Lab #3
Designing Alternatives.
Developing Low-Fidelity Prototypes.

Objectives:

- Understanding phases of UX design development
- Learning and applying ideation techniques in designing novel UI.
- Utilizing concept ideation and sketching for designing alternative UIs
- Creating low-fidelity prototypes for a system UI.
- Working with various software to create low-fidelity UI prototypes.

Procedure:

You will continue working **in the assigned groups**.

In **this lab**, teams will complete the second phase of UX design, i.e.
designing alternatives,
designing usable information architectures applying UX principles and guidelines for creating user interfaces,
designing sketches and wireframes (low-fidelity prototypes).

Each group will develop **several interfaces** for the information systems (refer to lab 2) that will improve existing practices form the perspective of usefulness, usability and satisfaction.

1. Concept Ideation and Sketching
Use the data gathered the previous phase, functional, non-functional requirements (backend functions: security, performance, maintainability, etc.) and usability requirements (front-end features).

1. Process. At this stage of the project, use the following techniques to develop UI for your system:

- **ideation and creativity meetings** for brainstorming for UI for your system. Collect individual experiences and ideas, create a list of ideas regarding the content of the system, display layouts, navigation, components and visual elements.

- **affinity diagrams** (individual ideas are organized in categories) to collect ideas regarding UI display layouts, navigation, components and visual elements.

- Use **sketching** (visualize ideas) to present layouts, navigation, and groups of UI components.

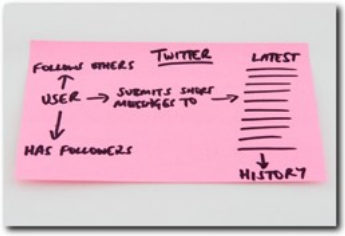
2. Implementing Information Architecture.
Information architecture (IA) is a science of organizing and structuring content of the websites, web and mobile applications, and desktop software.

IA forms a skeleton of any design project.
Visual elements, functionality, interaction, and navigation are built according to the information architecture principles.

2.1 Planning Content (possible techniques: **brain writing, affinity cards, content prioritization activity, competitor likes and dislikes**)

Discuss and brainstorm on the **content** for the system, **types of the content**, intuitive ways of organizing the content. Utilize the data from the previous stage of the project to reflect on the users' needs for the content, usability and usefulness of navigation through this content to complete the tasks.

Create a concept map: outline how the system will work at a higher level.
Document the content in **sketches and writeups**.



2.2 Designing Structures to house information (possible techniques: **cards sorting, rapid sketching activity**)

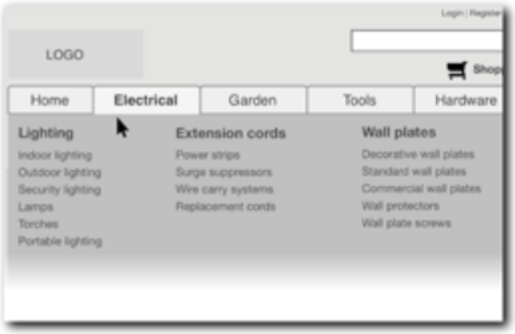
Define system's component **sections**, the organization of content that sits within those sections, and the **labelling** used to describe those sections.

Document the results in the form of **sitemap**.

2.3 Designing Navigation (possible techniques: **cards sorting, rapid sketching activity**)

Decide how many **levels of navigation** will there be, where will it appear on the different pages, where will it appear within the interface, what will the specific **navigation labels** be.

Document the **navigation solutions within sitemaps** use them later in wireframes and page sketches.



Use UX principles and guidelines described in Lecture 5 for designing navigation for your system.

2.4 Designing pages, page components, and functional elements (possible techniques: **cards sorting, rapid sketching activity)**

Define the **individual page components** of a system and how they should be presented in the most effective way (**order** within the screen, **call to action** elements, elements **groups**, how the system delivers its functional objectives).

Use UX principles and guidelines described in Lecture 6 for designing displays for your system. Document the results producing **sketches**.

Apply heuristic ways of organizing information:

Location - Organize by physical geography or by position within a space of a location.

Alphabet - Categorize information by alphabetical order, such as names in an address book.

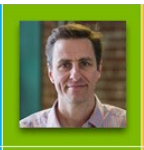
Time - Organize information in chronological order, such as ordering news articles by latest published.

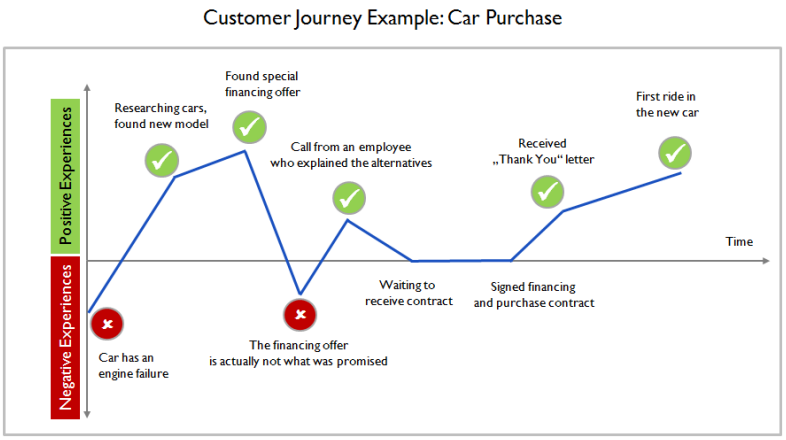
Category - Group objects or content by similar attributes, such as music albums grouped by musical genre.

Hierarchy - Group by magnitude, such as the largest to the smallest or such as the “view cheapest first” sort options on e-commerce search results.

2.5 Use **Card Sorting** to **Involve Users** in the **IA Design Process**.

2.6 Use personas from the previous lab to create **task analysis or user journey map**:

Hotel booking service Personas overview				
Name	**Victor**	**Hailey**	**Brian**	**Valerie**
Occupation	Chef	Recent graduate	CMO	Accountant
Age / Gender	32 / Male	24 / Female	43 / Male	36 / Female
Quote	“Wine and food. I want to explore new areas with nice hotels and restaurants, but I have to do so on a budget.”	“I want to take some time to travel, see the world, and discover my possibilities.”	“I need a business-friendly place near the airport, with nice beds and accessible WiFi.”	“I’m interested in booking our traditional annual vacation spot at a good rate.”
Goals	· Find a variety of lodging that is specifically tied to culinary arts. · Ensure that nice restaurants, vineyards, and other attractions are within walking distance.	· Find multiple interesting destinations that can be booked in succession.	· Finalize and approve hotel selection made by assistant. · Confirm personal information, dates, and cost.	· Get a good deal on the family vacation spot. · Potentially find and consider lodging alternatives. · Ensure proximity to family attractions.
User flow	· Google searched for “Best hotels near vineyards” · Landed on a blog post about hotels known for wine · Will go to the Recommended Destinations page.	· Clicked an ad from twitter with popular destinations for college students. · Will land on a vacation landing page. · Will visit the Destinations Gallery.	· Signed in on the email portal page. · Landed on the trip itinerary. · Will go to the trip confirmation page.	· A co-worker recommended checking out the booking service to save on hotel cost. · Will land on the home page. · Will visit the Hotel Destination Search page.



2.7 Create sketches and wireframes
Sketch variations of the chosen concept of the system, and detail interaction flows, so that you have **drawings for the wireframing**.

Create paper **based sketches** for the **displays of the system**.

Ideate and **sketch** out several **design concepts**.

Evaluate the sketches concepts.

Wireframes are visual guides representing the page structures, hierarchy and key elements.

Wireframing is a backbone of the system.
A wireframe is a low-fidelity, simplified outline of your system.
Wireframes are to help you focus the placement of content and component for your future prototype.

Create digital wireframes using:

Balsamiq Mockups tool
https://balsamiq.com/download/

Figma
https://www.figma.com/

Pencil
https://pencil.evolus.vn/

NinjaMock
https://ninjamock.com/

FluidUI
https://www.fluidui.com/

2.8 Test your interfaces for usability.

3. Write a group report reflecting on 2.1 – 2.8 steps on designing alternatives.

Include the results of each lab activity in your report.

Submit your group report as a pdf file designing_alternatives.pdf via Moodle.

References:

Smashing UX Design: Foundations for Designing Online User Experiences. Allen Jesmond, James Chudley. John Wiley & Sons, 2012.

Designing the User Interface: Strategies for Effective Human-Computer Interaction, Ben Shneiderman, Catherine Plaisant, Maxine Cohen (2016), Pearson

The Design of Everyday Things, Don Norman (2013)