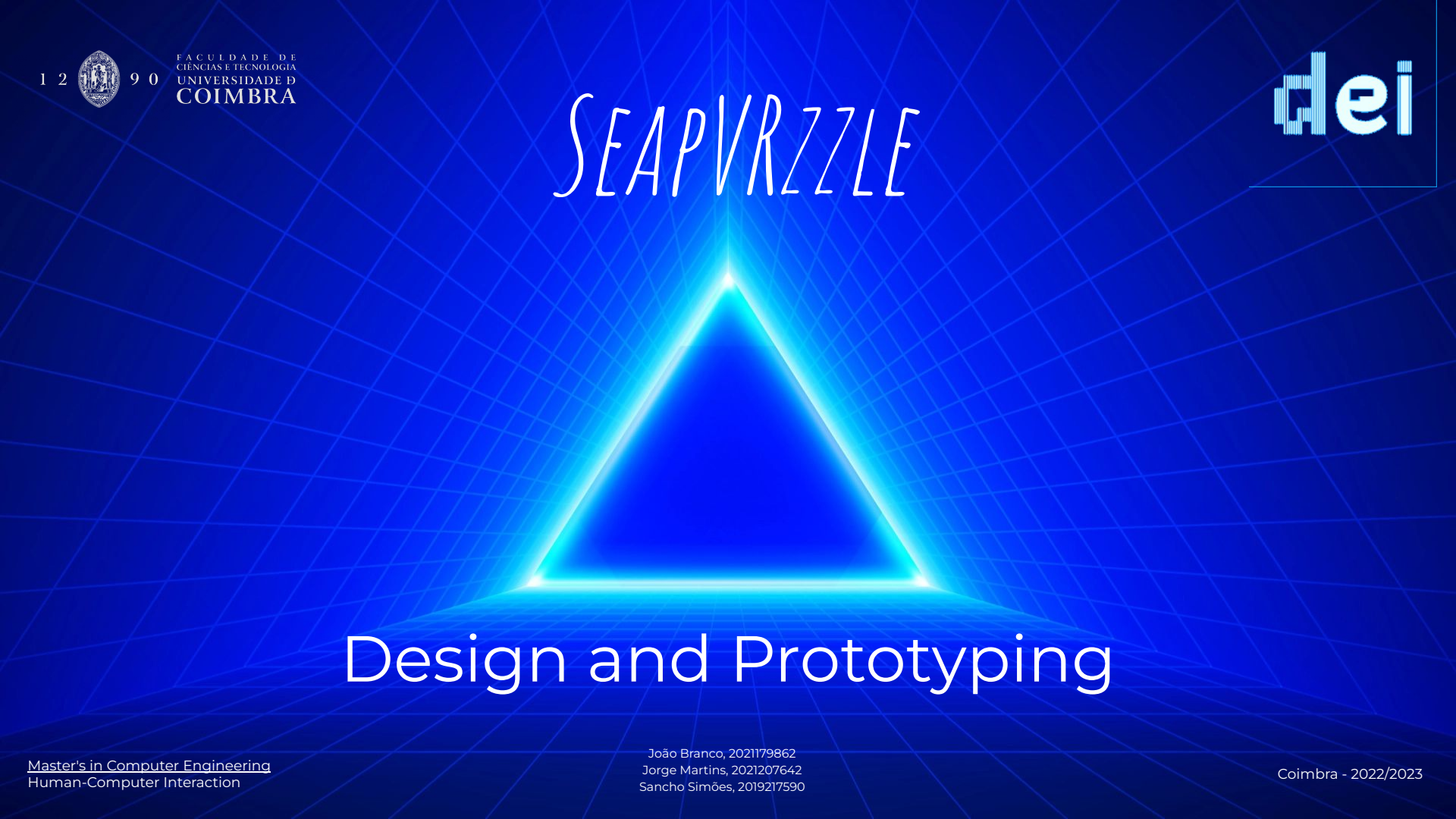
1290 FACULDADE DE CIÊNCIAS E TECNOLOGIA UNIVERSIDADE D COIMBRA

dei

SEAPVRZZLE



Design and Prototyping

Master's in Computer Engineering
Human-Computer Interaction

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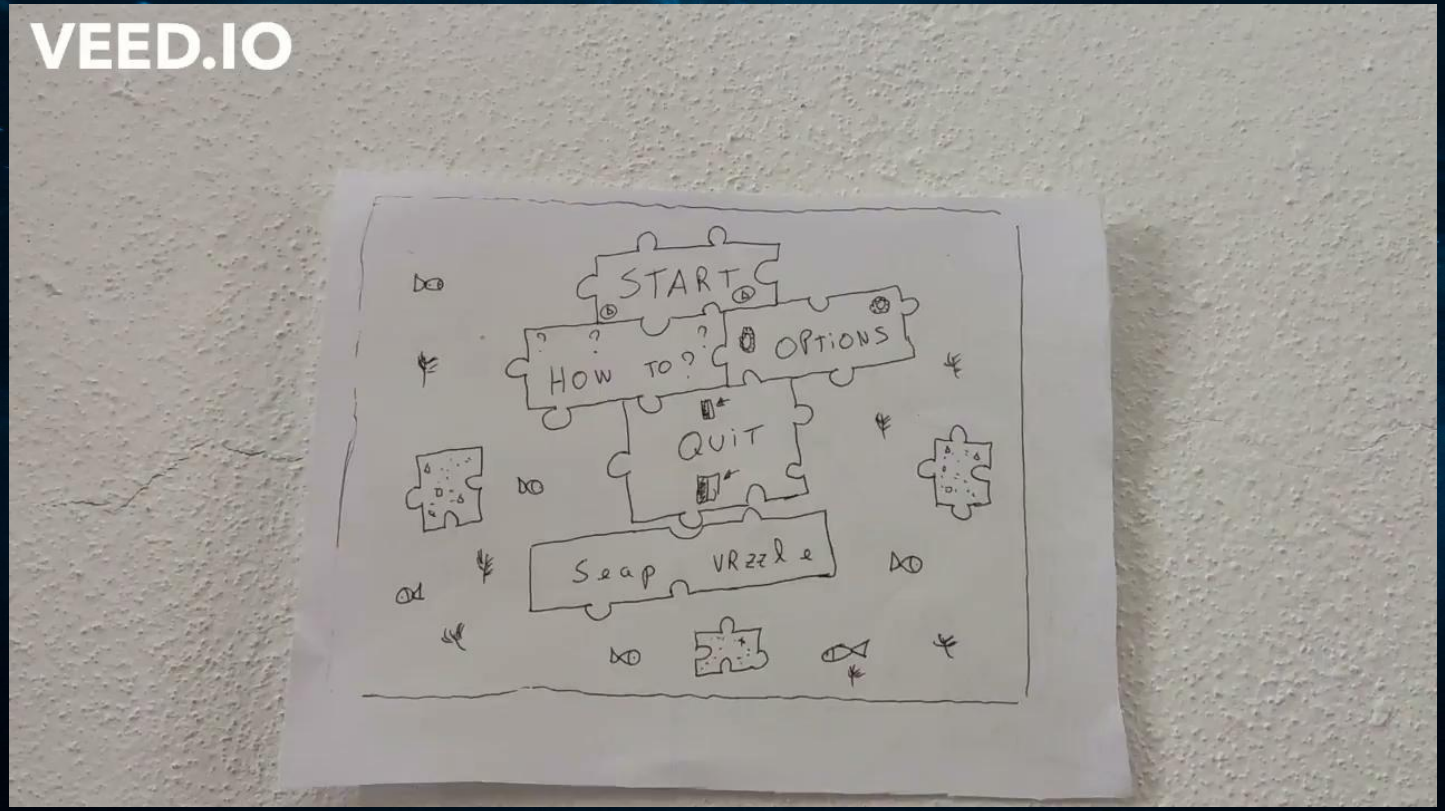
Coimbra - 2022/2023

Paper prototyping

Paper prototyping



Environment prototype - simulation

WHAT WE LEARNED

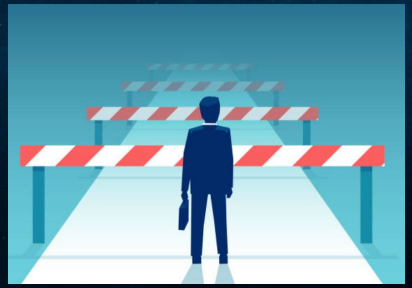
- Since the environment is somewhat unknown to the user (underwater + immersive VR experience), some kind of help must be provided - i.e. tips, tutorials..

- Some linearity for the act of finding the puzzle pieces should be added for the user to not get lost and confused.

- The movement rate may be adequate to the user physical capacities (i.e. move more with less effort - sensitivity).

CHALLENGES

- Find and familiarize with a tool that efficiently allows the creation of VR games - Unity.
- Get a free Unity asset package to model the environment - UnderwaterFX + ?
- Find a Unity asset package that allows the transformation of a given image to a puzzle - Unity Jigsaw Puzzle.
- Recreate the swimming movement with realism.
- Articulate the VR controllers/headset with the game.



DIGITAL DEMO - MENU

DIGITAL DEMO - IN-GAME ENVIRONMENT

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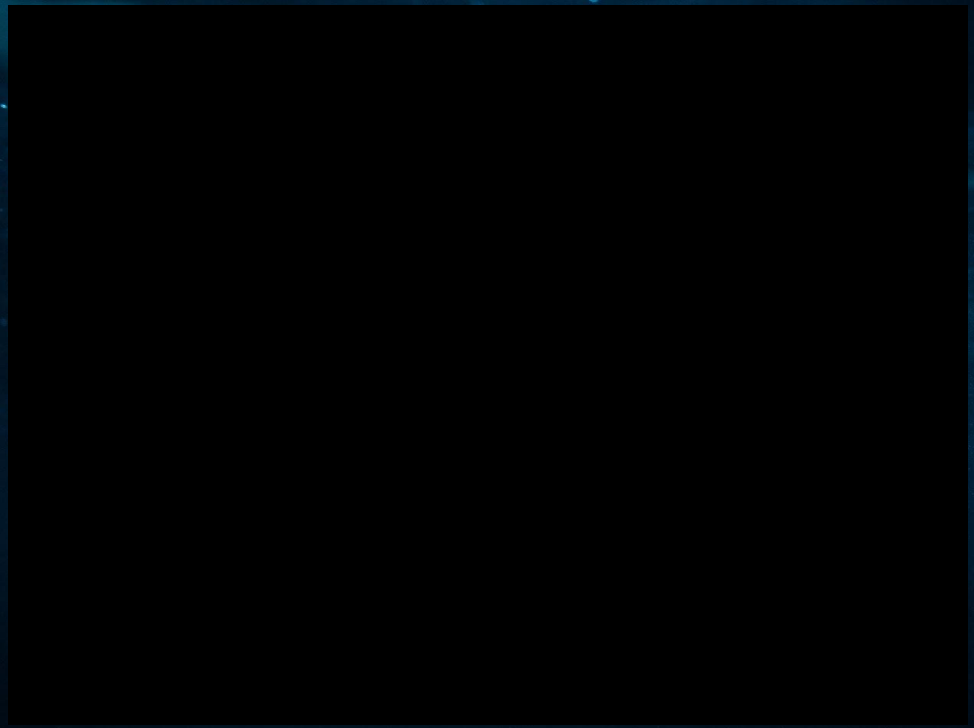


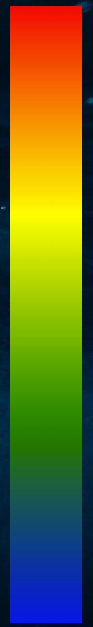
DEVELOPMENT STATE

- Underwater environment. 
- FPS controller. 
- Base menu. 

Still a ton of work to do...

DEVELOPMENT PLAN

- Support for hands' controllers tracking motion (VR controllers).
- Make movement through the environment water smooth as in swimming.
- Random scattering of pieces of the chosen puzzle through the environment.
- Progress in puzzle as pieces are found.
- Enrich environment.
- Improve menus and add their functionalities, adjusting to the first paper prototypes, in order to be more visually appealing and user-friendly.
- Supportive messages in our interfaces for user experience - tips.
- Puzzle timer.



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