JURUSAN TEKNOLOGI INFORMASI

Software Engineering Course

10. Design (Part-3)

Yoppy Yunhasnawa, S.ST., M.Sc.

Topics

1. UI/UX
2. Designing User Interface
3. Wireframing

Topic #1: UI/UX

1. UI/UX

- UI → User Interface
  - Facility for the users to interact with our system in order to be able to obtain desired benefits/goals from it.

- Types:
  - CLI → Command Line User Interface → Text
  - GUI → Graphical User Interface
  - VUI → Voice Command User Interface

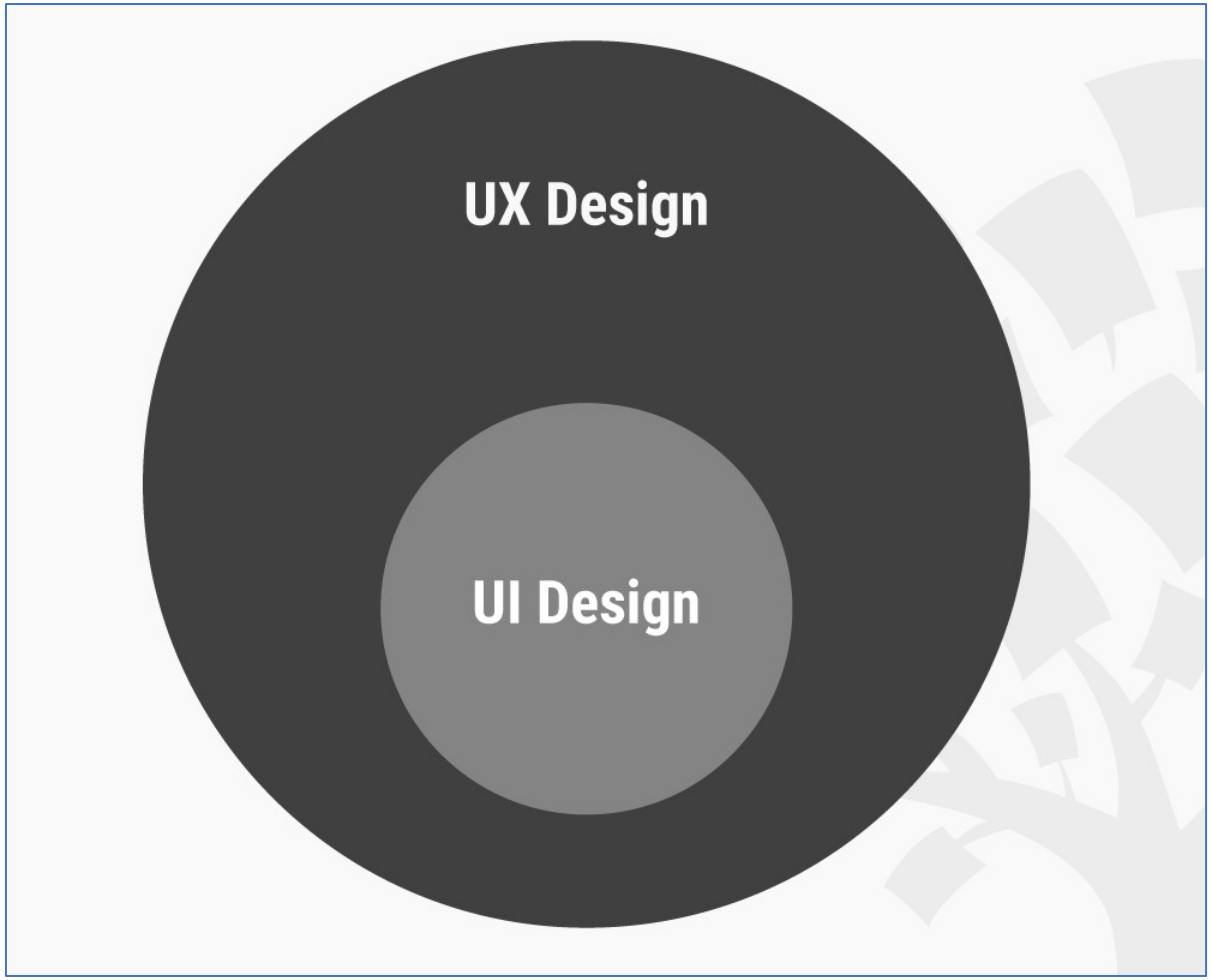
- User Interface that focuses on excellent user experience is one of the keys of a successfull system/service.
  - Beautiful UI **does not always** have good UX.

- UX → User Experience (In Indonesian: “Pengalaman Pengguna”).

- Is every aspects and effort to make users feel comfortable when they are interacting with our system.

1. UI/UX

- UI design is a part of UX design. [1]



Good vs Not So Good UX

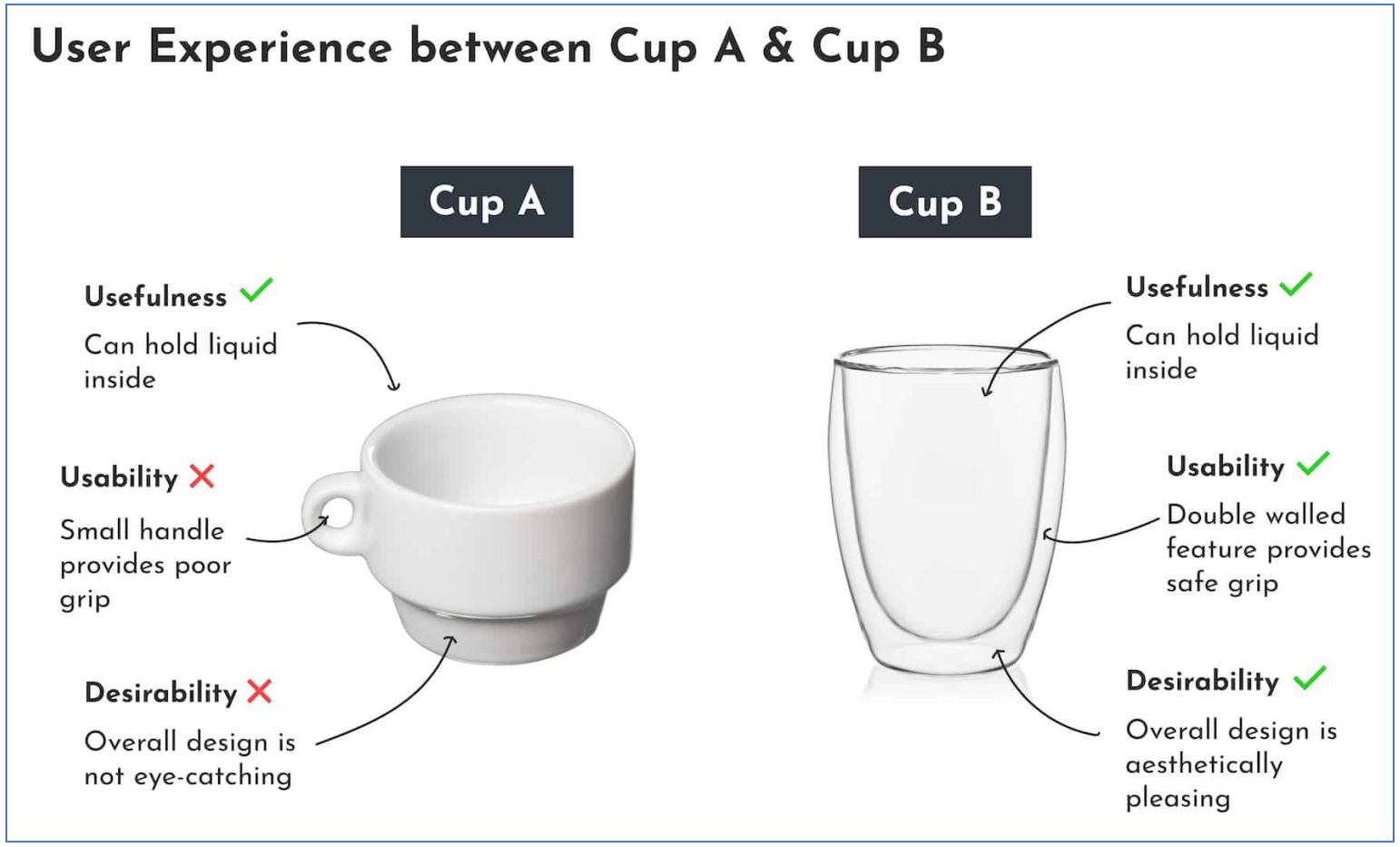


Figure: Illustration of UX [2]

Best Practices

1. **Predictable**
   - The UI elements, especially the common ones (e.g. Button, TextBox) should be predictables.

2. **Discoverable**
   - The most important elements in our apps must be easily recognized by the users.

3. **Simple**
   - Avoid to use too much controls, use only the very necessary elements only.

4. **Comfortable**
   - Properties of each elements (e.g. color, shapes, icon) must be choosen carefully so the users feel comfortable when seeing them.

5. **Less Action**
   - Minimize the steps the users must take in order to finish their goal.

Best Practices (Contd.)

6. **Intuitive**
   - Place related control near to each other, i correct place when user expect them where to be.

7. **Informative**
   - Give feedback on important user actions.

8. **Less Burdens**
   - Use default/prefilled values.

9. **Familiar**
   - Use uniform/repetitive design patterns.

10. **Brand Consistency**
    6. Make the brand theme, color, logo, look and feel persist in every pages/apps.

Topic #2: Designing UI

2. Designing UI

- UI Design phase is the most important and perhaps will be the last chance in order to make sure our users:
  - Really understandwhat they want.
  - Acknowledge and agree with our (the development team) thinking.

- It is also very,very important to finalize UI design first before beginning to code the system.

- Why?
  - To make sure our application design have really aligned with users vision/desire.
    - If the UI is correct, we don't need to ask our user again and again anymore.
  - Programmers will be easier to materialize the app.
    - They just need to follow the given design.

- Approaches to do UI design:
  - **Brainstorming** → Discuss, think, conjecture, imagine
  - **Conversion** → Utilizing Use Case Specification and/or Activity Diagram to create the wireframe.

Conversion

- With the help of good and **correct** Activity Diagram set, we can deduce comprehensive UI components then arrange and compile it in a wireframe.
  - Comprehensive → All necessary components are idenfitied.
- Remember: Every series of actions in an Activity Diagram represents **one main task/goal** that our users want to achieve.
- By studying what actions are there, we can decide what component we should use.
- At this time there is still no tool that is able to automatically generate UI from activity diagram.
  - So we need to do it by ourselves.
- But, many tool exists to assist in UI design creation. Theese tools are called *Wireframing Tools*.

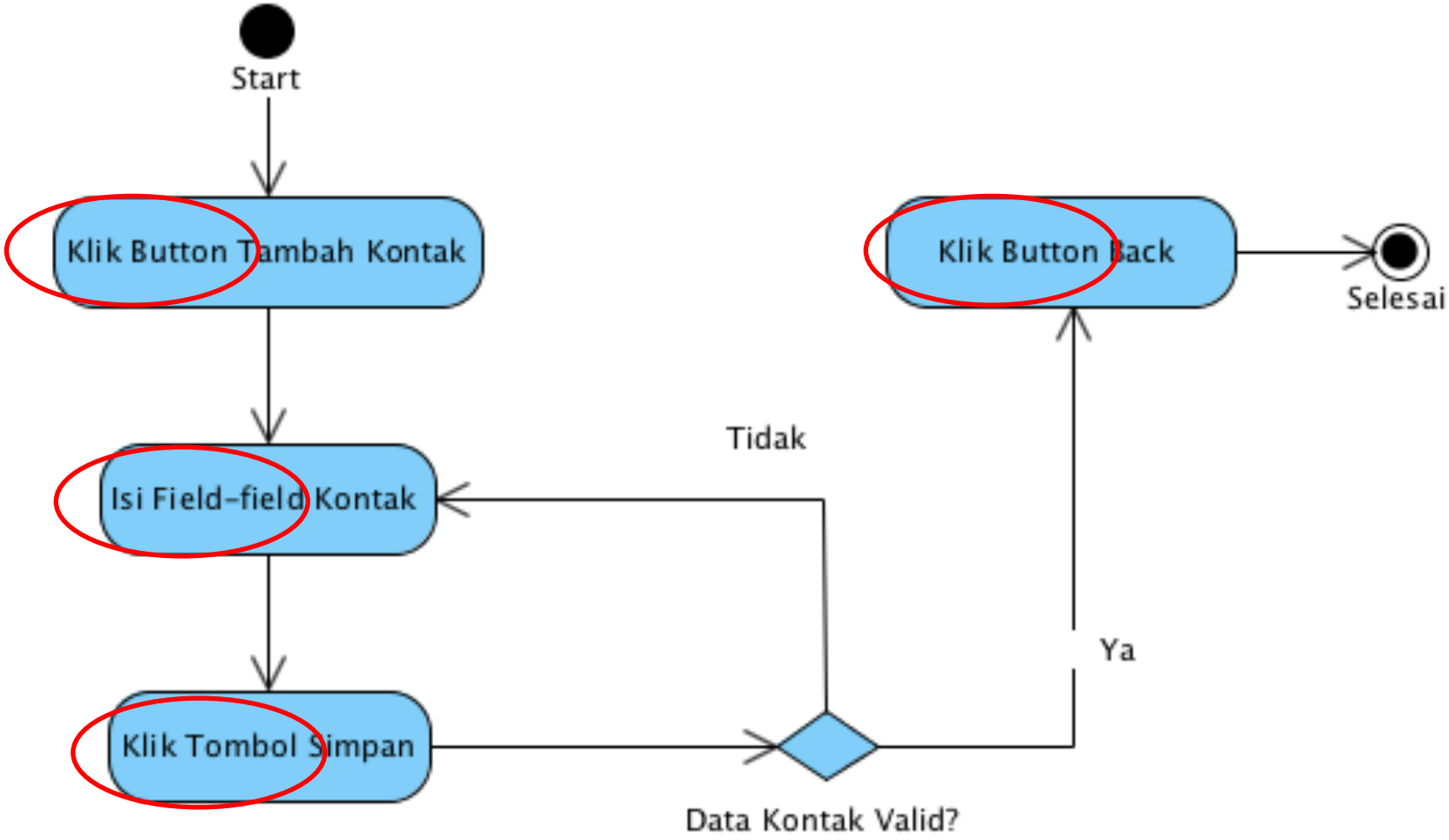
Converting Activity Diagram

- Examine and study carefully **all activity diagrams** in our project.
- Decide which activity diagram that must be in the same or different pages of our app.
- Take a look at the **words** in each action. Give special attention for words that have control/component name.
  - E.g.:

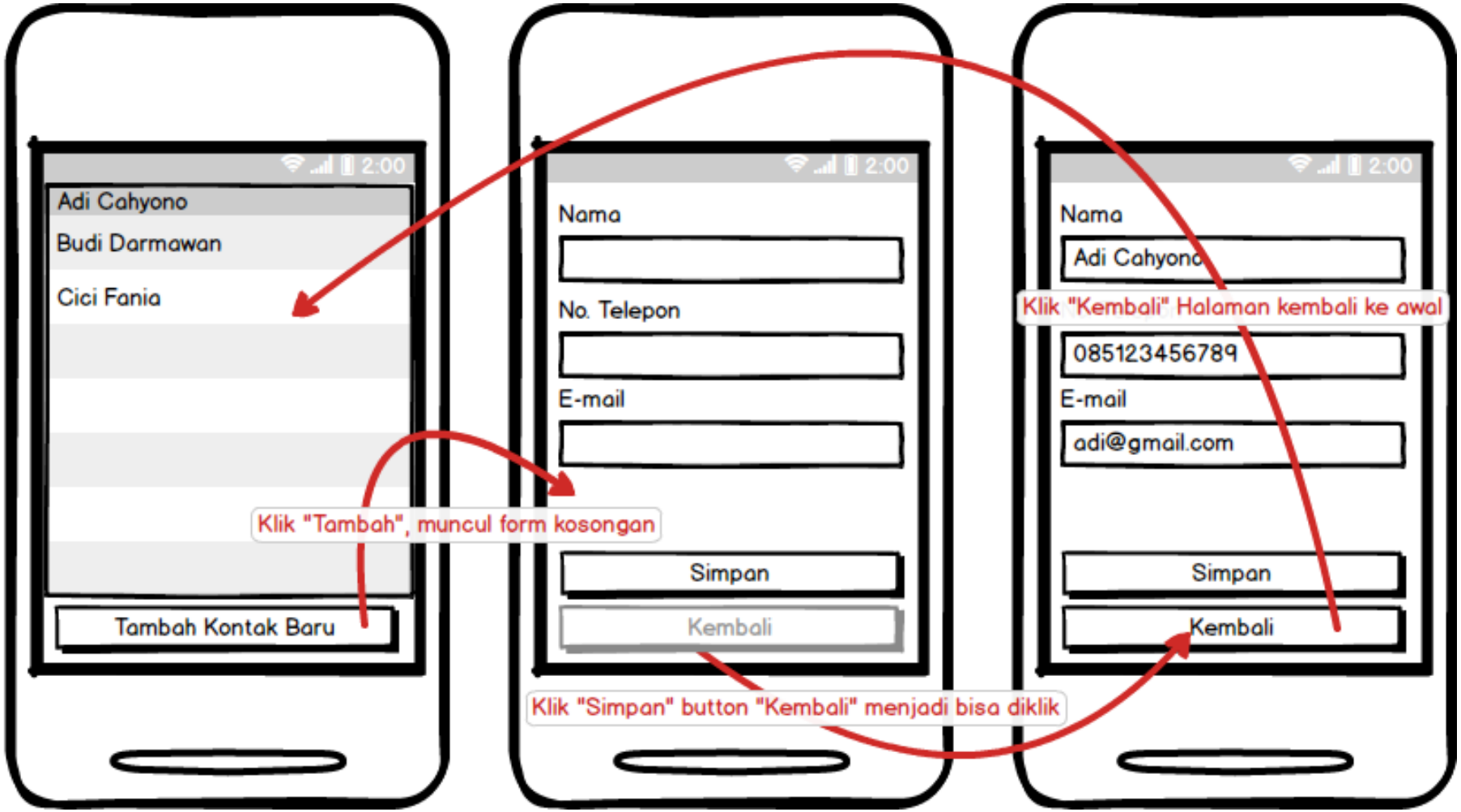
Fill the password **field** | Click register **link** | **Choose** desired types

- Arrange the control names we have got from the previous step to series of pages that follow the UI/UX best practives.

Activity Diagram → UI



Activity Diagram → UI

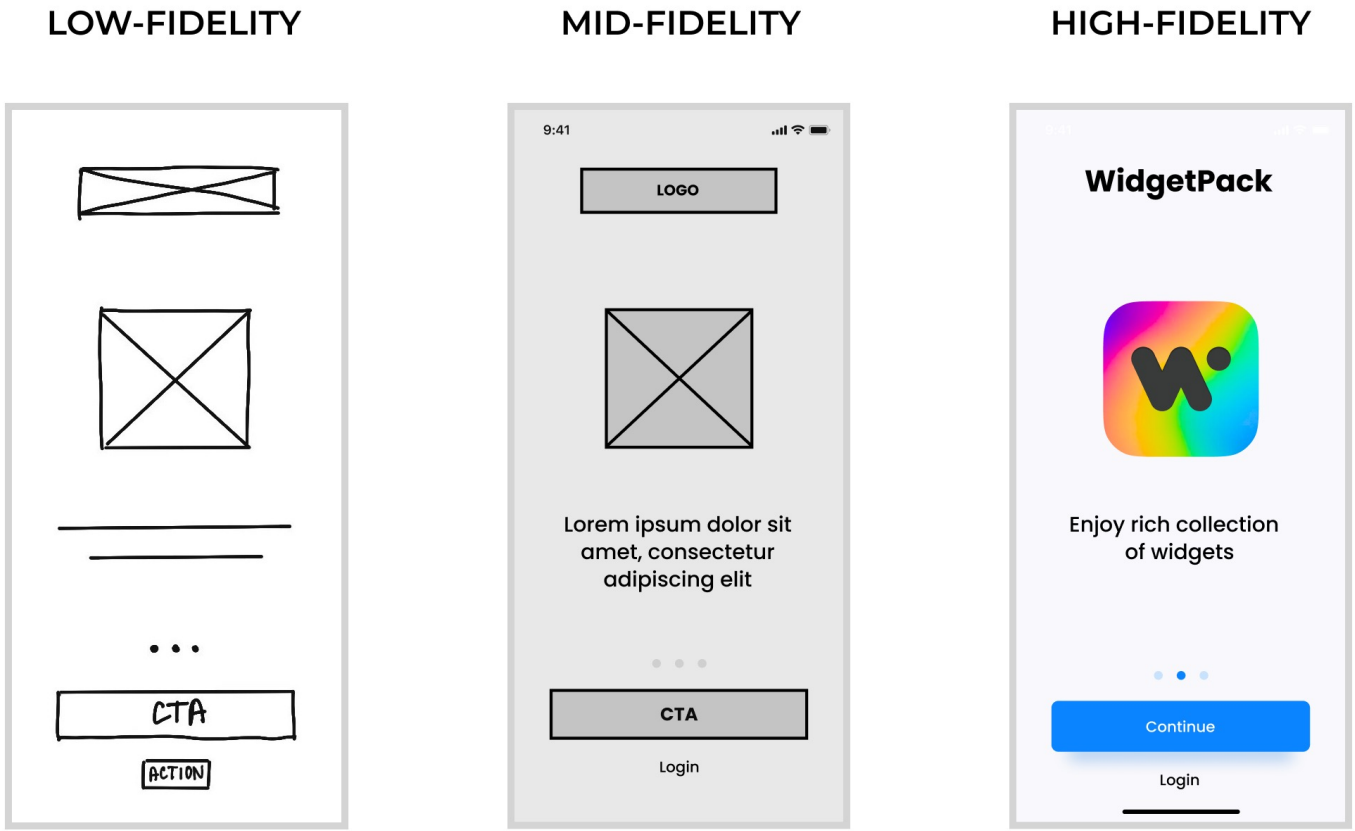


Topic #3: **Wireframing**

3. Wireframing

- **Wireframe →** A wireframe is a visual representation or skeletal outline of a web page, mobile app, or software interface that shows the basic layout, structure, and functionality of the final product. [3]

- Types:
  - Low-fidelity wireframes,
  - Mid-fidelity wireframes,
  - High-fidelity wireframes. [4]



Wireframing Tools

- Wireframing → An activity in which we try to create wireframes.

- Can be done using different types of media.
  - Wireframing tools software
  - Paper or Whiteboard
  - General purpose design software
    - E.g.: Photoshop, Adobe Illustrator, CorelDraw dll.

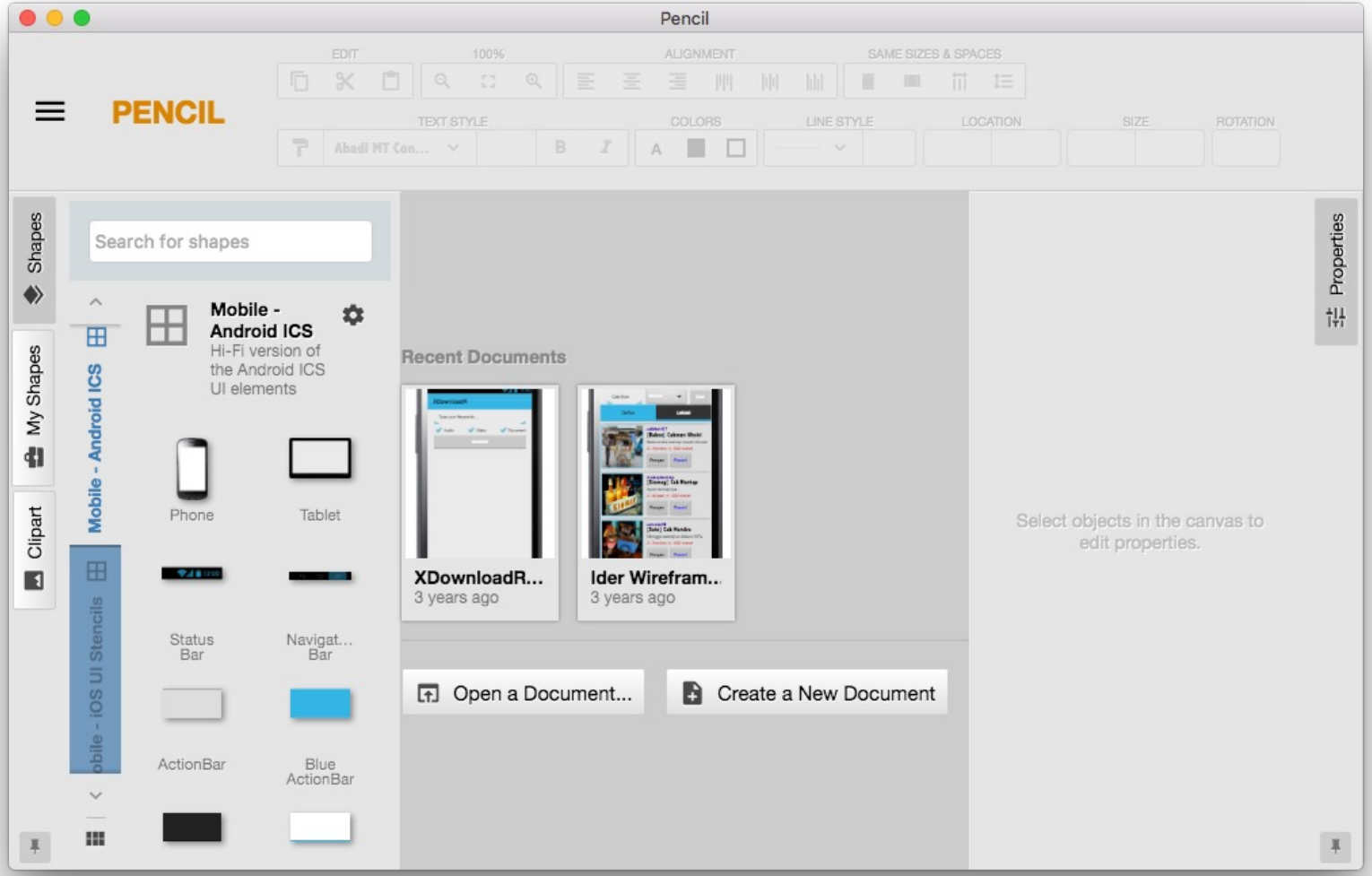
- It may be better if we use wireframing tools because:
  - It is faster because it is a lot easier to use.
  - Usually, we don't need to draw common control/componets from scratch.

- However, if you are pro in design, it is very okay if you use general purpose design software.

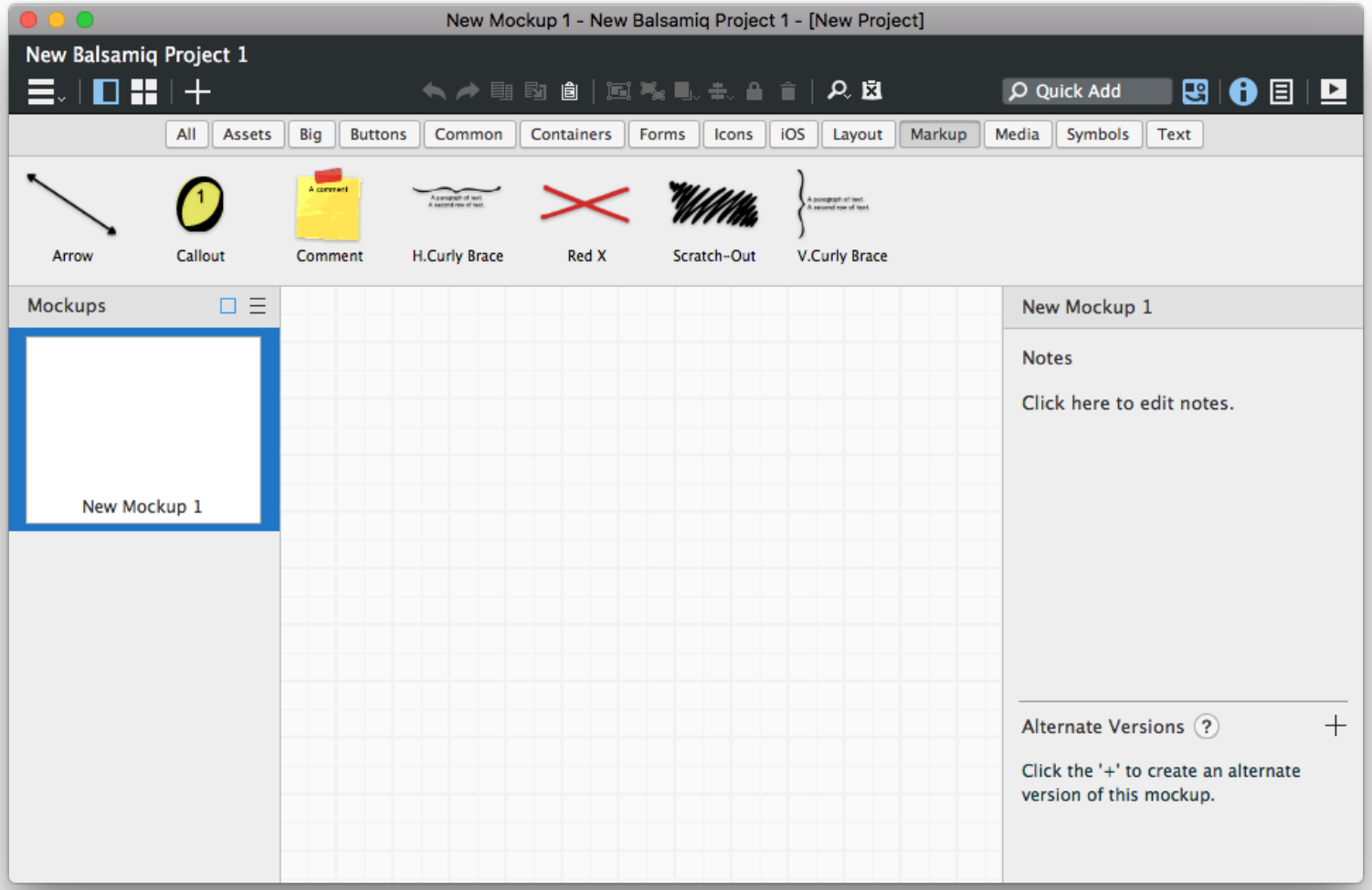
Example of Wireframing Tools

- Lucidchart
- InVision
- Moqups
- Wireframe.cc
- MockFlow
- Fluid UI
- **Pencil**
- **Balsamiq**
- **Figma**

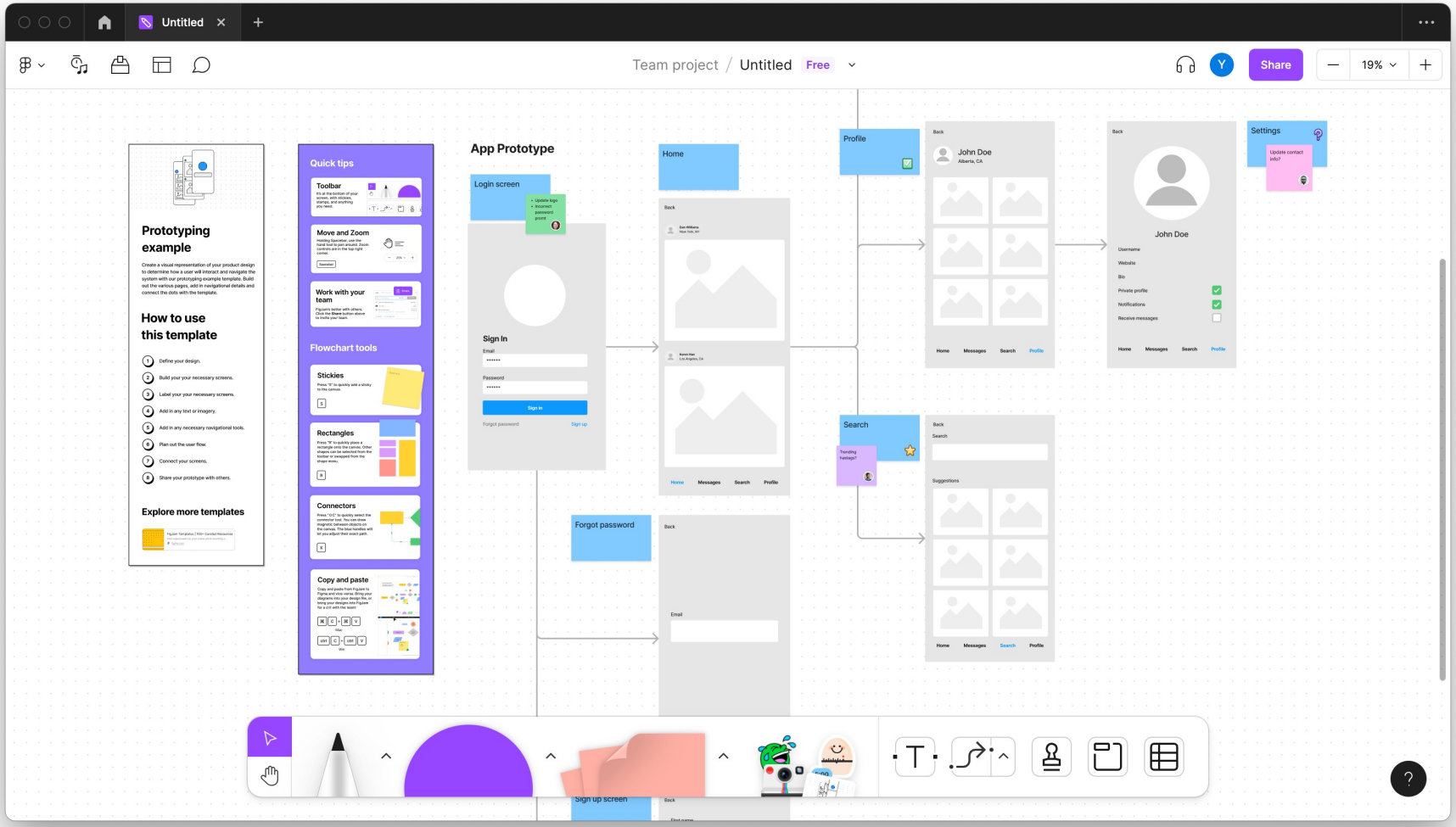
3. Wireframing
Evolus Pencil



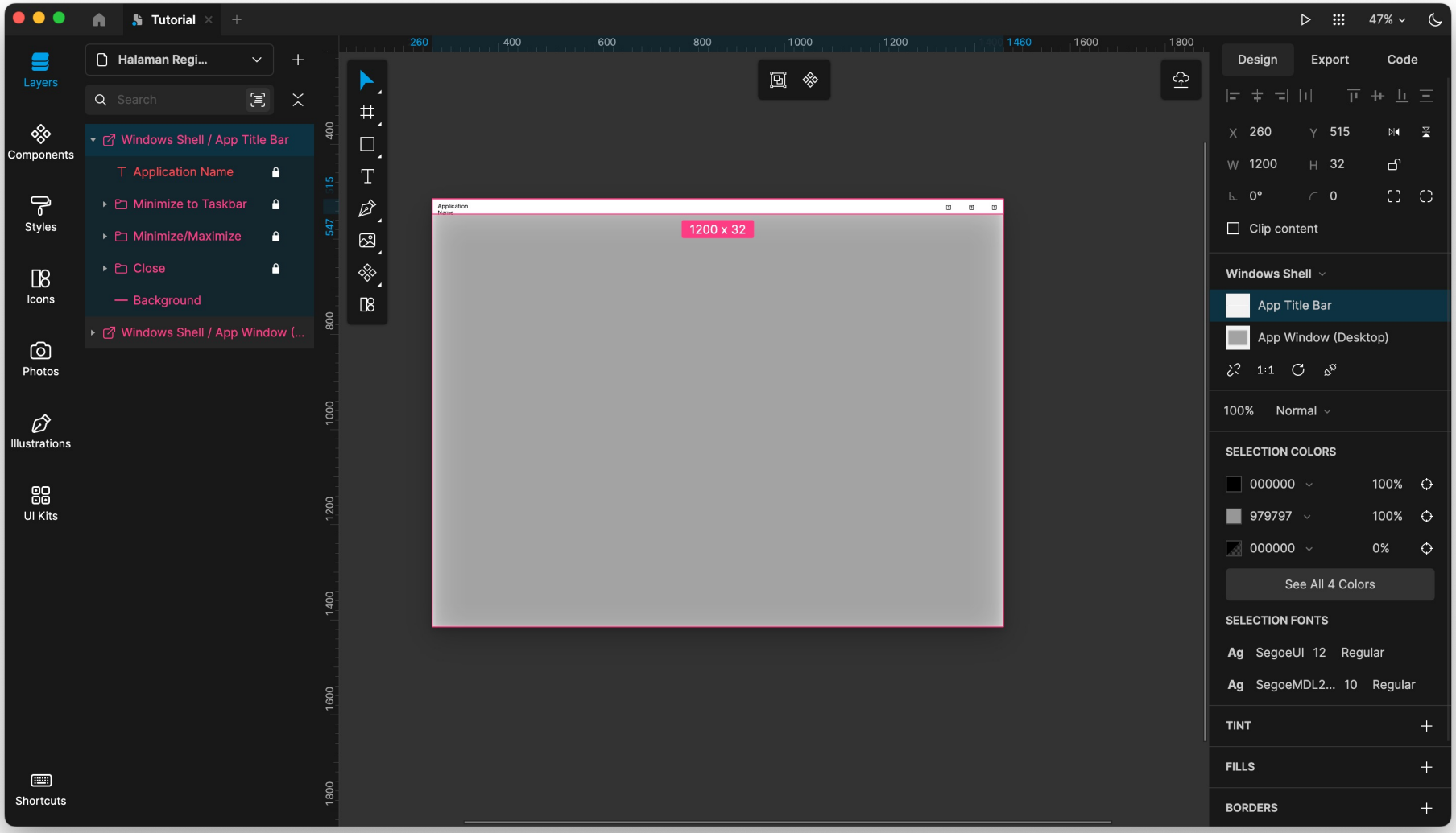
3. Wireframing
Balsamiq



3. Wireframing
Figma



3. Wireframing
Lunacy



Questions?

Thank You

Task

- Create one wireframe from one of your activity diagram you have created in the mid-term exam!
- Classroom Code: 6axztdt

References

[1] https://www.interaction-design.org/literature/topics/ui-design
[2] https://leeruoshan.com/the-fundamentals-of-user-experience-ux-design/
[3] https://visme.co/blog/what-is-a-wireframe/
[4] https://yellow.systems/blog/what-it-takes-to-create-a-wireframe