

Part 1

i. What is the purpose of your website?

- My website is an interesting game-like tool that gives people a vital capacity test through long voice input. The normal vital capacity testing process is cold and boring, and I aim to make it more engaging and encouraging by adding gamification elements.

ii. What information do you convey with your website?

- Through the website, I encourage users to input their voice as long as possible to test their vital capacity. I leverage people's voice input to control the growth of a digital tree – only when the time of the voice input reach a certain point can the tree fully grow up and blossom.

iii. How is it interesting and engaging?

- People would be encouraged when seeing the growing tree and feel rewarded when seeing the tree blossom in the end. I believe this idea can also be applied to existing medical equipment (probably for kids) to make the vital capacity measurement process more fun and engaging.

iv. Who is the target audience?

- Kids who are reluctant to vital capacity testing; young people who want to learn about their vital conditions while having fun.

Part 2

i. interaction type: voice input

ii. input your voice and make it as long as possible

Part 3

i. p5.js

ii. It can be used to create interactive digital design or arts and is convenient for people with few coding experience (has extensive documentation and active community)

iii. I self-learned it through <https://p5js.org> and looked the libraries to see references and examples of mic input. I also referred to several YouTube tutorials.

iv. p5 helped me implement the voice interaction.

Part 4

i. I improved the visual design to make it more visually appealing.

ii. I added text instructions at the beginning to guide people input their voice and used encouraging words to compliment people when they successfully pass the vital capacity test.

iii. I added the function of clicking to enter full screen and pressing Esc key to exist. When I tested the interactive demo, people mentioned that they would like to see a more immersive experience in full screen.

Part 5

The biggest challenge I have is to implement the tree-grow effect. I referred to p5 library and online tutorials and finally created the “treeGrow” function that can push branches from nodes. I also have difficulty defining the voice input length and the final solution is the result of many testings on myself.