Editing Your First Animation

This page is a tutorial to editing your first animation. We will progressively make changes, and we strongly suggest you do this on a **new branch** so as to not mess anything up. This guide will be committed to the repository after the project is complete and will serve as a really good future reference for any team in 2022.

The library used for animation is called Framer Motion (see https://www.framer.com/motion/). Framer Motion makes use of 'motion components' which are DOM primitives optimised for 60fps animation and gestures. There's a motion component for every HTML element, for instance, motion.div or motion.li etc. which work like their static counterparts except that they offer props that allow you to:

- Declaratively or imperatively animate components.
- Add drag, pan, hover and tap gestures.
- Respond to gestures with animations.
- Deeply animate throughout React trees via variants.

Reference: https://www.framer.com/docs/component/

To add an animation

1. Navigate to the relevant 'Renderer' file (e.g. Array2DRenderer.js)
2. Ensure the file you're working on has imported the motion component, see https://www.framer.com/docs/introduction/##importing
3. Change the static HTML component you wish to animate to a motion component e.g. if the component is a <div>, change this to <motion.div> (*see here in the code directly for an example* https://github.com/Melb-Uni/AA/blob/cad4ced964f0488cbc2d3ef8bf78acb80f8196e8/src/components /DataStructures/Array/Array2DRenderer/index.js#L99)
4. Add 'animation' props such as scale, rotate, or x and y values (for changing position) to animate the component, see https://www.framer.com/docs /animation/

Note: if you would like to animate the repositioning of a component which occurs without specifically changing the x and y position values (i.e. animating the the swap of array items - the repositioning occurs due to the array item's new index, not because we change it's x and y position values), you can utilise the 'layout' prop (see https://www.framer.com/docs/component/##layout-animation). If layout is true, the component will automatically animate to its new position when its layout changes. Ensure that such motion components have a **unique key** which doesn't change when the items position changes (i. e. an array item component's key should be different from it's index, as its index changes when its position changes but its key should not).

To edit an animation

1. Navigate to the relevant 'Renderer' file (e.g. Array2DRenderer.js) and find the motion component you wish to change the animation for (e.g. motion.td)
2. Add or change the value of the 'animation' or 'transition' props to edit the look of the animation, see https://www.framer.com/docs/animation/