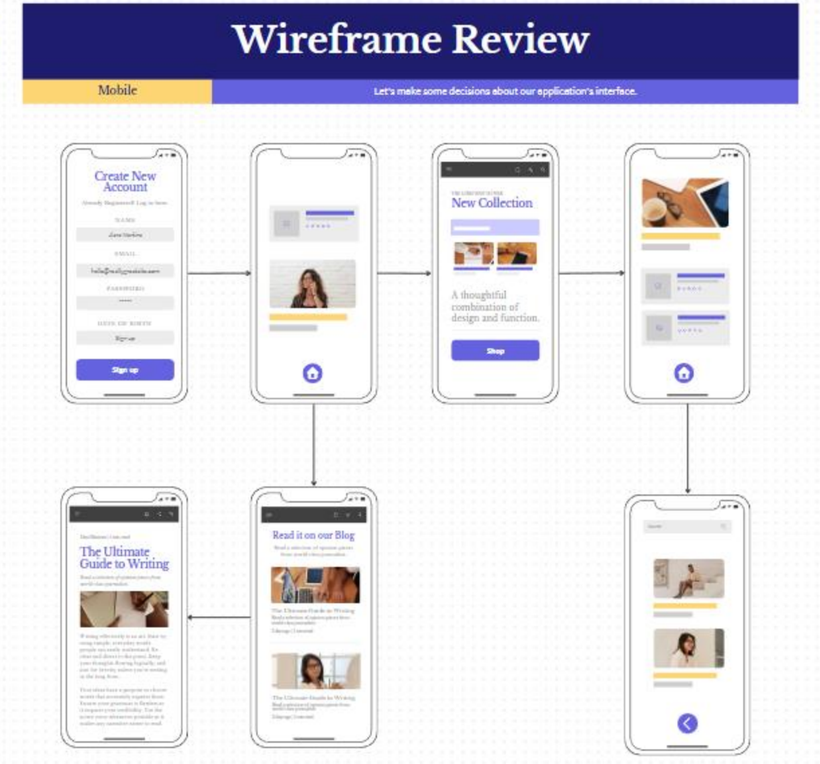

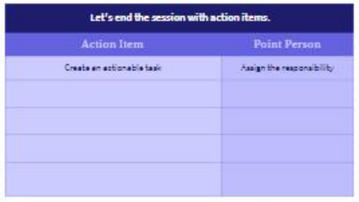

MIRO

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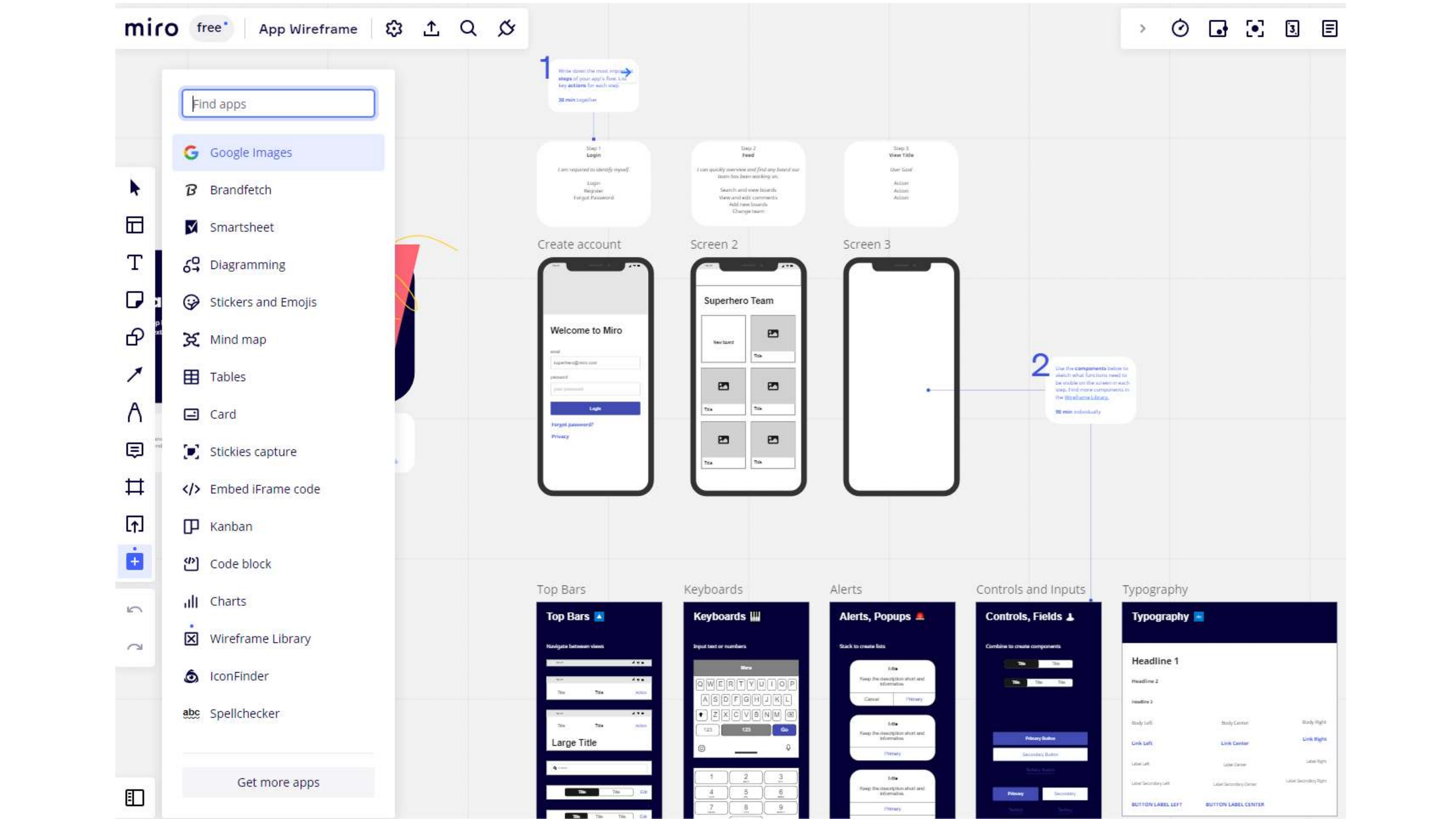
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App Wireframe
Find apps
Google Images
Brandfetch
Smartsheet
Diagramming
Stickers and Emojis
Mind map
Tables
Card
Stickies capture
Embed iFrame code
Kanban
Code block
Charts
Wireframe Library
IconFinder
Spellchecker
Get more apps
1
Create account
Screen 2
Screen 3
Welcome to Miro
Superhero Team
2
Top Bars
Keyboards
Alerts
Controls and Inputs
Typography
Top Bars
Keyboards
Alerts, Popups
Controls, Fields
Typography
Large Title
Headline 1

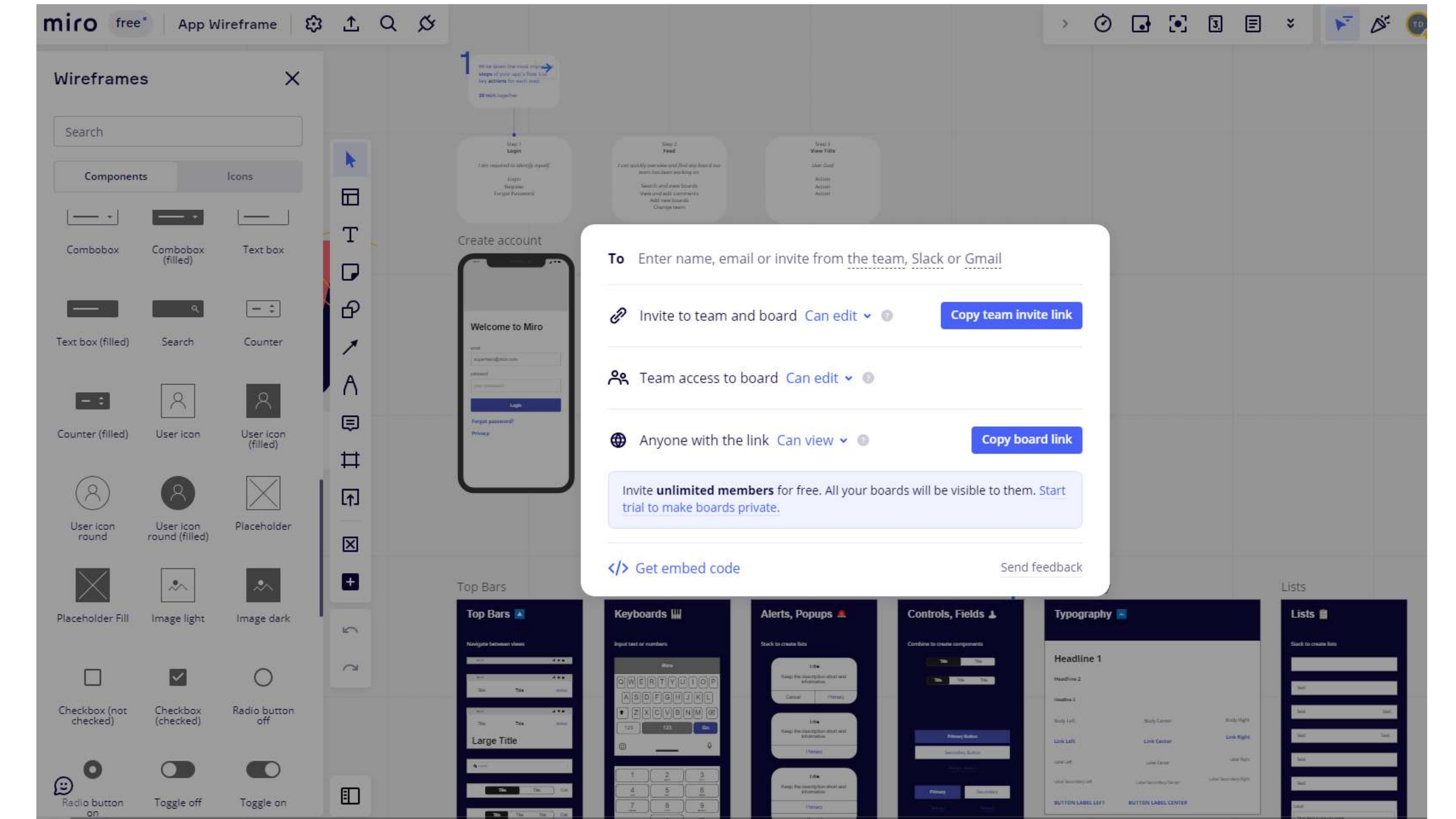
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Image light
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Checkbox (not checked)
Checkbox (checked)
Radio button off
Radio button on
Toggle off
Toggle on
Create account
Welcome to Miro
To Enter name, email or invite from the team, Slack or Gmail
Invite to team and board Can edit
Copy team invite link
Team access to board Can edit
Anyone with the link Can view
Copy board link
Invite unlimited members for free. All your boards will be visible to them. Start trial to make boards private.
Get embed code
Send feedback
Top Bars
Lists
Top Bars
Keyboards
Alerts, Popups
Controls, Fields
Typography
Lists
Large Title
Headline 1

06

Mobile App Design Trend

https://fireart.studio/blog/mobile-app-design-trends-2020-comprehensive-collection/
https://www.smashingmagazine.com/2018/02/comprehensive-guide-to-mobile-app-design/

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Boost user experience with in-app gestures

When using an app, we all use gestures. We **touch the screen**. **Swipe it, tap, rotate**. The gestures are various, but we always expect that finding the right gesture won't take too much time.

We're already used to double-tapping any Instagram photo you 'like' it, and it has become one of the standard gestures we use every day. We don't even pay attention to some of the gestures and do them intuitively.

https://developer.apple.com/design/human-interface-guidelines/inputs/touchscreen-gestures/

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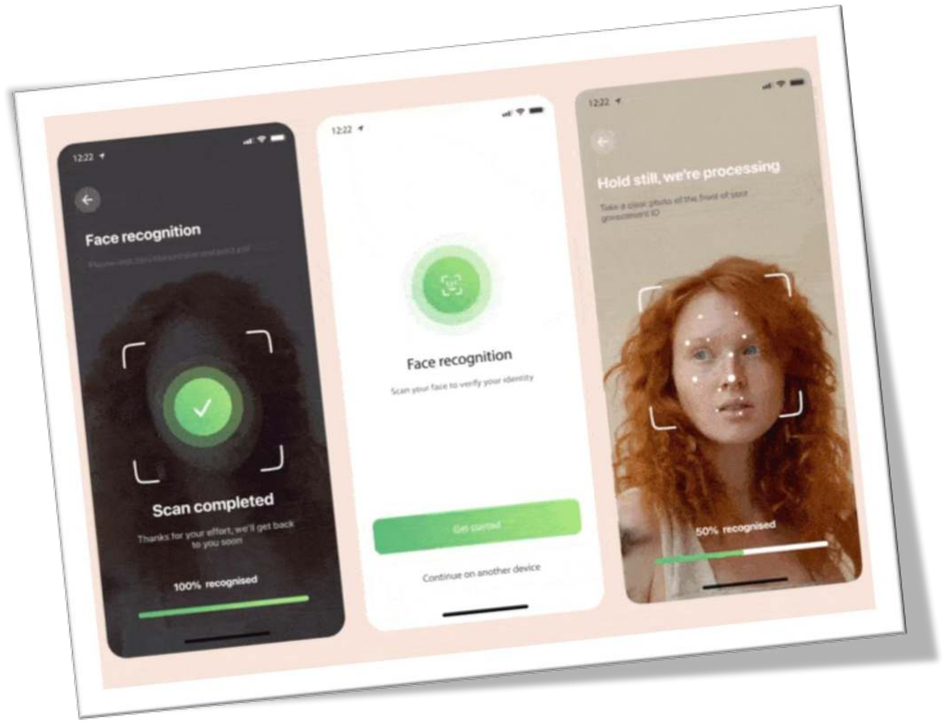

Face ID

Face ID technology has changed the way we interact with devices and apps. No more passwords, no more mistapping. You o**just need to look at the screen** f your device, and it is unlocked.

Face ID appeared for the first time in 2017, and it is now used in all **Apple/ Android devices.**

Camera captures accurate face data by projecting and analyzing over 30,000 invisible dots to create a depth map of your face and also captures an infrared image of your face', therefore, this is a more advanced technology than Touch ID.

That's an amazing opportunity for UI designers to smoothen the user flow, improve mobile app design, and make people feel more secure. Face ID is a mobile design trend you should start working on because 2022 will surely see this technology being much more widely used, especially when in e-Commerce app design.

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Motion: Video and Animation

According to Wyzowl, **96% of people have watched an explainer video** to learn more about a product or service. Video content is booming: we spend hours watching Youtube and Vimeo, and expect from all brands to be presented on these platforms.

If you still ignore video and animation in your marketing strategy, make a switch. You'll notice the difference: your **landing page will get more leads**, the content will finally start to convert users, and brand loyalty will be higher than ever.

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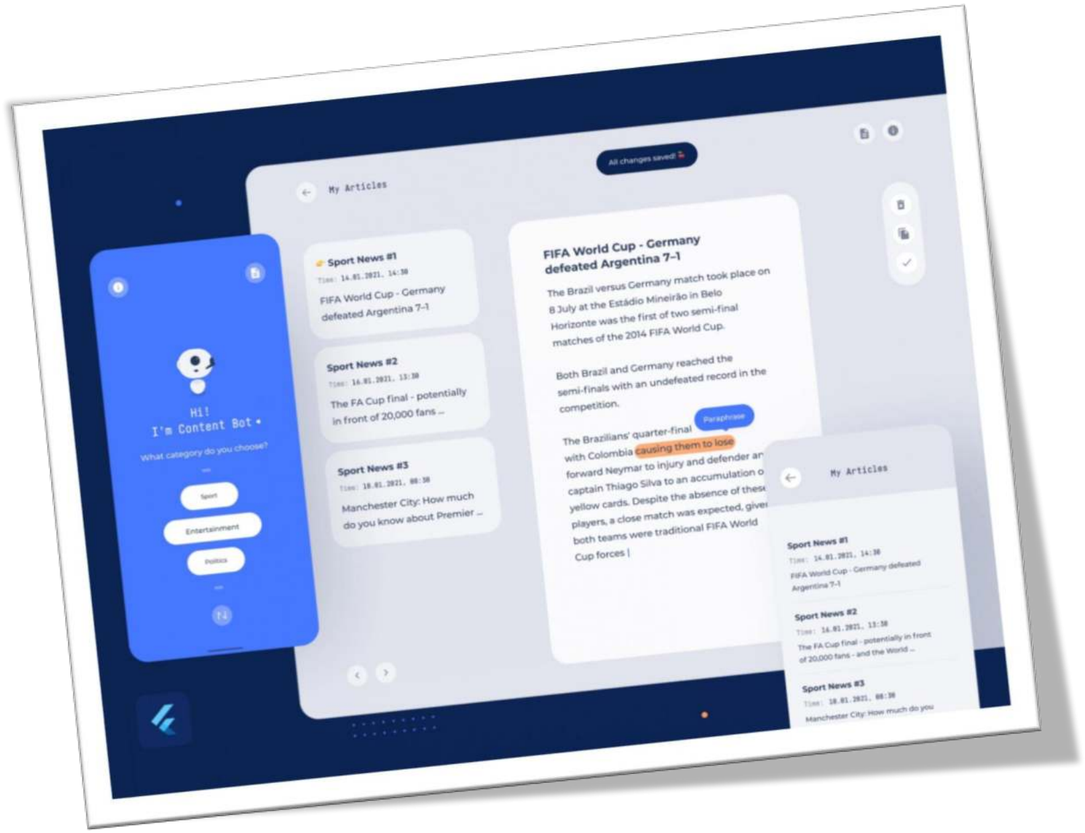

Chatbots And Conversational Design

In 2022, the revenue from chatbot is promised to turn up $83.4 million, and by 2027 this number will reach $454.8 million. This is definitely one of the mobile UI trends 2022, and it won't lean back.

Chatbots **help to optimize business** processes concerning communication with clients. Moreover, they are helpful when it comes to processing multiple requests at a time, and working with common issues.

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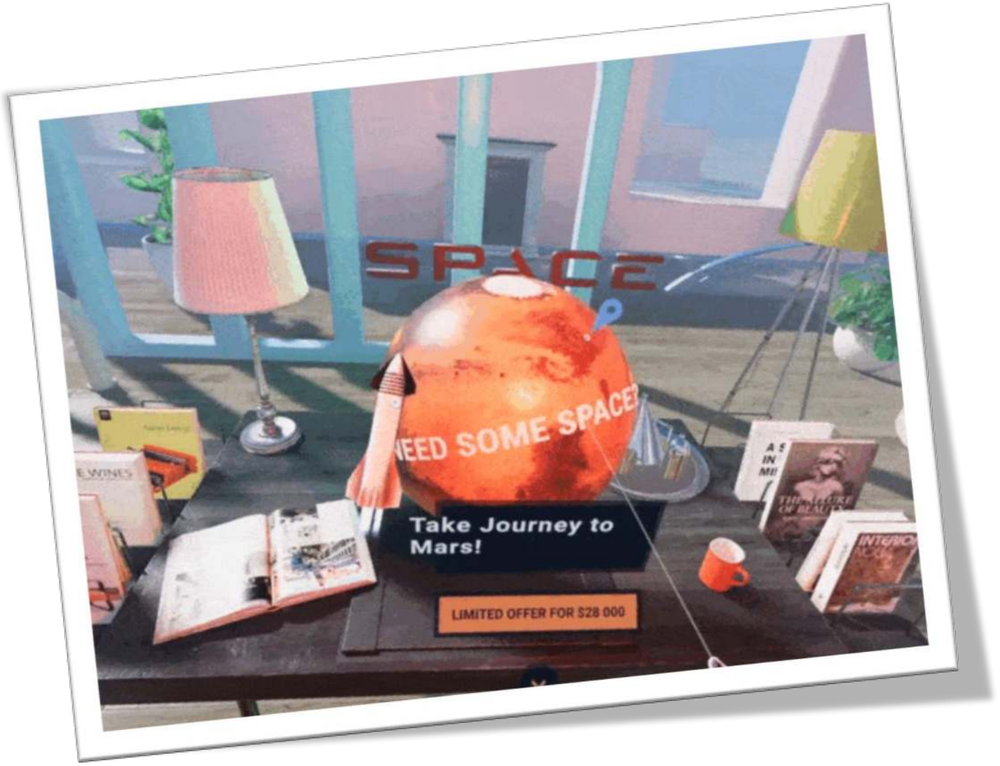
Augmented Reality In UI Design

In 2019 the number of augmented reality mobile users was 0.44 bln worldwide. In 2024, this number is expected to reach up to 1.73 bln! If you want to get ahead of the time, introduce augmented reality to the list of latest mobile UI design trends that are obligatory to use.

Introducing AR into UI can hardly be done by a small team of designers. Here, you will need deep expertise and a professional approach. It’s better to hire a team of experts who will develop a strategy for using augmented reality in design and help with its implementation.



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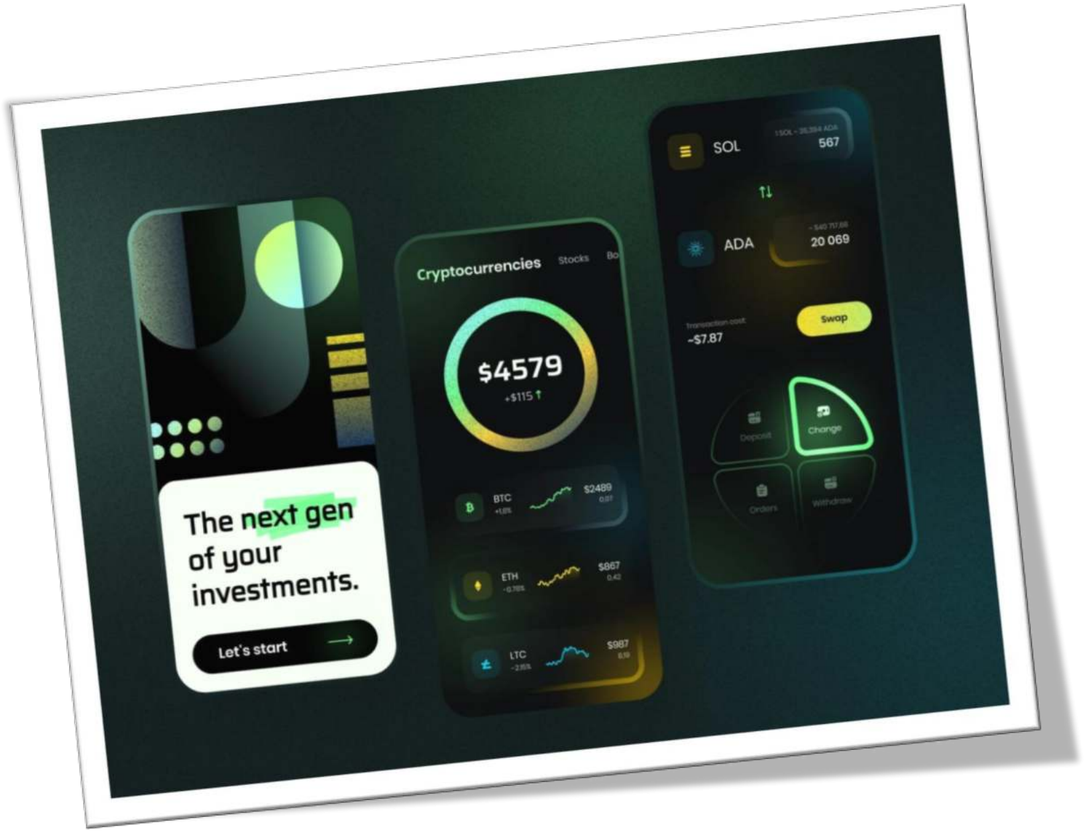

Neutral Interfaces And Content-focused Experiences

Many of the mobile UI trends 2022 emerged from the most popular tendencies of the previous years. Neutral interfaces and content-oriented experience is one of them. It encompasses several approaches that we recall below.

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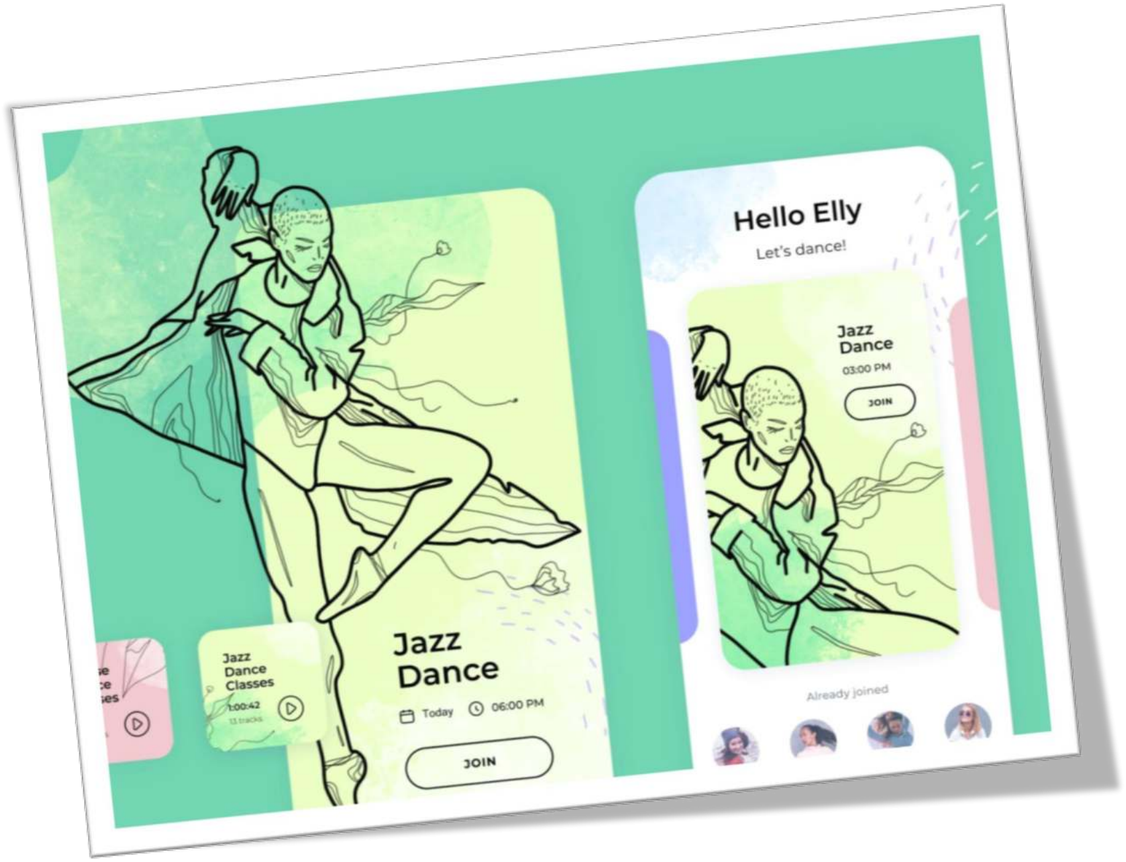
Illustrations

Illustrations are a great supporting tool that can help with business identification and brand demonstration. Whatever idea you want to convey, an illustration helps to make it as clear as possible even though you use a metaphor.

You can use illustrations of different types for your business. But remember: try not to mix styles, not to mislead your clients.



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Serif fonts

Serif fonts are clear and elegant, and they help to visualize texts in the most attractive way. There is a psychological trick behind the serif fonts: the letters stand out clearly, so it gets easier for the brain to remember the words.

The top 5 popular serif fonts are as following:

Hermann
Recoleta
Blacker
ITC Lubalin Graph
Linotype Didot

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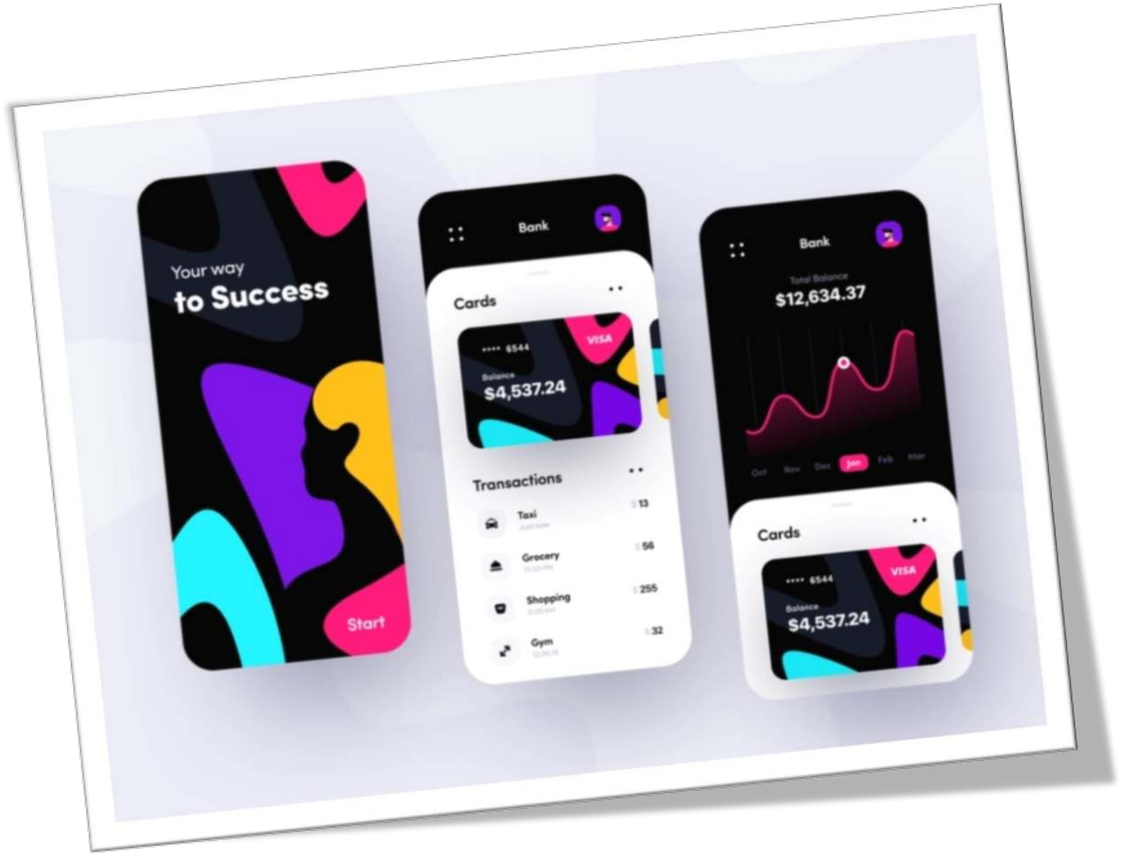
Futuristic color

Neutral interface no longer means using neutral colors. Mobile UI trends 2022 insist: using **futuristic colors**, you drive the attention to the most important parts of the design. Moreover, they help to stand out from other **neutral designs** that frequently look the same.



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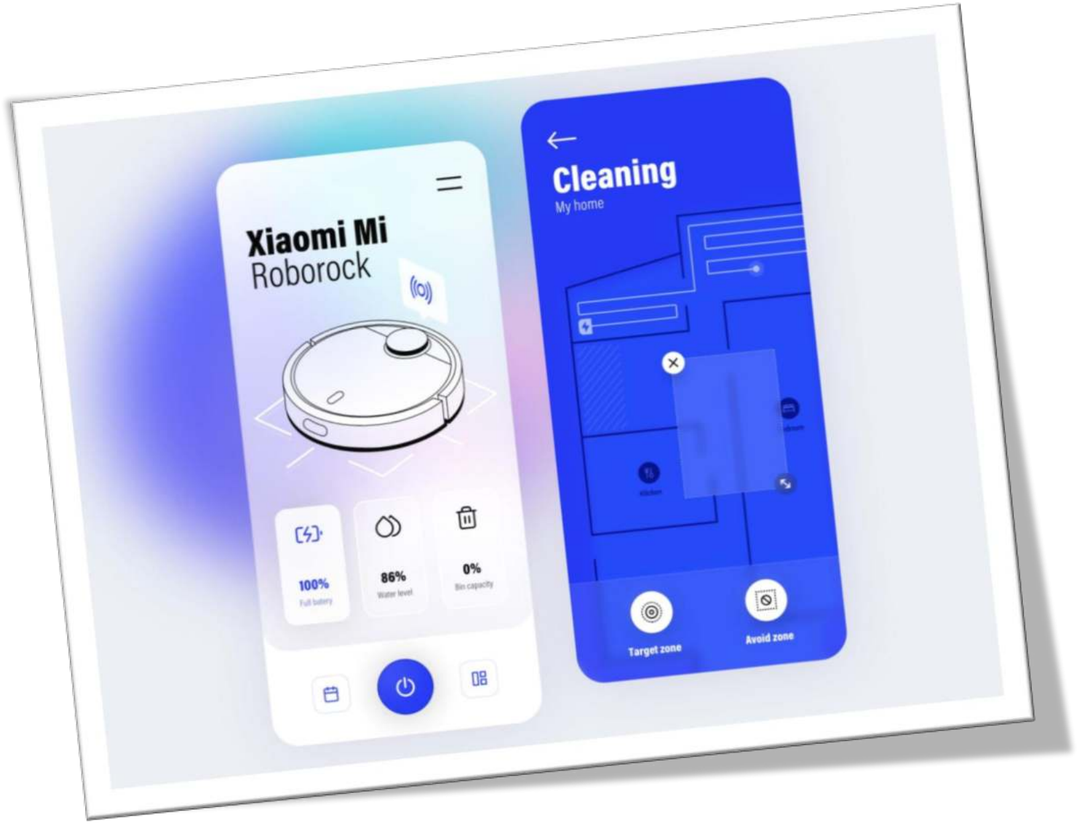

Transparent elements

Transparent elements in design help to demonstrate depth in design. Also, this is an additional way to drive attention to certain elements and make the design clearer and more attractive.

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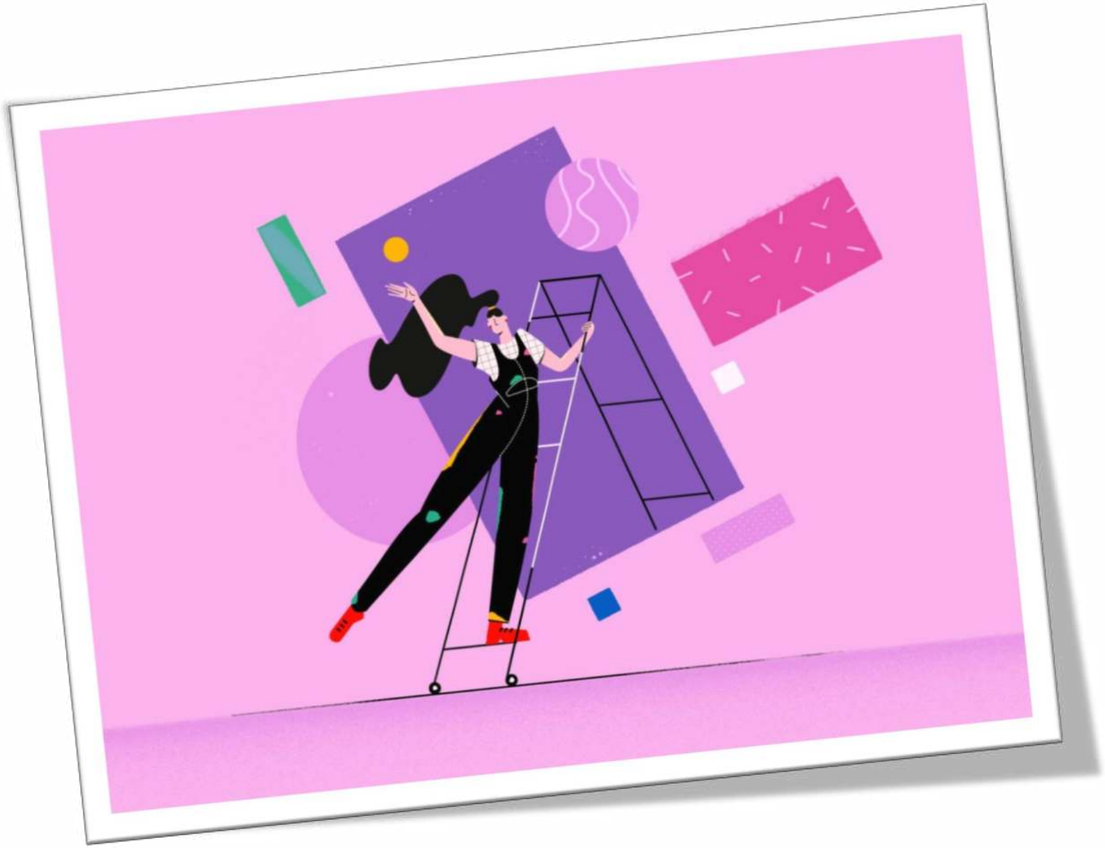
Rounded, organic shapes

At the moment you decide to apply a shape to the interface, the design gets into the mobile UI design trends. In combination with other approaches, you get a stylish element that sharpens the experience and helps to create a clear and unambiguous design.



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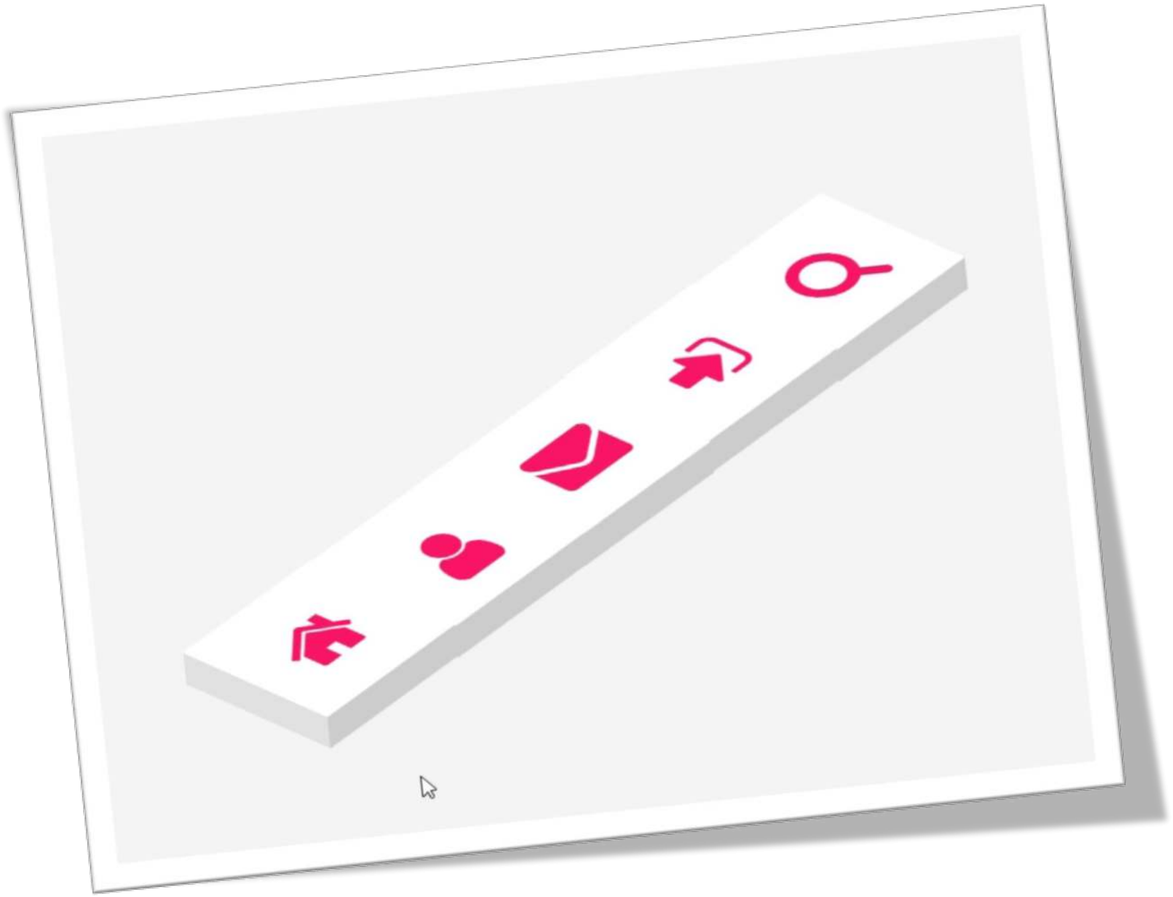

Dynamic Visual Experience

To enhance the UI of your website or app, add some dynamics to the interface. The least complicated way to do that is to add some animation or videos. Micro-movements can change your application significantly. With the help of animation, you can emphasize app features, improve conversion rates, and even sales.

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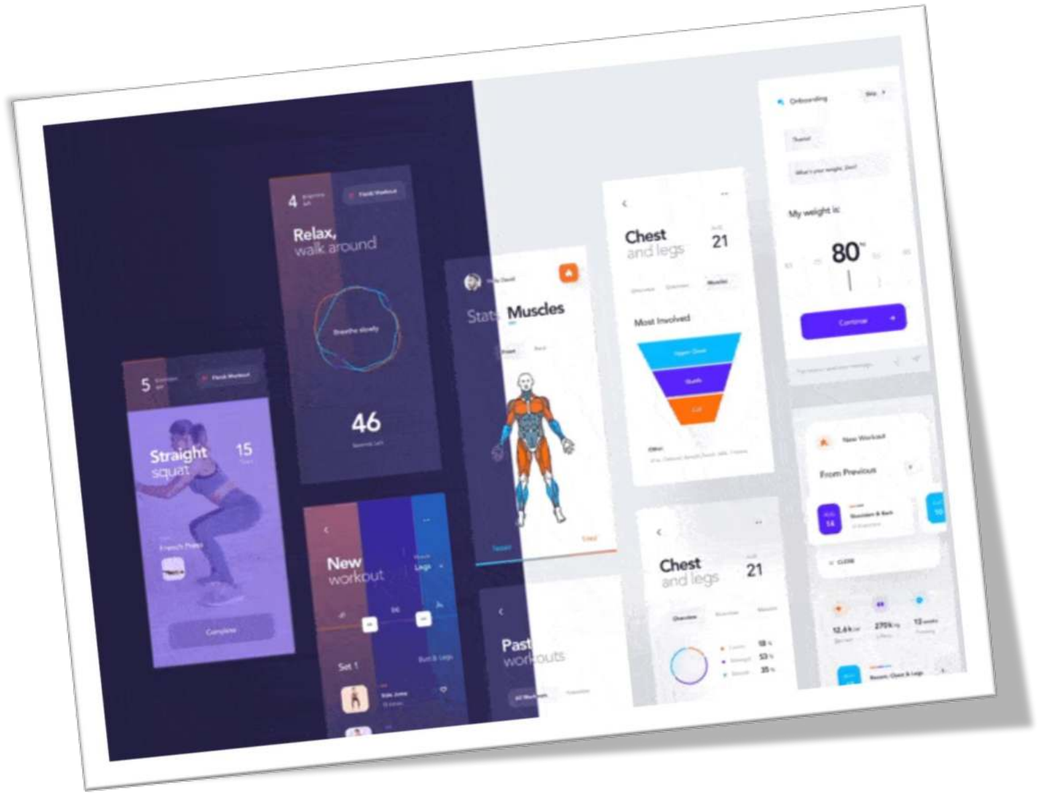
Dark mode

Dark mode is probably one of the most popular interface themes that are currently presented in a huge number of apps and devices. It’s opposite to the standard mode with dark text on a white background: in dark mode, the text is white, and the background is dark.

More and more devices and apps provide an option of switching between these two modes.



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Convenient Voice Interactions

Mobile UX trends 2022 are a little bit more than just visuals. Currently, they also include voice interactions – just like Siri, Google Assistant, and Alexa. However, with VUIs it's important to stick to the idea and the message not to overload users with information.

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More Extravagant Digital Illustration

The number of designs that exist today is uncountable: websites, apps, landing pages, images, videos, etc. It’s almost impossible to create something that has never existed before. Still, you need to stand amongst the others and introduce some new approaches to design.

Extravagant digital illustration can help you with that. Don’t hesitate to experiment with the images: you can always return to previous forms if you’re not satisfied with the results.

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The Passwordless Future

With the rise and development of technologies, it would be a mistake to ignore them. People have gotten tired of passwords, they are annoying and not safe. New technologies allow forgetting about passwords, so it’s time to integrate these technologies into your projects.

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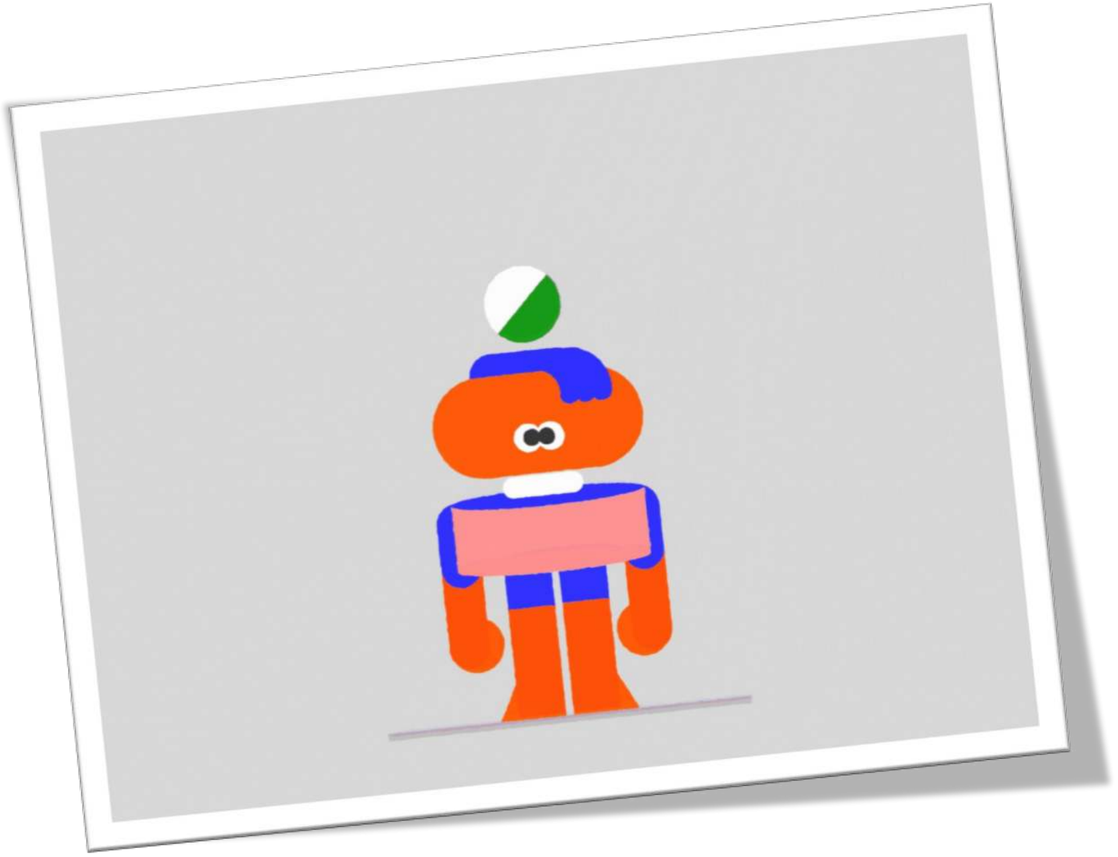
Advanced Animation

One of the biggest mobile UI design trends that you are to introduce into your designs is advanced animation. Simple movements won’t attract your users anymore. Try to add new, more complicated transitions and you’ll notice the difference.



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Liquid Swipe and Buttonless Design

We have already mentioned common gestures for iOS and Android. You can use this information in creating a buttonless design with a liquid swipe. Users do not need to see a visual button to understand where they need to click or swipe to get the desired result. So why to keep adding these visuals to the UI?

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06

UI/UX Design For People With Disabilities

You can refrain from futuristic colors and VUI, but your design must work effectively for people with any kind of disability.

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UI AND UX DESIGN FOR PEOPLE WITH DISABILITIES

When working on any UI/UX, you need to remember the users who will interact with it.

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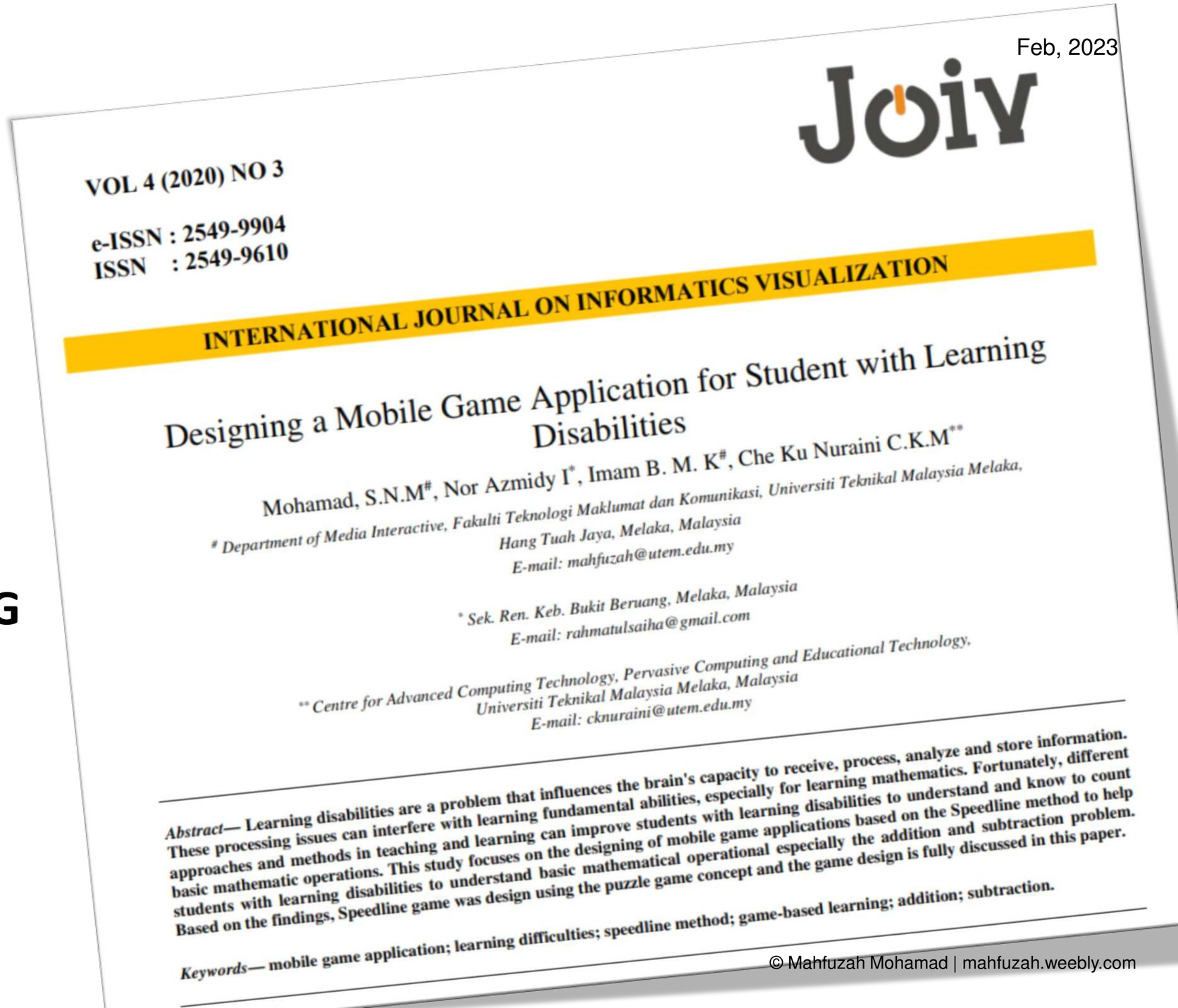
SERIOUS GAME FOR CHILDREN WITH LEARNING DISABILITIES TO IMPROVE UNDERSTANDING ON BASIC MATHEMATIC OPERATION

http://joiv.org/index.php/joiv/article/view/404



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Designing a Mobile Game Application for Student with Learning Disabilities

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Abstract— Learning disabilities are a problem that influences the brain's capacity to receive, process, analyze and store information. These processing issues can interfere with learning fundamental abilities, especially for learning mathematics. Fortunately, different approaches and methods in teaching and learning can improve students with learning disabilities to understand and know to count basic mathematic operations. This study focuses on the designing of mobile game applications based on the Speedline method to help students with learning disabilities to understand basic mathematical operational especially the addition and subtraction problem. Based on the findings, Speedline game was design using the puzzle game concept and the game design is fully discussed in this paper.

Keywords— mobile game application; learning difficulties; speedline method; game-based learning; addition; subtraction.

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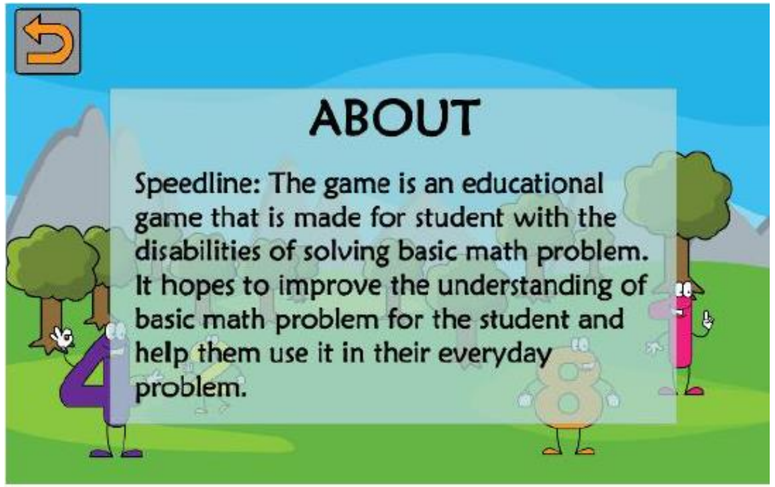
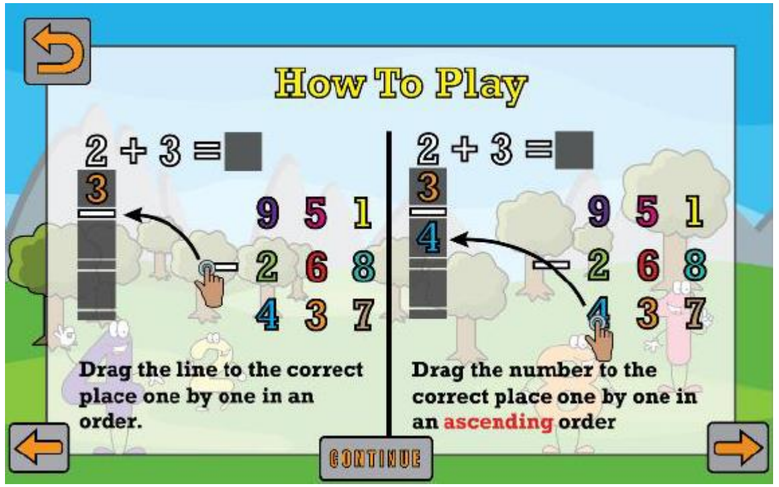
This project presents the development of games for children with learning disabilities to improve understanding on basic mathematic operation. The project focused on mobile games that will act as a learning tool for slow learners' students. Besides, game-based learning is one of a suitable way for slow learner and others.

Award :
Primary School e-Learning Award
Gold Award -IIDEL
Special Award – E-Teacher (IUCEL 2019)
Mobile Apps Competition
Gold Award (IMU 2020)





Speedline is a new method that uses lines to improve understanding of addition and subtraction operation. Speedline method is designed to allow students to calculate easily, quickly and accurately. In other words, it is a new initiative by Subject Matter Expert to enhance student understanding on how to perform basic mathematical operational especially addition and subtraction operation for students with learning disabilities.

https://speedlinemath.wixsite.com/mysite/serious-game

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Mobile Game Design

Image classification method is used instead of the object detection method since this study aims to recognize the food image as one whole meal instead of each food item in the image. The primary purpose of image classification is to classify images into the appropriate groupings.

There are three main steps in TensorFlow image classification for mobile development. An image classification model is fed photos and their corresponding labels during training. Each label designates a unique category or class that the model will come to identify. An image classification model may learn to predict whether fresh photos belong to any classes it has been trained in given enough training data (typically hundreds or thousands of images per label), and this prediction process is called inference.

https://beei.org/index.php/EEI/article/view/4916

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Mobile game model for monitoring Malaysian food calories intake using image recognition

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ABSTRACT

Two important problems related to food consumption were reported in Malaysia: Malaysia was the sixth rank in Asia for the highest adult obesity rate; and the United Nation reported that Malaysian consumed an average of 2,910 calories per day. An imbalanced diet and high intake of calorie-dense food problems that need attention to reduce obesity. These problems affect national economies by lowering productivity, increasing disability, raising health care expenses, and shortening life spans. Although, there are food calorie tracking applications available, however, existing apps are less engaging and to recognize Malaysian food due to its not versatile databases. This can be solved using game technologies. Hence, this study will propose mobile game model as a solution to the underlying problems. There are 4 phases in the method: expert validation, initial model, expert verification, and final model. The proposed parameters were validated by dietitians, and nutritionists. The model was verified by game experts. A low fidelity prototype was developed based on the proposed model to assist the expert verification process. The model was finalized based on the expert's feedback. The proposed game model resolves the limited recognition of Malaysian food and monitoring the food calories intake in an engaging way.

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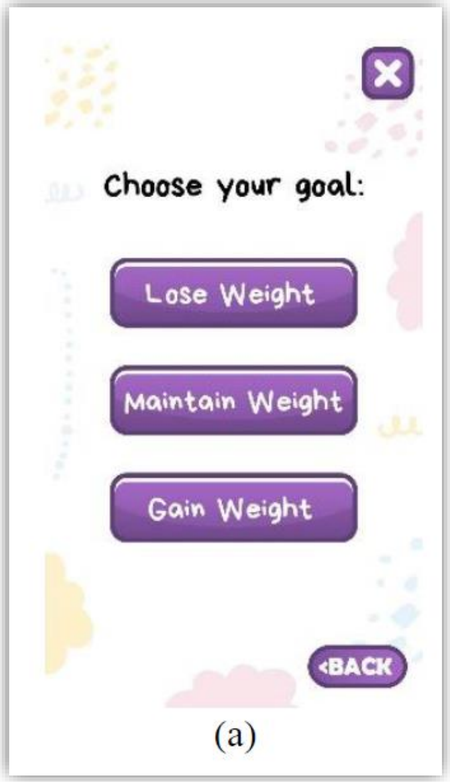

Goal Screen

Level Screen

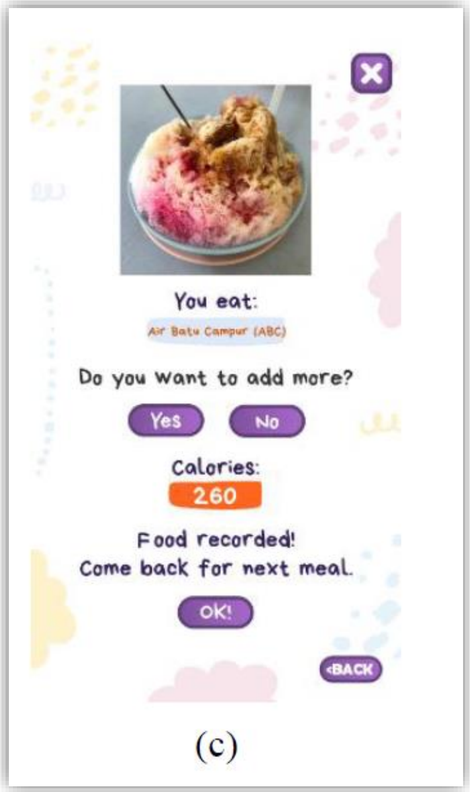

Image Classification

Battle Screen

Reward Screen

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Feb, 2023

07

Adobe Education Exchange

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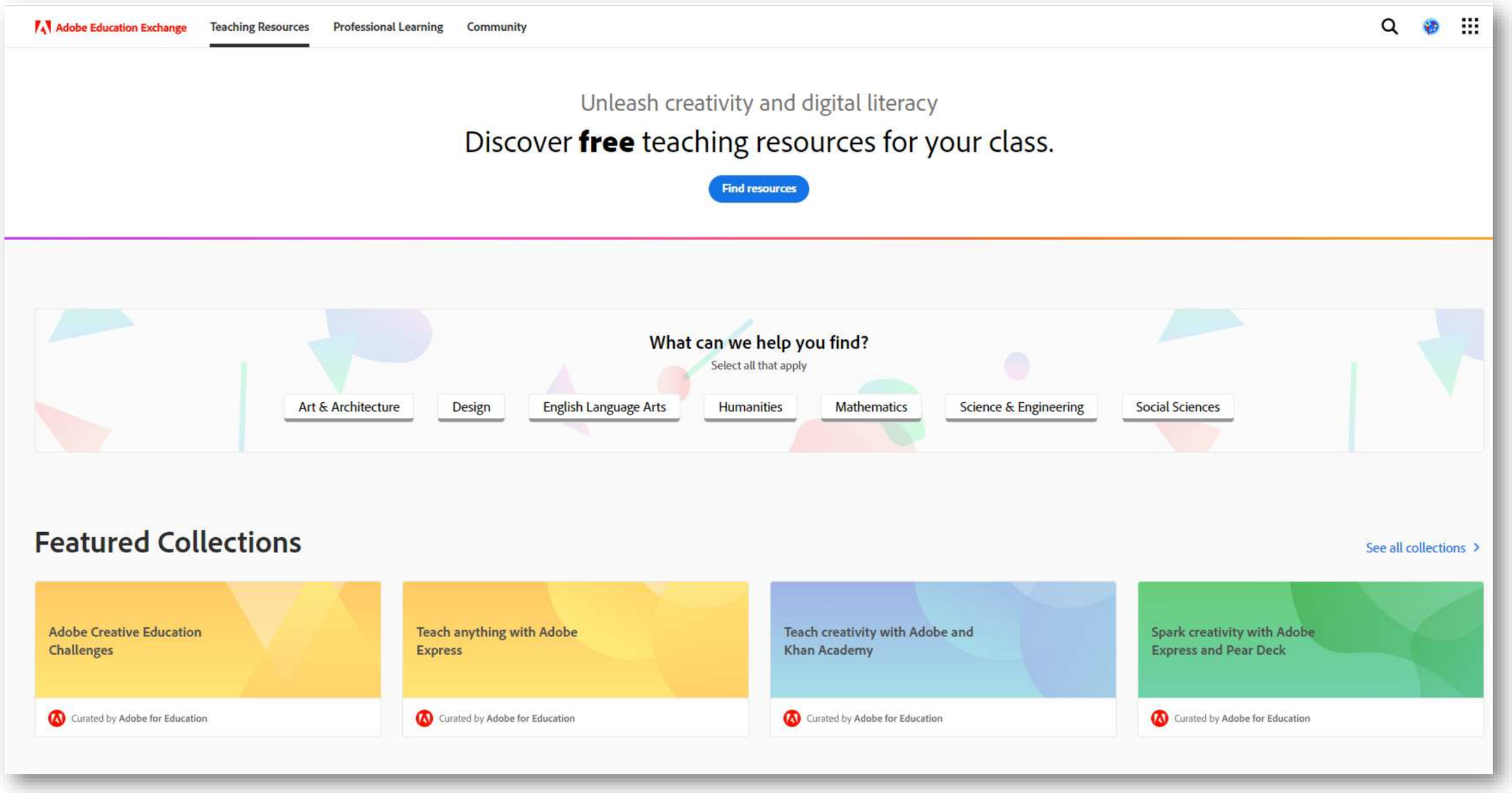

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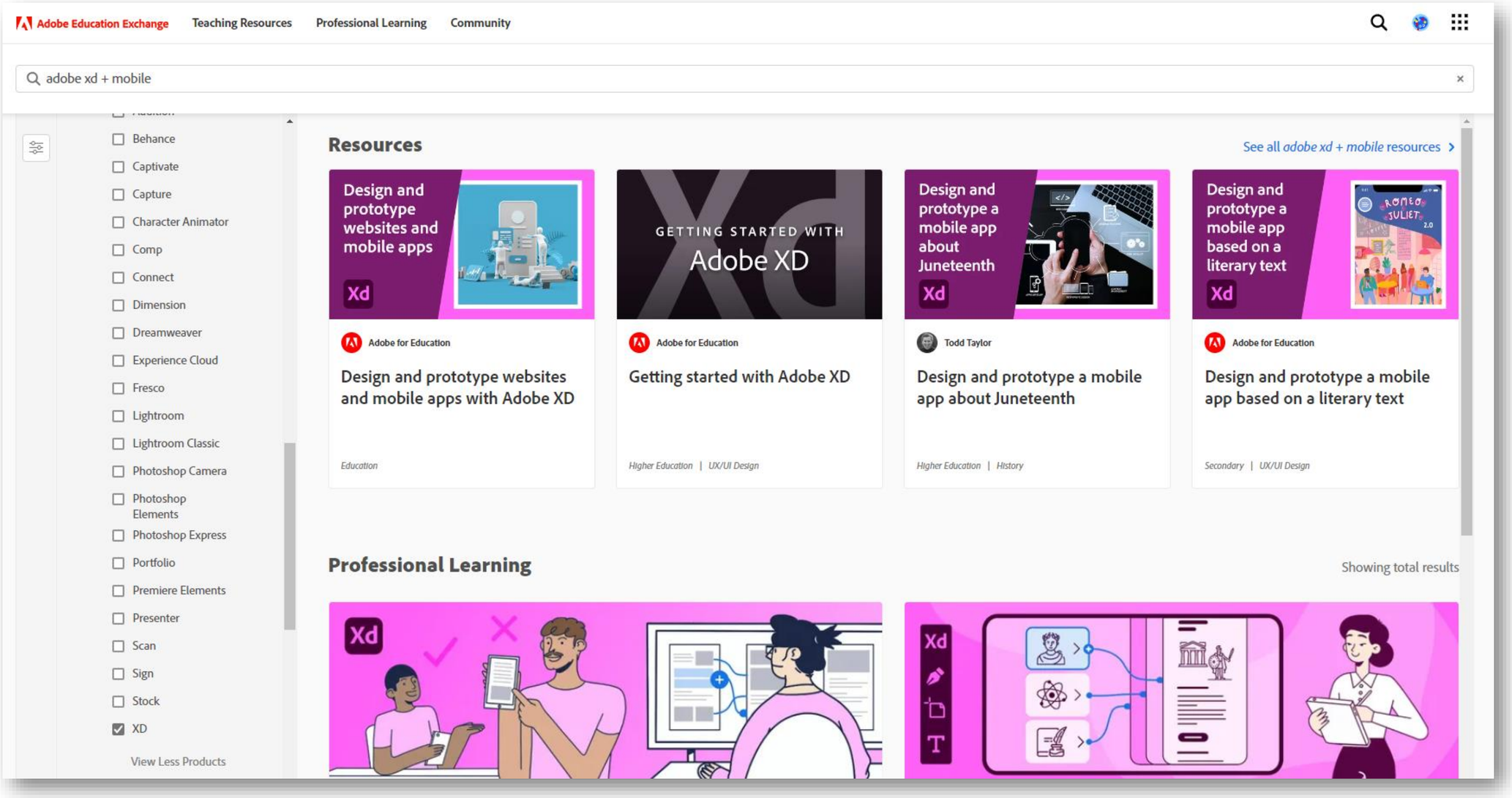

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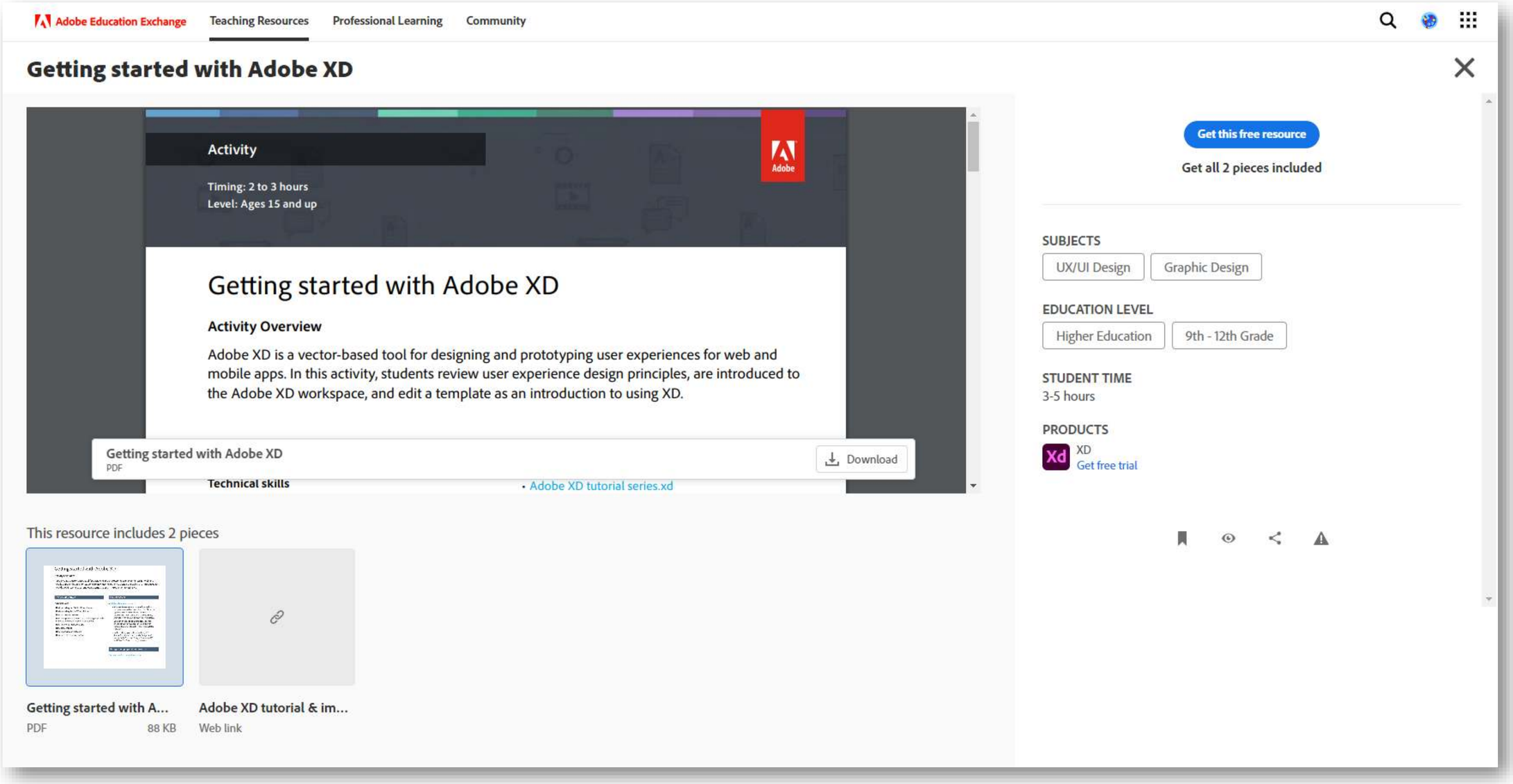

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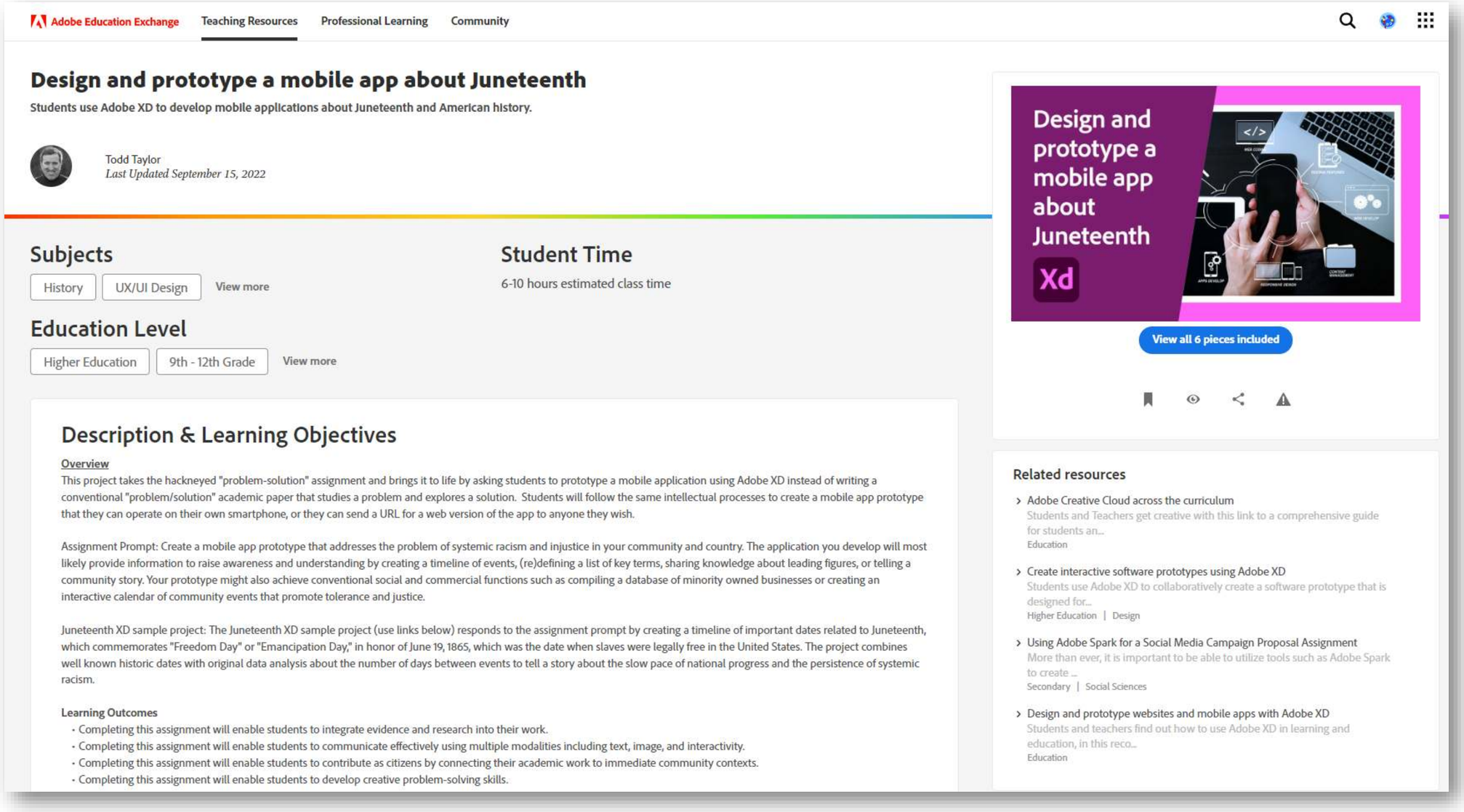

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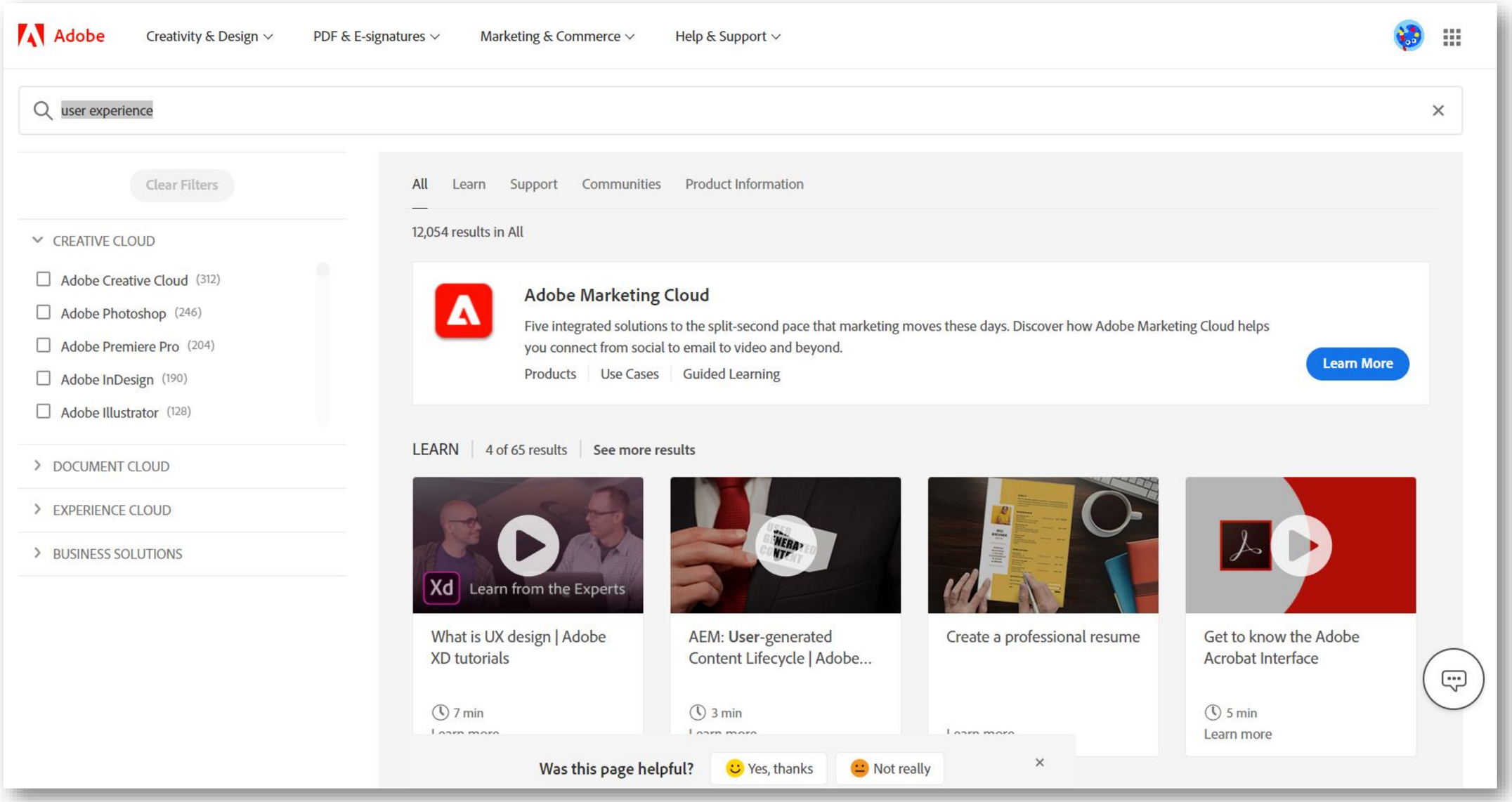

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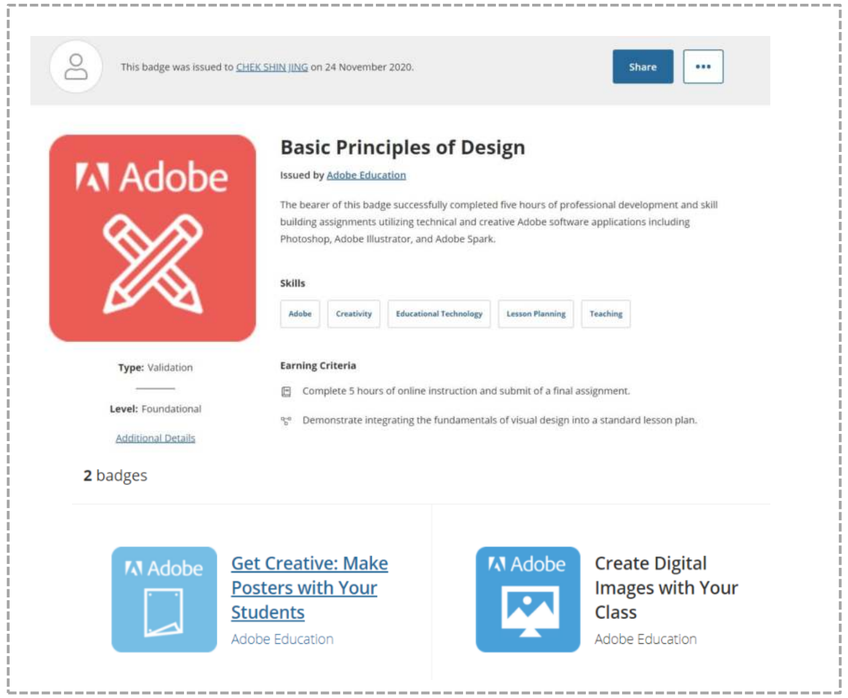
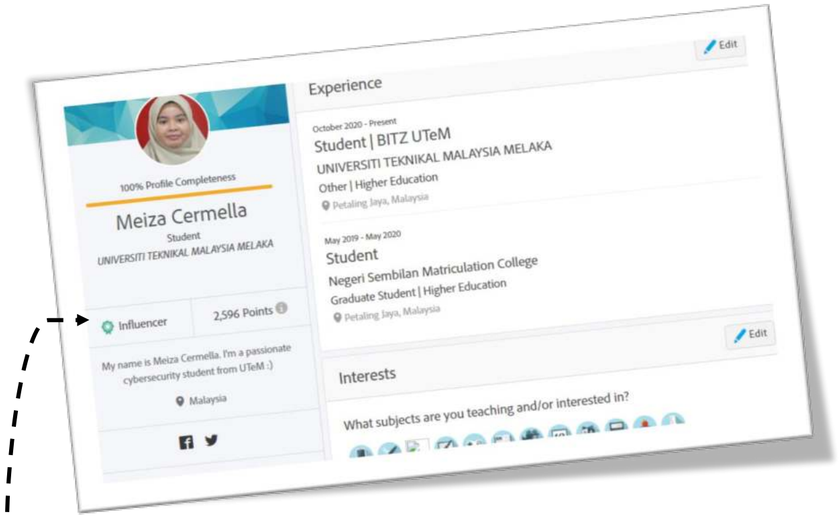
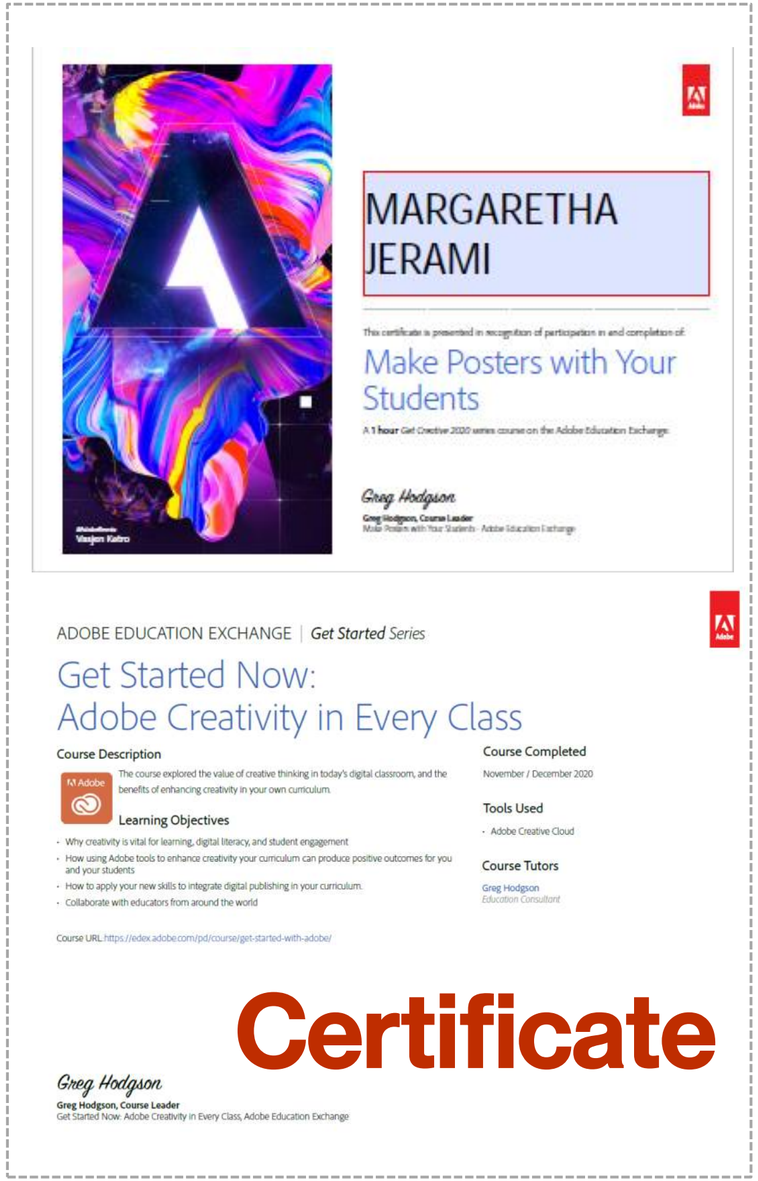
Digital Badge





Influencer



Certificate

Good UX is essential to the success of your product and your business, and UX designers are an integral part of the process. By putting your customers' needs at the core of your design, learning about their expectations, and then exceeding those expectations, you'll end up with loyal customers that sing your praises and spread the word about your product.

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Be Creative!

Thank You

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