

COMP 86

Assignment 6

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OVERVIEW

- 1 Project Sketch - *Idea 1, Idea 2*
- 2 Technology Requirements/Technical Risks
- 3 Technology Feasibility Test

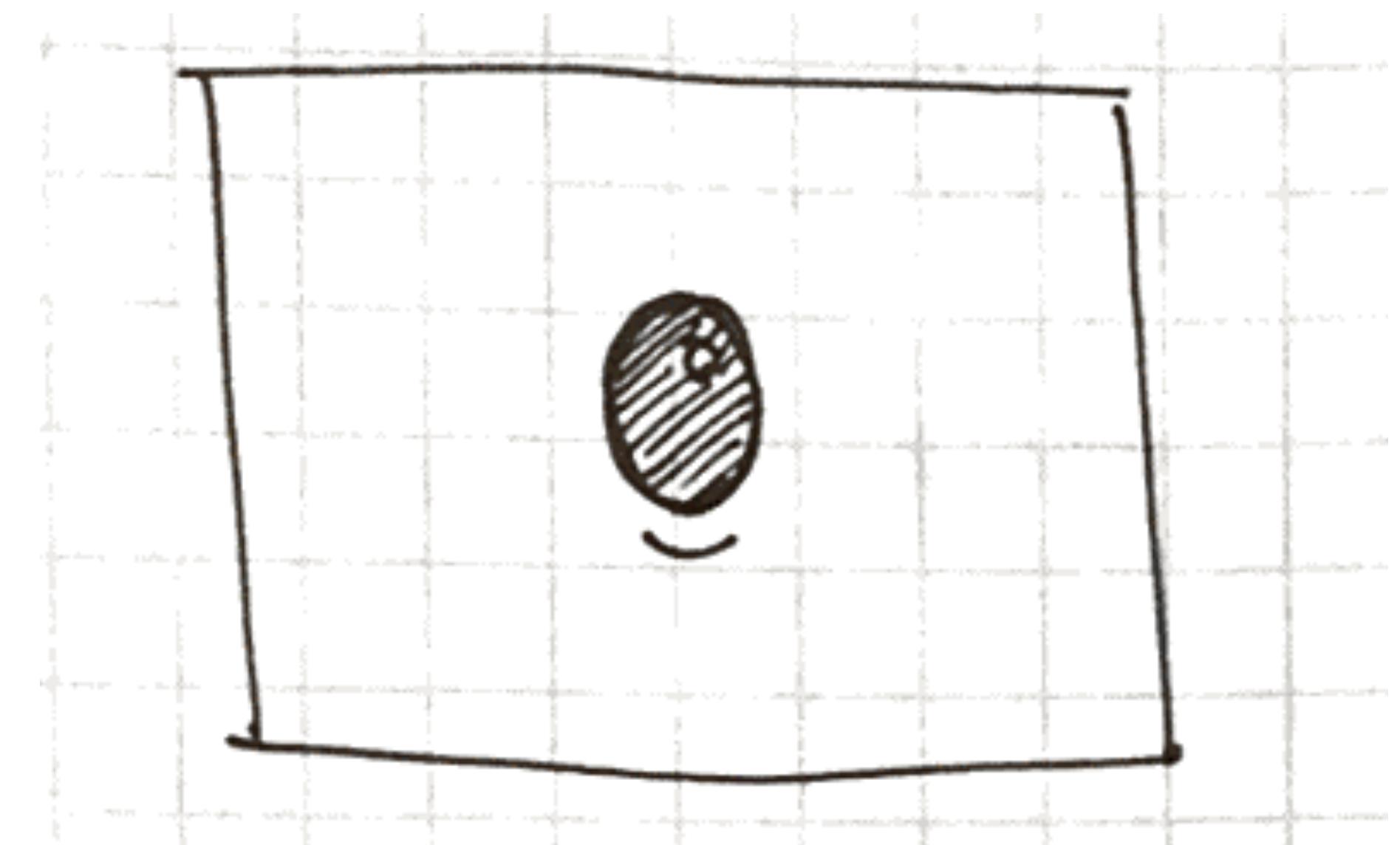
PROJECT SKETCH

Idea 1. Reactive Monster

Goal

The monster character reacts to user's gaze and emotions. Through the monster's reactions, users learn how their facial expressions affect other's emotion.

We would like to help users to develop empathy towards others' emotions and to smile more by interacting with this monster.

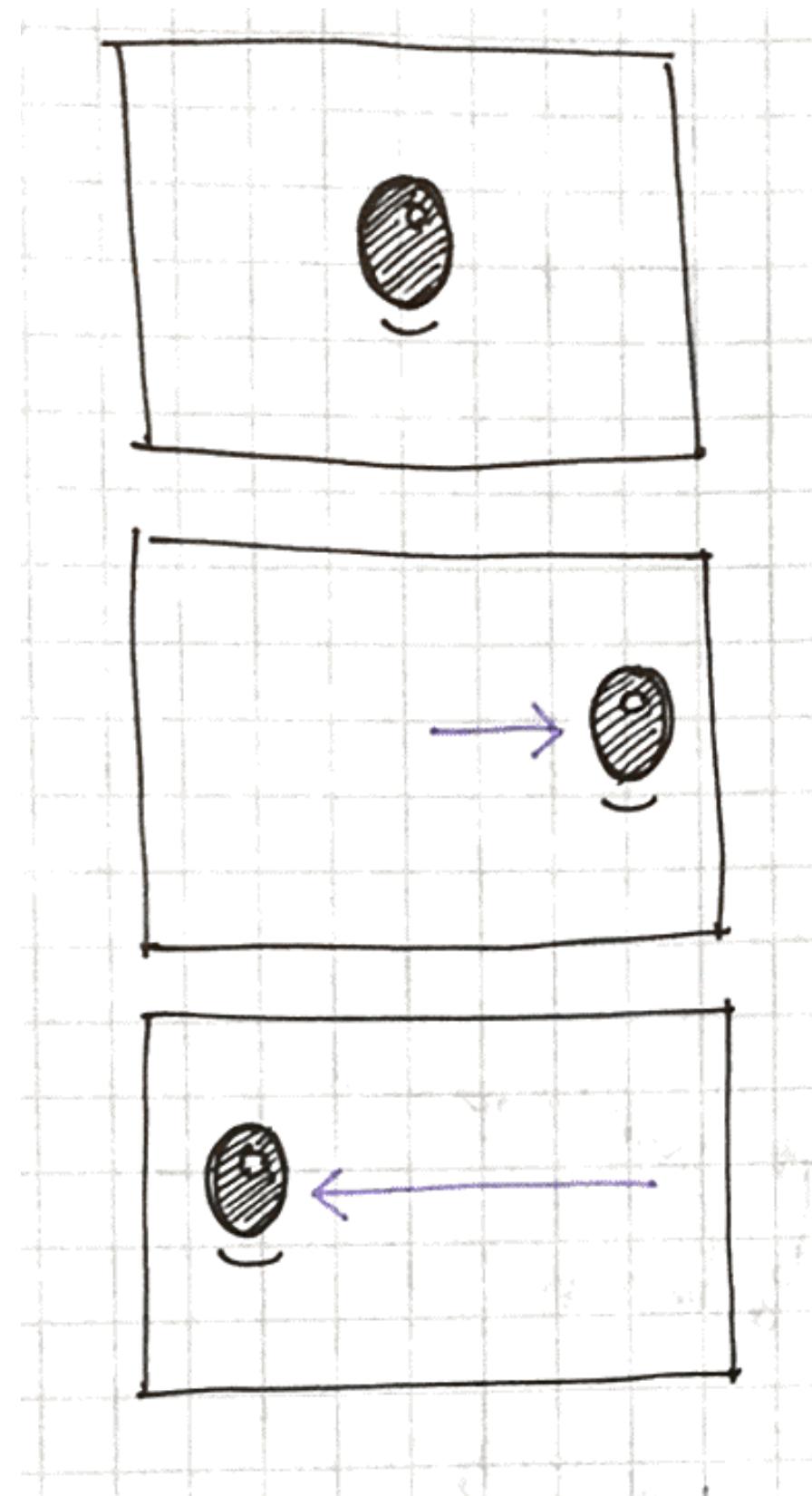


PROJECT SKETCH

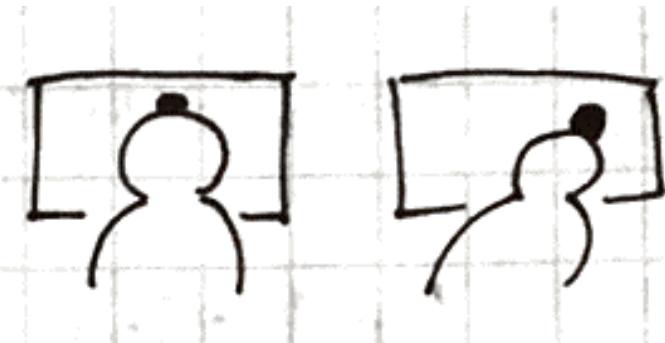
Idea 1. Reactive Monster

Input & Output

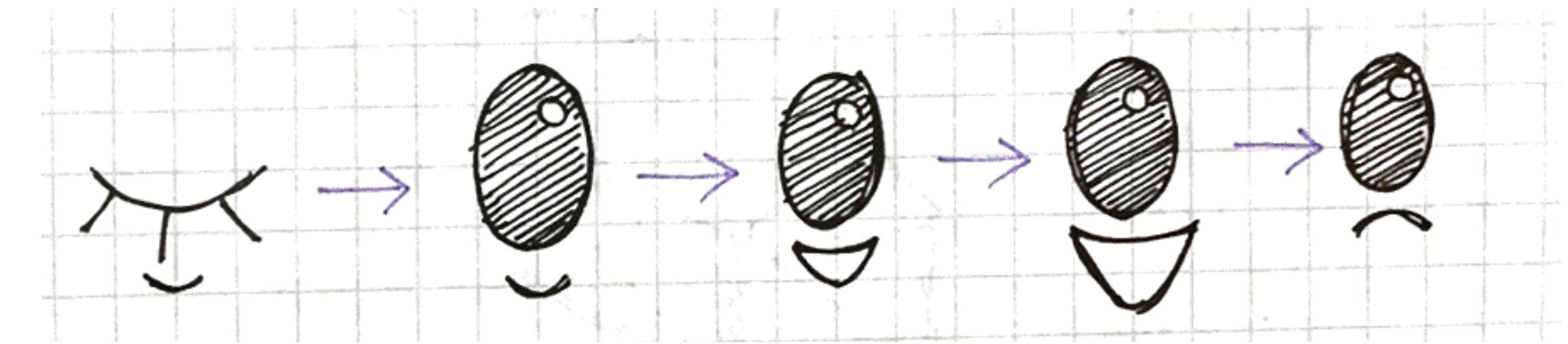
1) Head Tracking



A character that has an eye and a mouth follows user's head



2) Eye Gaze/Emotion Detecting

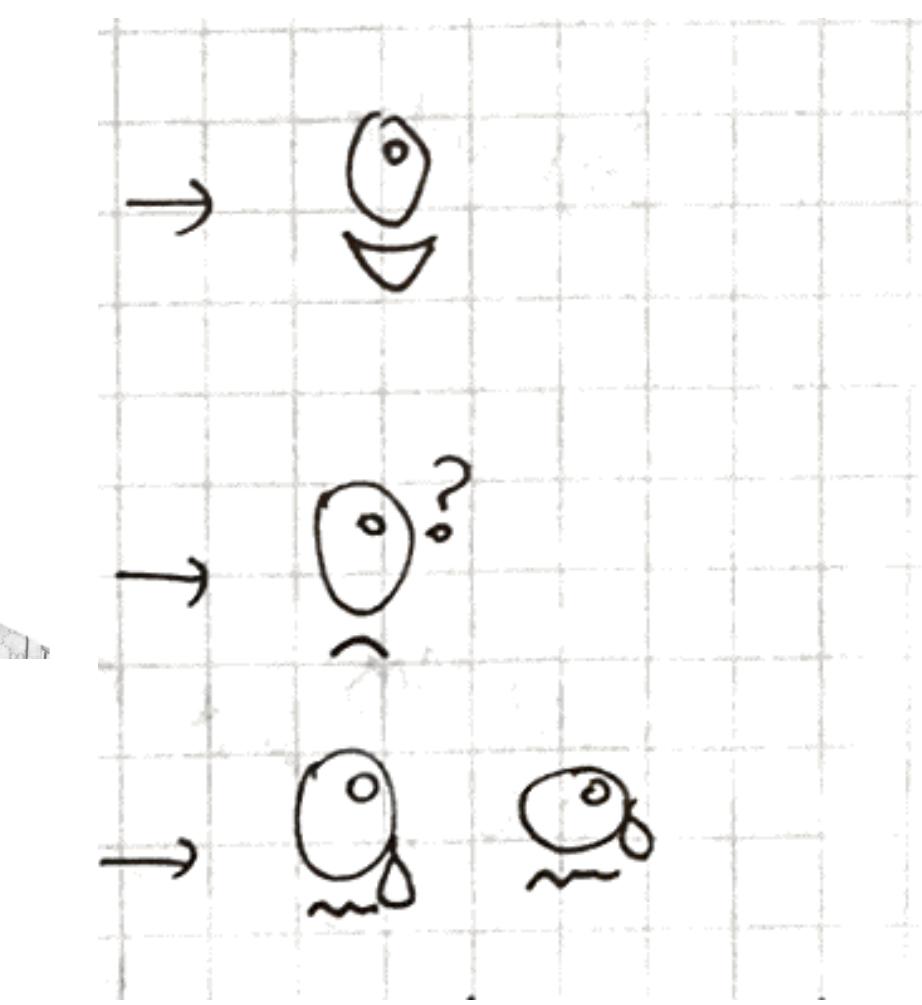


The character reacts to user's eye gaze or facial expressions by changing its shape (e.g., eye or mouth)

User's facial expressions



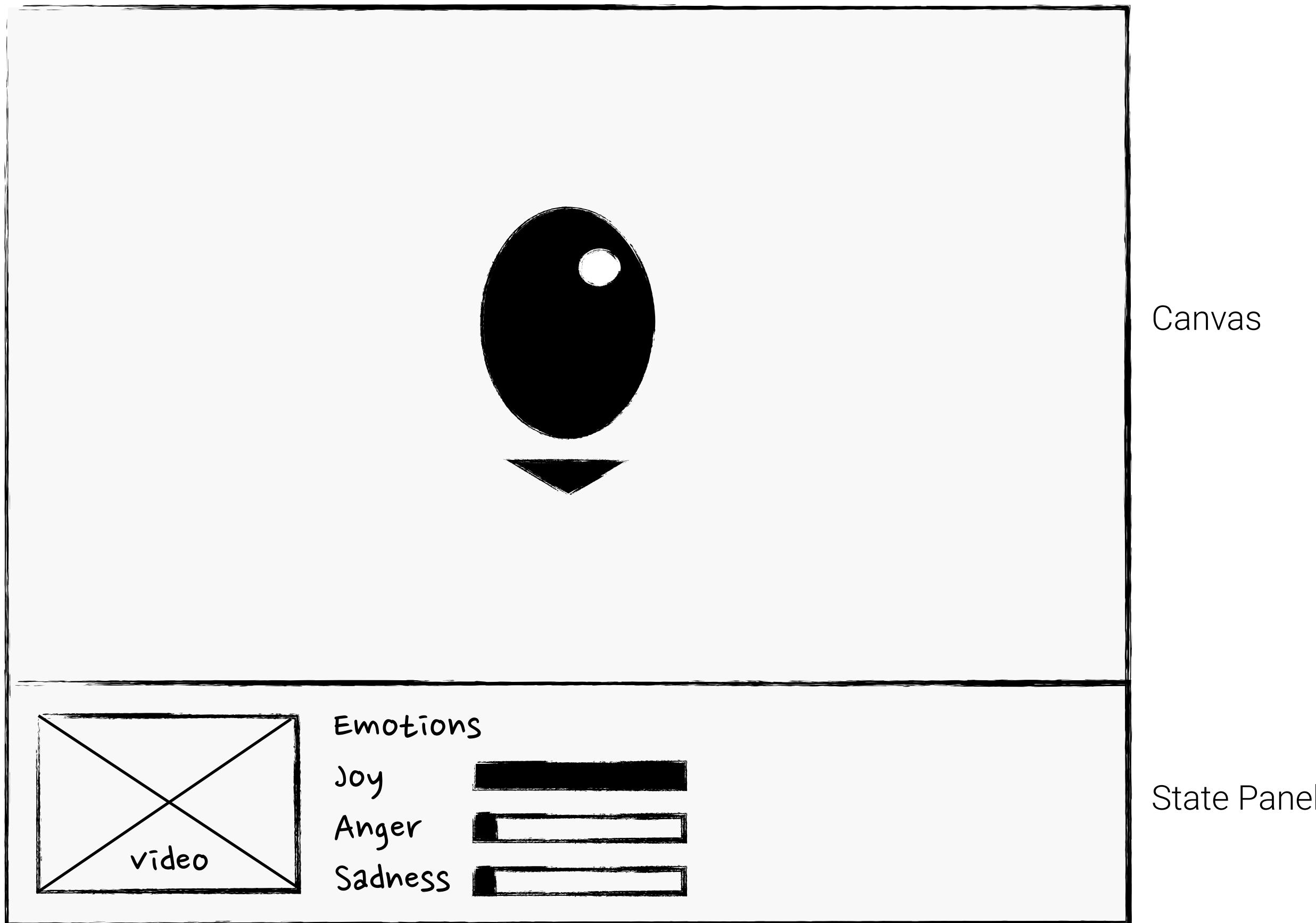
Character reacts



PROJECT SKETCH

Idea 1. Reactive Monster

User Interface Sketch



PROJECT SKETCH

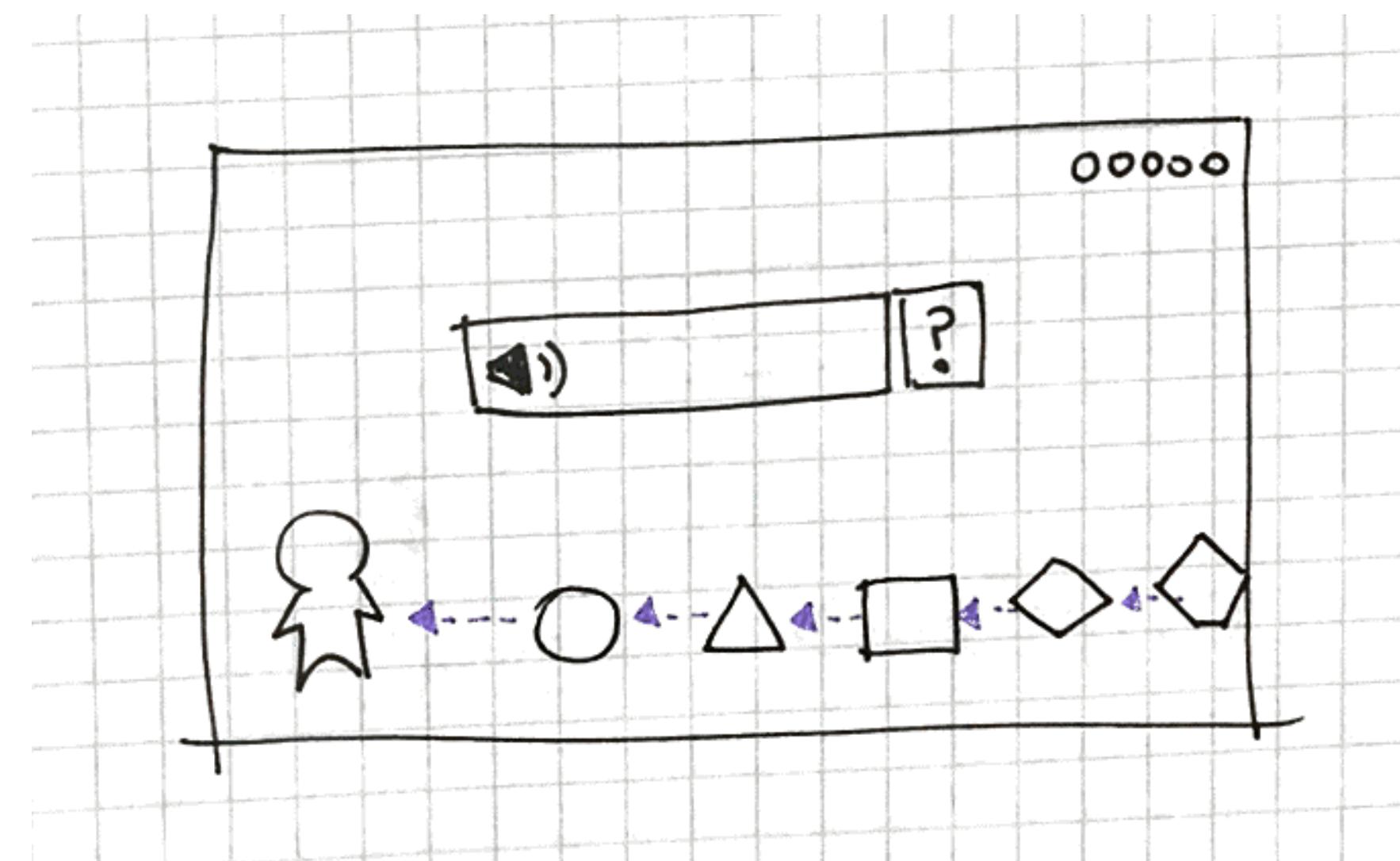
Idea 2. Voice-Control Game for Education

Goal

Various objects randomly appear and user has to say the name of the object to jump over it to avoid collision.

Playing this game, user can memorize unfamiliar words while having fun. (It would be especially effective for children)

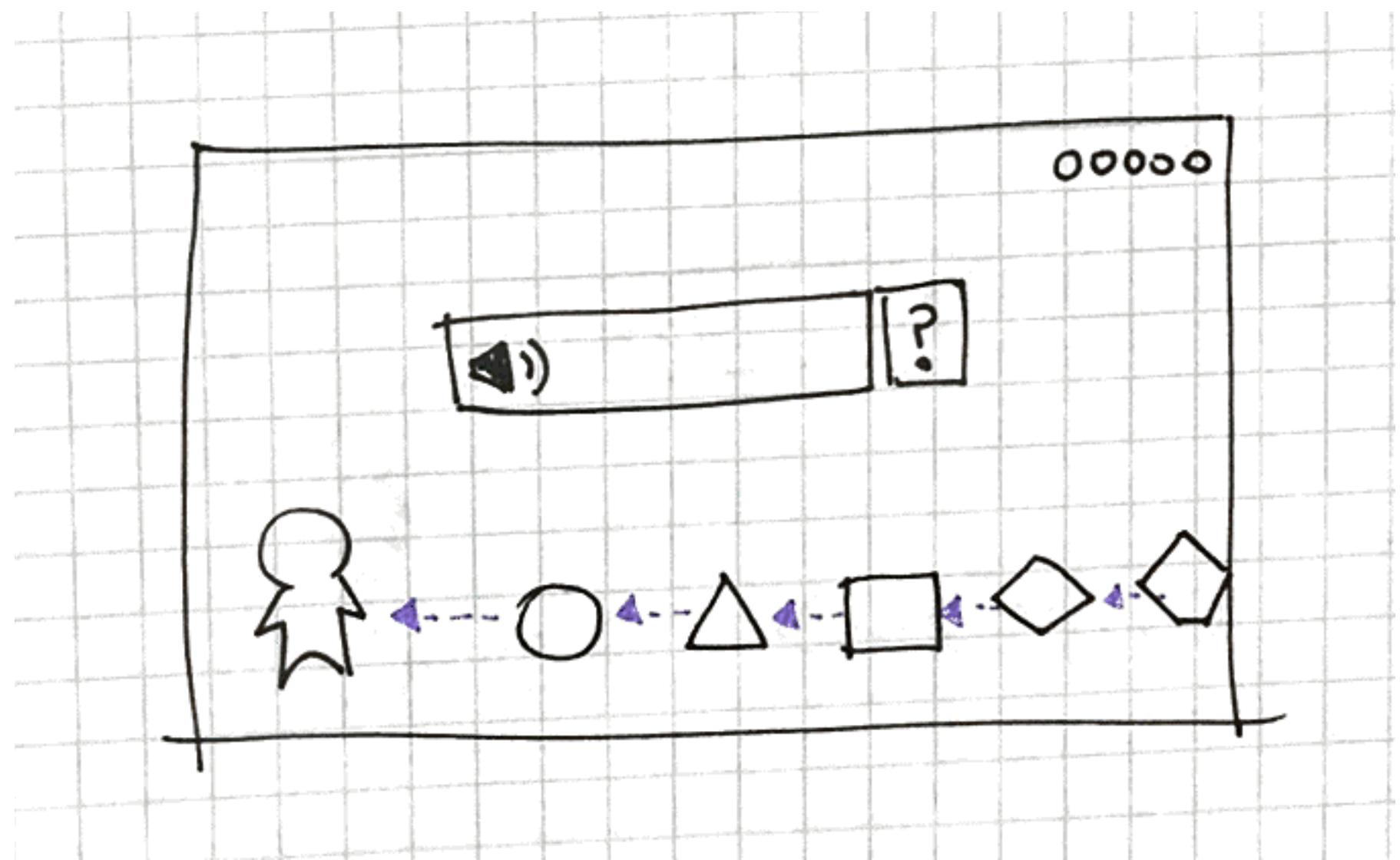
The type of objects can be shapes, animals, or country flags.



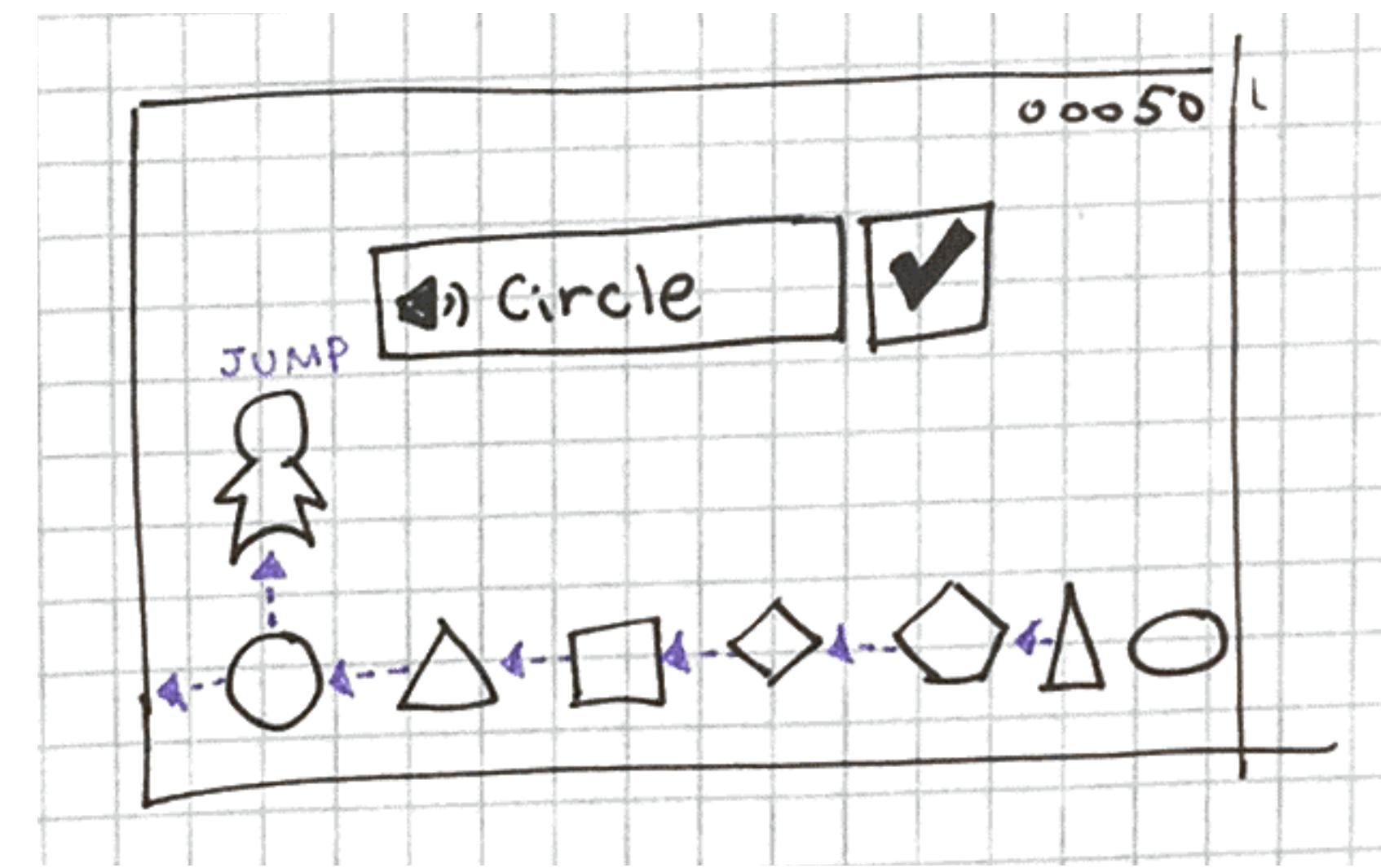
PROJECT SKETCH

Idea 2. Voice-Control Game for Education

Input & Output



Voice Recognition

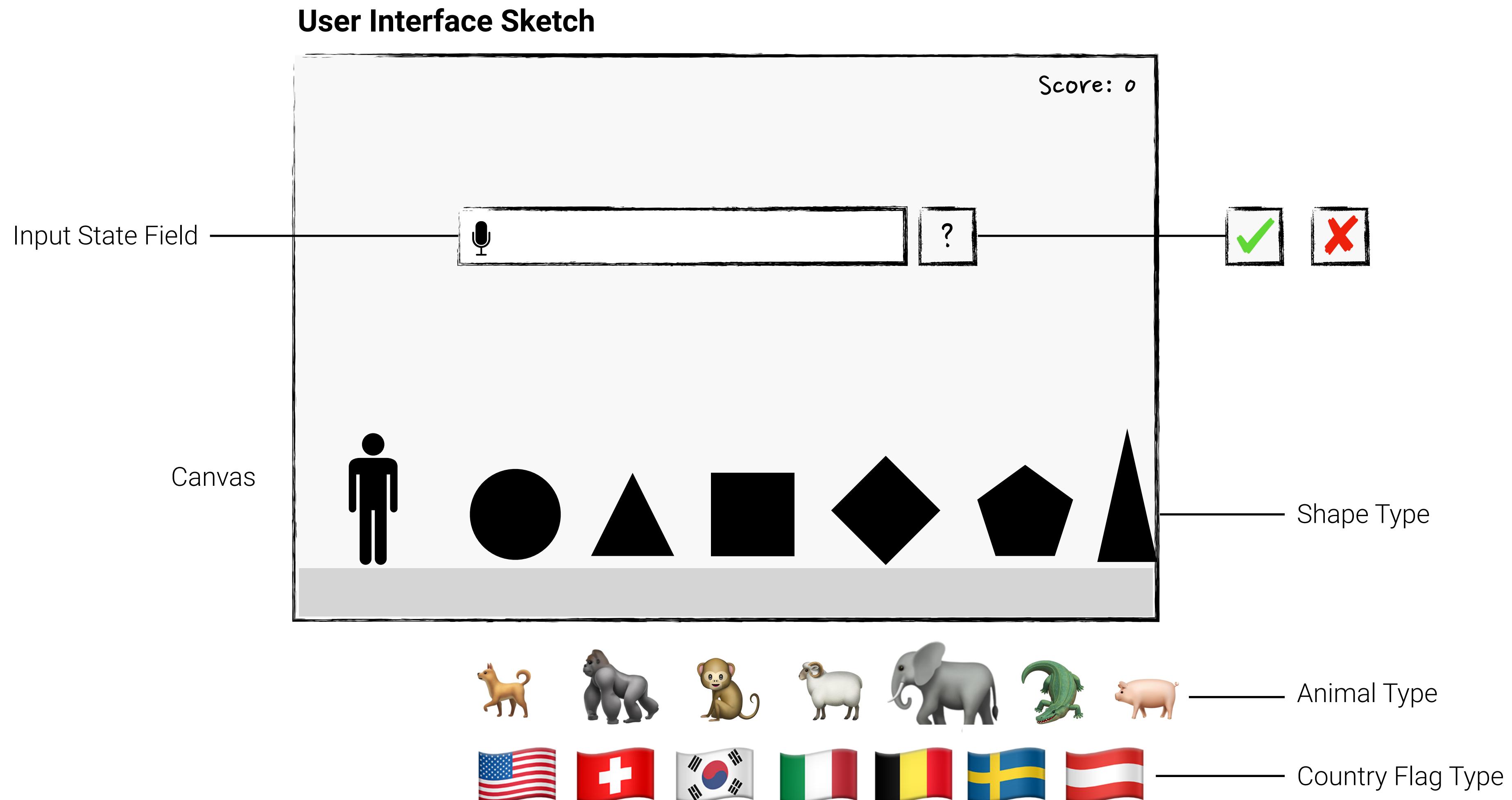


Game Start: Various objects randomly generated move toward the player

Play: To jump and avoid colliding the object, user has to say the name of the shape in front. If the word user says is right, user can jump and gain the scores. On the other hand, if it is wrong, the game is over.

PROJECT SKETCH

Idea 2. Voice-Control Game for Education



TECHNOLOGY REQUIREMENTS/TECHNICAL RISKS

Technologies we are planning to use

Language

- Javascript

Input

- Idea 1: WebGazer, Affectiva: to detect user's eye gaze, head position, user's emotions
- Idea 2: Web Speech API: to detect commands for controls

Output

- Draw 2D graphic images & animation
- Present realtime input information

Risk to using these new technologies

- Neither of us have experience making animation with Javascript
 - Might not be able to debug problems in API efficiently
- * Web Speech API: Microphone access in local host seems to be a common problem

TECHNOLOGY FEASIBILITY TEST

What we tested so far

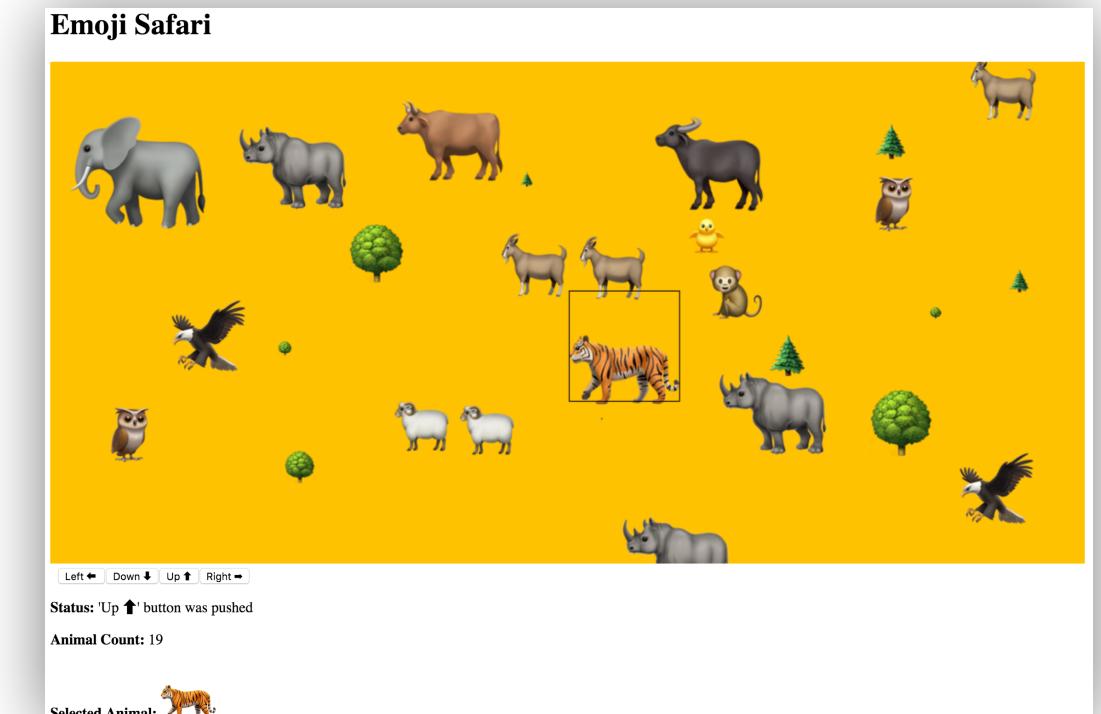
Idea 1

- Webgazer: Test with Demo
 - It did not work well as we expected so we decided not to use it
- Tracking.js: Draw basic graphics that follow user's head position
<https://hyejinim.github.io/a6-trackingjs.html>
<https://hyejinim.github.io/a6-trackingjs2.html>
 - Its result was expected to be a little simple so we thought that we needed to add something



Idea 2

- Web Speech API Test: <https://www.w3schools.com/code/tryit.asp?filename=FLXNCY54S0AO>
 - It detected words we need quite well
- Drawing images with Javascript: lab1 <https://hyejinim.github.io/emojisafari>



What we need to test

- Animation with Javascript: Applying principles from a5
- Game rule design

A screenshot of a browser developer tools console. The title bar says "Technology Feasibility Test". The main area shows the HTML and JavaScript code for a Google Chrome page. The code includes meta tags for mobile devices and a link to a Google+ icon. The status bar at the bottom right shows "Result Size: 574 x 576".

Thank you 

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