

High Fidelity Prototypes

User Experience Design

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Hi-Fi Prototypes

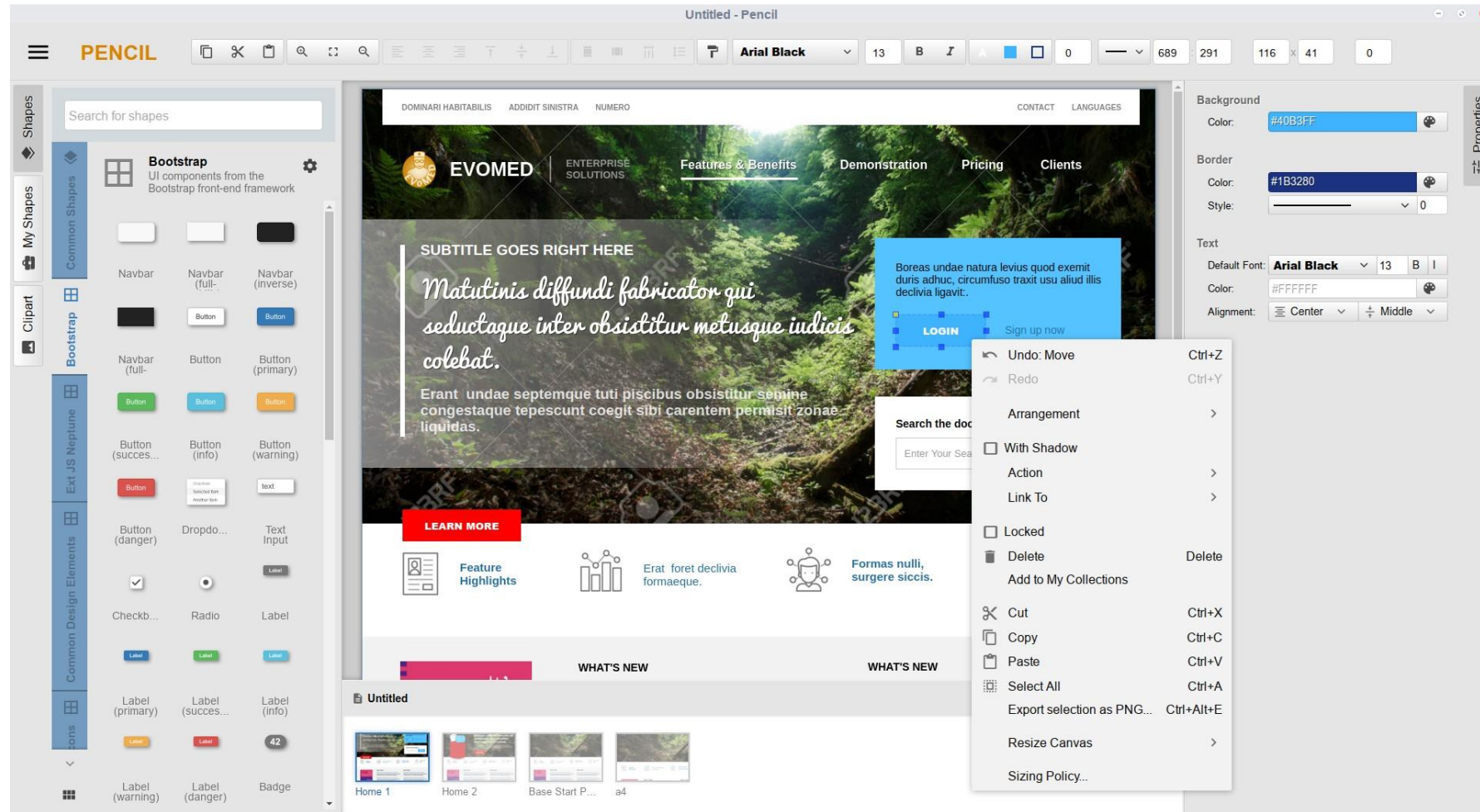
- Actual computer application, with final-looking layout, colors, and graphics
 - May use design prototyping tools
 - May use real application code
- Much more expensive to build
- More time is spent with graphic design than interaction design
- When tested, people will mostly comment about colors, fonts, ...
 - representation communicates “finished”

What Can We Learn From Hi-Fi Interactive Prototypes?

- Screen layout
 - Is it clear, overwhelming, distracting, complicated?
 - Can users find important elements?
- Colors, fonts, icons, other elements
 - Well-chosen?
- Interactive feedback
 - Do users notice & respond to status bar messages, cursor changes, other feedback
- Efficiency issues
 - Controls big enough? Too close together? Scrolling list is too long?

High-fidelity Computer Prototypes

Semi-interactive



Some Tools For Semi-Interactive Hi-Fi Prototypes

No-Code



<https://www.invisionapp.com/>



<https://www.figma.com>

FROONT

<https://froont.com/>

webflow

<https://webflow.com/>



<https://principleformac.com/>

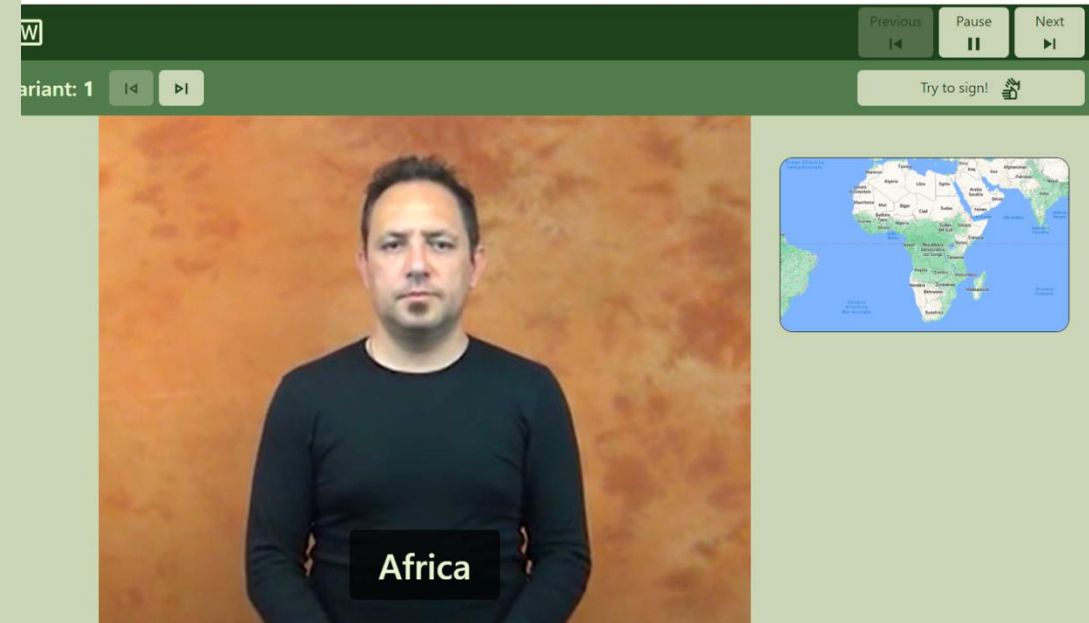
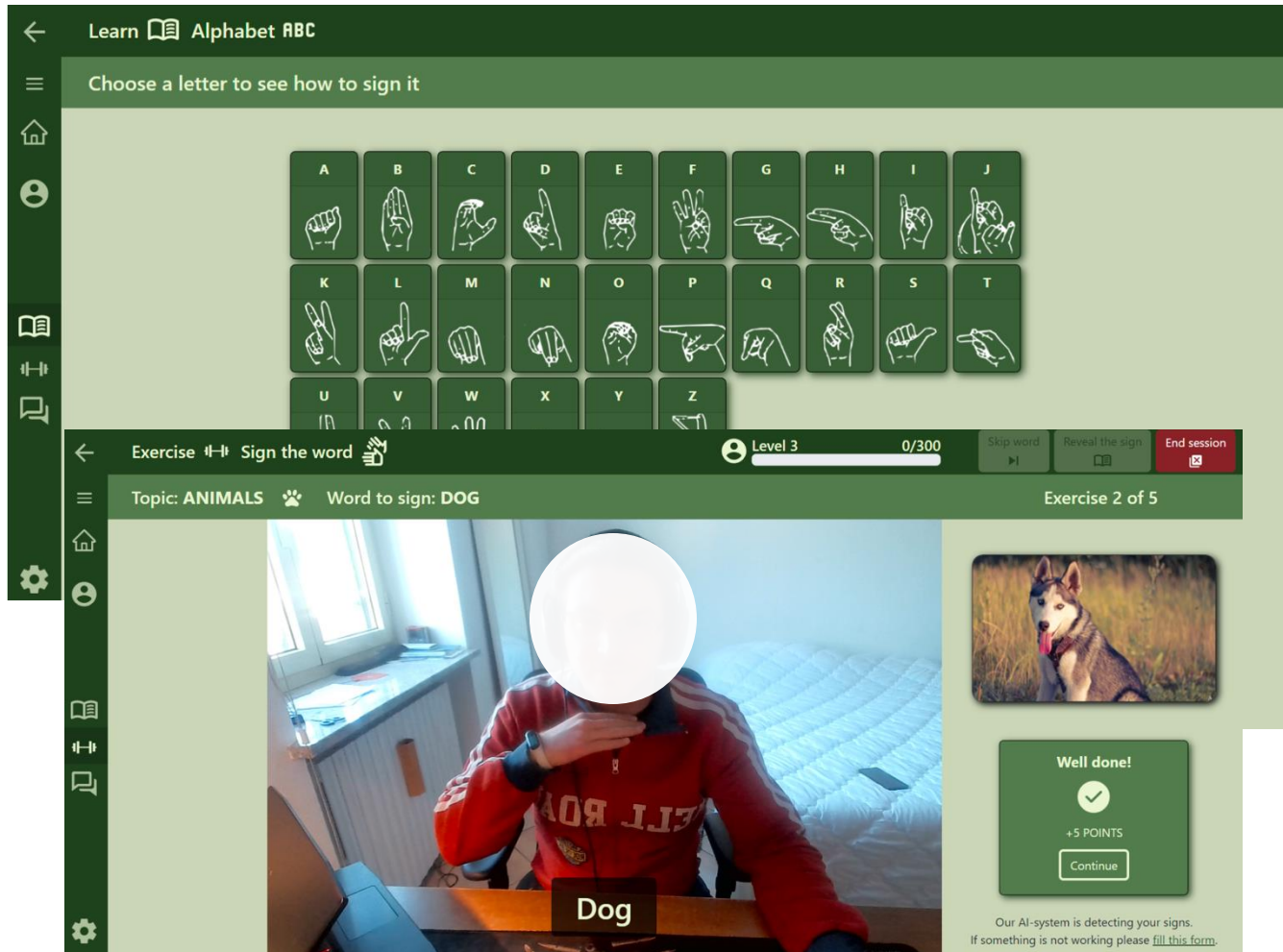
High-fidelity Prototypes

With Code



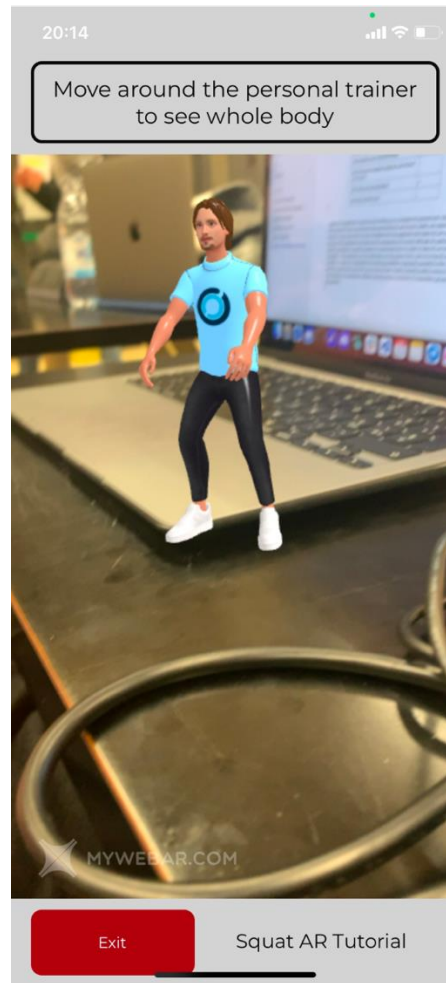
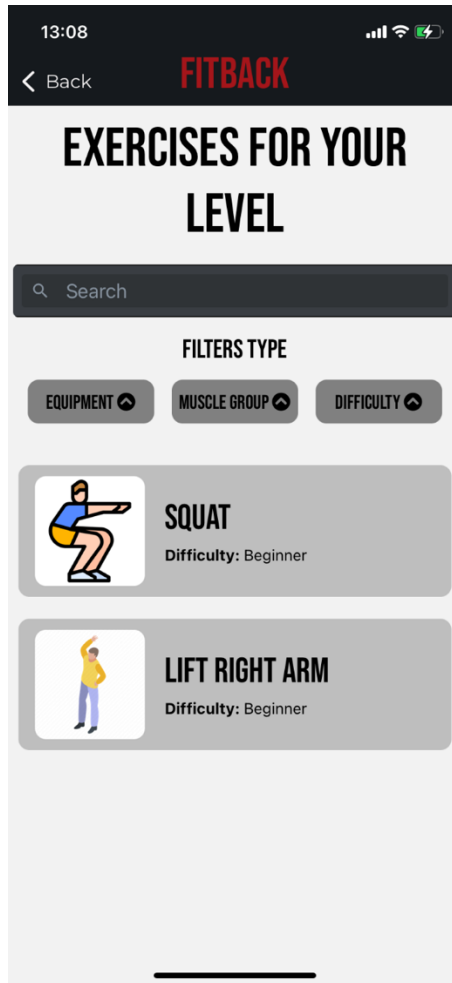
High-fidelity Prototypes

With Code



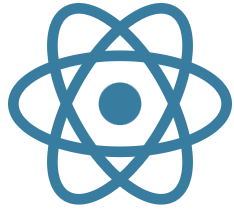
High-fidelity Prototypes

With Code



Some Tools For Interactive Hi-Fi Prototypes

With Code



React

<https://react.dev>



Firebase

<https://firebase.google.com>



<https://ngrok.com>

...



React Native

<https://reactnative.dev>



<https://expo.dev>



<https://virocommunity.github.io>

Tech and Options

- Mobile App → Web application that behaves like a mobile app
 - React + Express, PHP, React + Firebase, etc.
 - --> Alternative: a real mobile app (Android/iOS app, React Native, ...)
- Tablet App → see above
- Speech-to-Text (and vice versa) + Camera
 - iOS/Android native APIs
 - HTML5 Media Capture API → HTTPS-only
- Desktop app → Web application
- AR-based app → Vivo + React Native, Unity, iOS/Android native APIs, etc.
- Notification --> HTML5 Notifications API, iOS/Android/Windows/macOS/Linux native APIs

Tech and Options

- Maps → embed Google Maps or OpenStreet Map (for basic features) or use leafletjs (also available a React version)
 - Warning: Google Maps requires a Google Developer Account with credit card info
- Geolocalization → HTML5 Geolocation API
- Uploading files → multipart (forms) in Web applications
- Touch gesture → HTML5 Touch events
- NLP → Dialogflow, Rasa, ...

Note: for all the HTML5 <something> API check the “Development Resources” on the course website

References and Acknowledgments

- Google, Begin Today With Rapid prototyping,
https://www.youtube.com/playlist?list=PL9KVIdEJ2K8NDpsiyYpcbB_qifd3y5CYZ
- MIT, http://web.mit.edu/6.813/www/sp18/classes/11-prototyping/#reading_11_prototyping
- Scott Klemmer, Storyboards, Paper Prototypes, and Mockups,
<https://youtu.be/z4glsttyxw8>
- Most of the slides are adapted from those used in the "Human Computer Interaction" course of Politecnico di Torino
 - <http://bit.ly/polito-hci>



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